International Journal of Development Strategies in Humanities, Management and Social Sciences
p-ISSN: 2360-9036 | e-ISSN: 2360-9044
Volume 12, Number 2 March, 2022
IJDSHMSS

Evaluation of the Performance of Collective Investment Schemes in Nigeria

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Article DOI: 10.48028/iiprds/ijdshmss.v12.i2.03

Abstract

This paper examined the performance of thirteen (13) large-size money market funds in Nigeria based on the net asset values (NAV) as at 31 December 2021. Mutual fund data were obtained from the website of Securities and Exchange Commission, 91-day treasury bills true yield and stop rates which served as proxy for benchmark index and risk-free rates respectively from Central Bank of Nigeria statistical bulletin while returns yielded by the funds were obtained from the audited accounts and factsheets of the mutual funds. The performance evaluation was carried out using Sharpe ratio, Treynor ratio and Jensen's Alpha for the period January 2018 to December 2021. The result is opposed to previous works that on the average, mutual funds did not generate returns to outperform the market index. All the 13 money market funds recorded positive ratios across all the three measurement ratios. It was observed that mutual funds industry in Nigeria is presently underutilized and underdeveloped. Also, the Nigerian mutual funds sector is heavily concentrated on fixed income investment rather than being widely spread across various investments outlets. The paper points to the need for collaboration between regulators and operators in facilitating awareness and distribution channels while the fund managers are called to select their stocks based on research and analysis as well as to always use risk-adjusted measures in reporting their performance.

Keywords: *Collective Investment Scheme, Performance, Net Asset Value, Portfolio, Unitholders.*

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Background to the Study

A Collective Investment Scheme (CIS) is an arrangement in which various investors' pool money together and place it under a professional to manage for them. Such arrangement allows individuals to invest in a wide range of assets that would have otherwise been difficult if they were to invest individually. Mutual Funds, CIS and Unit Trusts are used synonymously in different environments. However, in Nigeria it is mostly known as CIS as stated in the Investment and Securities Act (ISA 2007).

The ISA 2007 is the framework for operations and regulation of CIS in Nigeria, and in section 153(1), it outlined three basic features of CIS as follows: members of the public are invited or permitted to invest money or other assets in a portfolio; two or more investors contribute money or other assets to and hold a participatory interest in a portfolio; and investors share risk and benefit of investment in proportion to their participatory interest.

CIS represents the best investment vehicle suitable for the general public and retails investors. It enables people who do not have the skill, knowledge or time for direct investment, to become co-owners in investment portfolios. Its benefits include risk diversification, professional fund management, and operational cost reduction. An effective CIS market offers great potentials for cascading financial literacy, deepening the capital market, promoting financial inclusion and mobilization of resources for long term capital needs of government and private sector.

Despite its opportunities, CIS in Nigeria has remained underutilized. According to SEC (2022) Net Asset Value (NAV) of authorized CIS Funds as at 31st December 2021 was N1,313.514 billion. This represents just 0.86% of Gross Domestic Product at current basic prices for the year 2020 which stood at N152,324.070 billion as reported in the CBN statistical bulletin for the year. Total number of in unitholders stood at 576,448investors as at October 2021 as reported by the SEC, which is only slightly above half a million potential investors in a country with over 193 million estimated population as stated in the CBN 2020 statistical bulletin. Oduwole (2015), noted that some of the hindrances to CIS development in Nigeria include insufficient data points to help investors adequately evaluate the performance of the funds, little knowledge of retail investors about mutual funds and inadequate review of the performance of the few existing funds.

According to Tan (2015), Mutual fund performance has always been one of the most researched areas of finance studies. However, while mutual fund market is the focus of various studies conducted in several markets, research in this area is scanty in Nigeria. Oduwole (2015). As well as Ilo, Yinusa and Elumah (2018), observed that very few studies exist in this area for Nigeria. Accordingly, Ugwuoke and Onyeanu (2013), examined the unit trust scheme as an investment option very suitable in mobilizing investible funds from small investors. Oduwole (2015), evaluated the performance of 31 equity and mixed funds in Nigeria from December 2011 to November 2014, Ilo et al (2018) studied the performance of 37 mutual funds from January 2012 to December 2015, Isiaka and Oko (2019), analysed the performance of CIS funds in Nigeria from 2014-2018, while Omokehinde (2021), investigated the behavior of mutual funds and their risk-adjusted performance in the financial markets of Nigeria between April 2016 and May 31, 2019.

The studies by Oduwole (2015), Ilo et al (2018), Isiaka and Oko (2019) as well as Omokehinde (2921) all used movement in NAV to compute fund's returns over the period. The current study extends the body of knowledge by incorporating dividend payout into the model for calculating periodic returns. This was one of the recommendations for further studies suggested by Oduwole (2015). The objective of this study is to evaluate the performance of 13 large-size money market funds in Nigeria (based on the net asset values (NAV) as at 31 December 2021).The study used the Sharpe ratio, Treynor ratio, and Jensen's Alpha measures to evaluate performance for the period January 2018to December 2021. The remaining part of this paper is arranged as follows: section 2 deals with the review of literature, section 3 focuses on the research methodology, section 4 presents the data analysis and results while the conclusion and recommendations follow in section 5.

Literature Review

Conceptual Framework

CISs are generally classified as either open-ended or close-ended. Udenwa and Uwaleke (2015), stated that open-ended funds are available for continuous issuance to investors. At any point in time, the fund manager can buy or sell units from/to willing investors at the prevailing price. Close-ended funds on the other hand have limited number of units which are offered to investors by way of public offering. Once the public offer period is over, the fund closes sales. Any buying or selling of units thereafter must be done on a recognized securities exchange. Hence, close-ended funds are usually listed to enable investors buy/sell their units on the floor of the exchange. Apart from the classification based on fund structure, CISs are often classified based on type of assets they invest in. Ilo et al (2018), stated that the types of mutual funds in Nigeria include equity, money market, fixed income, mixed and Islamic/ethical funds.

Price Quotation is an essential concept in the CIS space. Udenwa and Uwaleke (2015), confirmed that mutual funds carry two price quotes viz: offer price and bid price. These two quotes represent the price at which the fund manager buys (bid price) and sells (offer price) a unit of the fund on a particular day. Therefore, the offer price is the investor's entry price while the bid price is the investors exit price.

Risk-adjusted performance ratios adjusts portfolio returns for the risk taken by the investor and compares the result with a riskless investment, to see how much the investor earns for each unit of risk taken. The ratios are considered to be superior over measures of absolute returns. Musah (2014), found that raw returns do not necessarily reflect superior performance because only a risk-adjusted performance measure can truly reflect the performance of a CIS. This aligns with the findings of Pandow and Butt (2017), that Sharpe and Treynor ratios measures the unit reward per unit of risk.

Empirical Review

Various studies carried out on the risk-adjusted performance of CIS across markets shows varying findings. In United States of America (USA), Shawky and Smith (2005), tested the relationship between number of stocks held and performance of equity mutual funds between

1992 and 2000 using risk-adjusted performance measures. The findings showed a significant relationship between number of stocks held and risk-adjusted return, up to an optimal number of stocks.

Research on CIS performance is prominent in India. Charry and Masood (2011), studied the performance of benchmark mutual funds in India using 16 equity funds, 15 debt funds and 12 balanced funds as samples over the period 2000 – 2009. The findings was that equity and balanced funds had the same performance under Sharpe, Jensen and Treynor measures, but debt funds had different results using the three performance measures. Roy and Ghosh (2012), studied the performance of Indian mutual funds between January 2008 and December 2009 using risk-adjusted returns measures and discovered that the performance of the funds over the period was not satisfactory indicating poor selectivity and market-timing strategies of fund managers. Both works pointed to the need for fund managers to improve on market timing and selection skills.

In Nigeria, Ugwuoke and Onyeanu (2013), carried out a study of CIS as suitable investment option for small savers in Nigeria using survey research design and concluded that there is lack of awareness and poor patronage of CIS in the country. The recommendation was for fund managers to put more efforts in creating awareness.

The effect of fund size on performance is an important issue in portfolio performance literatures. Tangjiprom (2014), studied the effect of mutual fund size on its performance based on active equity mutual funds in Thailand during 2006-2012 using a four-factor model. The results show that there is a significant relationship between fund size and performance. However, this relationship is not linear but quadratic, meaning that there is an optimal size of mutual fund. It recommends that fund managers should monitor the size of their funds to avoid it getting excessively large. This corroborates the findings of Shawky and Smith (2005).

In Ghana, Musah (2014), studied mutual fund performance from 2007 to 2012 using the risk-adjusted measures of sharpe ratio, treynor ratio and Jensen alfa. It found that fund managers lacked market-timing ability, and recommended improvement on the part of fund managers.

Among the works on CIS performance in Africa, Tan (2015), studied the performance of mutual funds in South Africa between January 2009 and November 2014 using the risk-adjusted measures of sharpe ratio, treynor ratio and Jensen alfa. It found that fund managers did not display selectivity skills in their work and recommended an improvement on the part of fund managers. Oduwole (2015), deployed Jensen's Alpha, Treynor and Sharpe ratios to measure the performance of funds in Nigeria from December 2011 to November 2014, finding out that the fund managers did not out-perform the benchmark. The paper recommended that future studies should capture dividend payment in computing fund returns.

In Nepal, Bajracharya (2016), evaluated the performance of five mutual funds traded on the Nepal Stock Exchange on the basis of monthly returns compared to benchmark, and using risk-adjusted performance measures. The conclusion was that few funds are well diversified

and have reduced their unique risks. It recommended that it is necessary to float more mutual funds since these are good instruments of mobilizing savings and providing investment opportunities to small savers

In Pakistan, the mutual funds market has received considerable research attention and most of these studies show that the funds are underperforming. Among the studies is that of Bilawal, Khan, Hussain and Akmal (2016), which examined the performance of closed ended mutual funds in Pakistan by using five different ranking measures during a period of January 2009 to December 2013. Ranking measures used in this study include Sharpe, Treynor, Sortino, Information and Jensen Alpha. Closed ended mutual funds are characterized by under performance during this period and the results showed inconsistent ranking of the funds based on the different performance measures used. The recommendation was that Fund managers should opt for less risky and more diversified portfolios as this will lead to the better performance of mutual funds.

Manek (2016), explored e-views in investigating the significance of portfolio turnover on mutual fund return using open ended diversified growth oriented equity funds as case study. The findings showed that portfolio turnover has a statistically significant effect on scheme returns meaning that, with higher portfolio turnover, there is a possibility that manager will be able to outperform the index, recommending that fund managers should opt for an optimum fund size.

The studies by Pandow (2016) as well as Pandow and Butt (2017), both tested the stock selectivity skills of sample fund managers in India from April 2007 to March 2011 using Sharpe and Treynor ratios. Both results showed persistent stock selectivity only in the short run, with absence of relative long term persistence in selectivity performance.

Akomeah, Kong, Drah, Kusi and Afriyie (2017), examined mutual funds average returns relative to the benchmark in Ghana using Sharpe and Treynor's index for a sample of ten Ghanaian Mutual Funds selected on the basis of consecutive data availability during the period of 1st January 2010 to 31st December, 2014. The results revealed that 80% of the Mutual Funds recorded high raw returns with a strong correlation coefficient of +0.6089 between the raw returns and total risk. The analysis concluded that, the money market funds had a superior performance than the balanced and equity funds under all the three performance evaluation techniques

Ilo et al (2018), did a similar work covering 37 funds in Nigeria between January 2012 and December 2015 with same results as that of Oduwole (2015), that the funds performed below the risk measures. Thus, the study points to a need for public education, which will improve support or mutual funds, hence, increasing the size of mutual funds in Nigeria. The most recent study was conducted by Isiaka and Okoh (2019), in which they analysed the performance of CIS in Nigeria between 2014 and 2018, with the finding that the weekly performance of funds was not significantly different among six different fund classes of ethical, balanced, bond, equity, real estate and money market funds.

El-Ansary and Elrashidy (2019), investigated the financial performance of Islamic and conventional mutual funds in Egypt from April 2008 to May 2015 using risk measures. The results show that Islamic mutual funds under performed both conventional mutual funds and the Egyptian market index.

Omokehinde (2021), investigated the behavior of mutual funds and their risk-adjusted performance Nigeria between April 2016 and May 31, 2019, using CAPM, Jensen's alpha, Sharpe and Treynor ratios, as well as Fama decomposition of return. The risk-adjusted portfolio returns measured by Sharpe and Treynor ratios showed that 67.31% of the funds underperformed the market compared to 40.38% that outperformed the market using Jensen's alpha. Fama decomposition of return revealed that the fund managers are risk-averse with 48% superior selection ability. Overall, the fund managers possessed 52% of inferior selection abilities that only earned 33% of superior risk-adjusted returns and hence, failed to achieve the desired diversification in the relevant period.

Based on the empirical review, research gap was identified in the method of calculating mutual fund returns. All the studies on the performance of mutual funds in Nigeria used movement in NAV in computing fund's returns without incorporating dividend payment. The current study fills this gap by capturing dividend payout into the model for calculating periodic returns. Furthermore, this work is very current as it captures date up to December 2021 and can be timely is aiding decisions and policies to address present-day realities.

Theoretical Framework

Portfolio Theory was originally proposed by Harry Markowiz in the 1950s. A portfolio is a bundle or collection of several securities. The various assets held by a fund manager forms the portfolio of such CIS. According to Akinsulire (2006), no rational investor would like to put all his/her eggs in one basket. Portfolio theory is based on the assumption that investors are risk-averse. This means that in practice a rational investor will seek to maximize return and minimize risk. The implication is that investors hold well-diversified portfolios instead of investing their entire wealth in a single or few assets. Hence, smart investors know the benefit of diversification. In conformity with this theory, Charry and Masood (2011), argued that investors essentially participate in financial markets over time in order to share and diversify various risks, which arise in their investment decisions.

Closely related to portfolio theory is the Capital Asset Pricing Model (CAPM) which was developed by three economists viz: W. F. Sharpe, J. N. Lintner and Jack Treynor between 1965 and 1966, in an attempt to simplify the assumptions of portfolio theory as they relate to investment in securities. Akinsulire (2006), suggests that the CAPM predicts the relationship between the risk of an asset and its expected return. This relationship is useful in that firstly it produces a benchmark for evaluating various investments and also helps the financial analyst to make an informed guess about the return that is expected from an asset.

Methodology

The Data

Data on NAV of CIS were obtained from the website of SEC while the market index data were obtained from website of the Nigerian Stock Exchange (NSE). Globally, risk-free rate is proxied by 91-day treasury bills and this was also adopted in the studies by Musah (2014), Tan (2015) as well as Pandow and Butt (2017). Hence, risk-free rate was computed from the 91-days treasury bill data obtained from Central Bank of Nigeria (CBN) statistical bulletin, while yearly returns were obtained from the audited accounts and factsheets of the mutual funds. The study captures a period of 48 months spanning from January 2018 till December 2021.

Table 1: Nigerian Mutual Fund by Classes and NAV as at 31 December 2021

S/N	Class of Fund	NAV (NGN' Billions)	Percentage (%)
1.	Money Market Funds	547.906	41.71
2.	Fixed Income Funds	377.744	28.76
3.	Dollar Funds Funds	272.186	20.72
4.	Real Estate Investment Funds	50.199	3.82
5.	Mixed Funds	29.274	2.23
6.	Ethical Funds	20.445	1.56
7.	Equity Funds	15.756	1.20
	Totals	**1,313.514**	**100**

Source: Author's Computation (2022) using data from SEC website

The study examined the performance of 13 large size money market funds based on NAV as at 31 December 2021.

The Performance Measures

The study adopts the popular performance measures in the investment industry which include Sharpe ratio, Treynor ratio and Jensen's Alpha. These risk-adjusted performance ratios are superior measures because they adjust the returns and compares them with a risk-free asset to determine the return earned for the risk taken by the investor. The measures were used by Musah (2014), Oduwole (2015), Tan (2015), Akomeah et al (2017), Ilo et al (2018), Omokehinde (2021) among several others. The measures are explained below.

Treynor Ratio: This is a performance metric for determining how much excess return was generated for each unit of risk taken on by a portfolio. Excess return in this sense refers to the return earned above the return that could have been earned in a risk-free investment. It is also known as reward-to-volatility and uses systematic risk (portfolio beta) as a proxy for risk. It is named after Jack Treynor who developed it in the year 1965.

$$TR = (Rp - Rf)/Bp \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \; 1$$

Where:

TR = Treynor Ratio

Rp = Return of the portfolio over the period

Rf = Risk-free rate of return over the period

*B*p = Beta of the portfolio over the period.

Sharpe Ratio: Developed by William Sharpe in 1966, this is similar to Treynor ratio except that it uses portfolio total risk (standard Deviation) as denominator instead of beta, and it is known as reward-to-variability.

$$SR = (Rp - Rf)/Qp \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \; 2$$

Where:
SR = Sharpe Ratio
Qp = Standard Deviation of the portfolio over the period.

For both the Sharpe and Treynor measures, a negative ratio implies there was no excess return to compensate the investor for risk taken while a positive ratio shows that the fund has out-performed the market through selectivity and timing skills exercised by the fund manager, being a pay-off for risk. A higher ratio signifies better performance.

Jensen's Alpha: This is named after Michael Jensen who developed it in 1968. It measures the excess returns earned by the portfolio compared to returns suggested by the CAPM model. So, if the security is fairly priced, its actual returns will be same as CAPM, and the Alpha in this case will be 0. If the security earns even more than the risk-adjusted returns, it will have a positive Alpha. Negative alpha indicates that the portfolio has not earned its required return. A higher Alpha is always desirable by portfolio managers.

$$a = Rp - (Rf + Bp(Rm - Rf) \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \; 3$$

Where:
a = Jensen's Alpha
Rm = Return on the relevant market index over the period.

Portfolio Returns: The rate of return of the fund is measured through changes in unit price plus dividend paid during the year. This was the approach used by Chary and Masood (2011) as well as El-Ansary and Elrashidi (2019).

$$Rp = (BPe - OPb + Div)/OPb \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \; 4$$

Where:
Rp = Return on the Fund over the year
BPe = Bid Price at end of the year
OPb = Offer Price at beginning of the year
Div = Dividend paid during the year.

Data Analysis and Results

Analysis of the performance of CIS shows that all the 13 mutual funds generated positive excess returns for all the three measures which are Treynor Ratio, Sharpe Ratio and Jensen's Alpha. By interpretation, money market funds in Nigeria have proved to have the ability to earn returns in excess of the market whether based on raw returns calculation or on risk-adjusted measures computation basis. It is worthy to note that the funds recorded similar result patterns across the different measures. In addition, this work have shown an improvement over previous studies in this field. Oduwole (2015), where all the 31 funds under study failed to outperform the benchmark, Ilo et al (2018), in which only 18.92% of the funds had positive results and Omokehinde (2021), where32.69% of the 52 funds showed positive risk-adjusted returns.

Table 2: Performance of Mutual Funds from 2018 - 2021

S/N	Money Market Funds	Sharpe Ratio(SR)	Treynor Ratio(TR)	Jensen's Alpha(JA)	SR Ranking	TR Ranking	JA Ranking
1.	Stanbic IBTC	0.86	3.94	3.83	5th	7th	5th
2.	FBN	0.42	2.62	2.58	10th	10th	7th
3.	United Capital	1.33	6.32	4.52	1st	2nd	2nd
4.	ARM	1.18	6.09	4.66	2nd	3rd	1st
5.	Meristem	0.71	8.46	1.36	7th	1st	11th
6.	AXA Mansard	0.97	4.52	4.35	4th	5th	3rd
7.	Greenwich Plus	0.86	4.35	3.36	5th	6th	6th
8.	Cordros	1.07	5.35	4.28	3rd	4th	4th
9.	Chapel hill	0.50	3.24	1.10	9th	9th	12th
10.	Abacus	0.27	1.48	1.82	12th	13th	10th
11.	EDC Class A	0.60	3.27	2.06	8th	8th	9th
12.	Coronation	0.36	1.95	2.40	11th	11th	8th
13.	Zenith	0.27	1.63	0.62	12th	12th	13th

Source: Author's Computation (2022)

Sharpe Ratio: From table 2 above, all the 13 money market funds examined returned positive sharpe ratios which implies higher returns in comparison to total risk. The ratios ranged between a maximum of 1.33% generated by United Capital Money Market Fund, to a 0.27% earned by both Abacus Money Market Fund and Zenith Money Market Fund.

Treynor Ratio: From table 2 above, all the 13 money market funds examined returned positive treynor ratios which implies higher risk-adjusted profit for the unitholders of the fund. The ratios ranged between a maximum of 8.46% generated by Meristem Money Market Fund, to 1.48% earned by Abacus Money Market Fund.

Jensen's Alpha: From table 2 above, all the 13 money market funds examined returned positive Jensen's alphas which implies higher risk-adjusted profit for the unitholders of the fund. The ratios ranged between a maximum of 4.66% generated by ARM Money Market Fund, to 0.62% earned by Zenith Money Market Fund.

Conclusion and Recommendations

A CIS pools money from variety of investors for the sole purpose of investment in various assets. Every authorized CIS in the country has four parties involved in its admiration. The parties comprise a Fund Manager charged with day-to-day investments of the scheme in line with its Trust Deed; the Trustee who monitors the fund manager's activities and holds the assets in trust for the unitholders; the Custodian who keeps custody of all the scheme's investments; and the Registrar who maintains the register of unitholders. These parties are supervised by Securities and Exchange Commission (SEC).

The analysis shows that the Nigerian Mutual fund sector is currently underdeveloped and underutilized despite its huge potentials. In terms of NAV, the N1,313.514 billion as at 31 December 2021 represents just 0.86% of Gross Domestic Product at current basic prices for

the year 2020 which stood at N152,324.070 billion as reported in the CBN statistical bulletin for the year. Total number of in unitholders stood at 576,448 investors as at October 2021 as reported by the SEC, which is only slightly above half a million potential investors in a country with over 193 million estimated population as stated in the CBN 2020 statistical bulletin.

The review also revealed that the Mutual Fund industry in Nigeria has a lower depth as it is concentrated mainly on money market funds and fixed income funds types. Money Market Funds (41.71%) and Fixed Income Funds (28.76%) jointly account for 70.47% of the industry size while all other fund types (Equity, Dollar Fund, Real Estate Funds and Ethical Funds) control only 29.53%. This shows concentration risk and this could be as a result of the high rates offered by short-term fixed income instruments in the country during the period studied.

This study examined the performance of 13 large-size funds in Nigeria based on NAV as at 31 December 2021, from 2018 to 2021 using Sharpe and Trynor ratios as well as Jensen's Alpha. The findings provide evidence that the funds out-performed the benchmark during the period. All 13 collective investment schemes sampled as proxy in this work recorded positive ratios across the three evaluation measures. Furthermore, there was consistency in returns generated by the 13 funds under the different measures. Also, the result of this analysis is an improvement over those of Oduwole (2015), where all the 31 funds under study failed to outperform the benchmark, Ilo et al(2018) in which only 18.92% of the funds had positive results, as well as Omokehinde (2021) where 32.69% of the 52 funds showed positive risk-adjusted returns. This improvement can be explained to emanate from the fact that previous works used only movement in NAV in computing returns while the current study have incorporated distributions paid by the funds into the model for computation of profit.

Given the findings and results of this study, the following recommendations are relevant:

i. There is need for public enlightenment to grow the CIS sector. SEC should partner with Fund Managers Association of Nigeria (FMAN) to embark on awareness campaign and create a diversified distribution channel for CIS products.
ii. Fund Managers in Nigeria should strive to select their stocks based on research and analysis so as to justify the trust of professionalism reposed on them by investors and the market. This will reduce the concentration of the sector in one type of instrument.
iii. Fund Managers should be required by SEC to always use risk-adjusted measures in reporting the performance of the funds under their management, as these give a better disclosure of the returns earned for unitholders.
iv. Future researchers in this area are advised to always capture distributions paid by mutual funds in computing returns so as to show a better and more reliable result.
v. Regulatory Agencies should pursue policies that will boost operations of the other segments of the financial sector such as the equity segment as this will help reduce the concentration of investments in the fixed income market.
vi. The Central Bank of Nigeria may consider sustaining the current policy of reducing the high interest payments on its short term fixed-income borrowings as this will assist in reducing the apathy towards equity investments.

References

Akinsulire, O. (2006). *Financial management fourth edition*, Lagos: Ceemol Nigeria Limited.

Akomeah, M. O., Kong, Y., Drah, W. K., Kusi, B. & Afriyie, S. O. (2017). Re-engineering mutal fund performance in sub-saharan Africa: Evidence from the Ghana stock exchange, *Canadian Journal of Applied Science and Technology*, 5(2), 111-120.

Bajracharya, B. S. (2016). Mutual fund performance in Nepalese mutual funds unit: An analysis of monthly returns, *Journal of Advanced Academic Research*, 3(2), 92-100.

Bilawal, M, Khan, M. D., Hussain, R. Y. & Akmal, U. (2016). Performance evaluation of closed ended mutual funds in Pakistan, *International Journal of Management and Business Research*, 6(1), 65-71.

Charry, T. S. & Masood, S. (2011). Performance of benchmark mutual funds in India- An analysis of select equity, debt and balanced growth funds, *Journal of Banking Financial Services and Insurance Research*, 1(6), 1-24.

El-Ansary, O. & Elrashidy, Z. (2019). On the performance of Egyptian mutual funds, *International Journal of Accounting and Financial Reporting*, 9(1), 379-399.

Ilo, B. M., Yinusa, O. G. & Eluma, L. O. (2018). Performance of mutual funds in Nigeria, *The IEB International Journal of Finance*, 17(1), 8-25.

ISA (2007). *Investment and securities act*, Laws of the Federation of Nigeria.

Isiaka, M. A. & Okoh, L. E. (2019). An empirical analysis of the performance of collective investment schemes in Nigeria (2014-2018), *International Journal of Research and Scientific Innovation*, vi(ii), 82-88.

Manek, V. B. (2016). Mutual Fund Performance: A study of the effect of portfolio turnover on mutual fund performance in the Indian financial market, *Scholarly Research Journal for Interdisciplinary Studies*, 3(23), 1916-1926.

Musah, A. (2014). Performance evaluation of collective investment schemes in Ghana. *International Journal of Empirical Finance*, 3(4), 202-211.

Oduwole, O. (2015). The performance of Nigerian mutual funds in the Period 2011-2014, *Mathematical Theory and Modelling*, 5(3), 85-95.

Omokehinde, J. O. (2021). Mutual funds behaviour and risk-adjusted performance in Nigeria, *Investment Management and Financial Innovations*, 18(3), 277-294.

Pandow, B. A. (2016). Selectivity skills of mutual fund managers in India: an analysis, *International Journal of Commerce and Finance*, 2(2), 41-59.

Pandow, B. A. & Butt, K. A. (2017). Risk and return analysis of mutual fund industry in India. *Journal of Banking and Financial Dynamics*, 1(1), 54-65.

Roy, S. & Ghosh, S. K. (2012). A comparative study of mutual fund performance during recession in India, *International Journal of Financial Management*, 2(2), 53-64.

Securities and Exchange Commission (2022). *Net asset value data for collective investment schemes*. https://sec.gov.ng/monthly-spreadsheet-of-collective-investment-schemes/

Shawky, A. S. & Smith, D. M. (2005). Optimal number of stock holdings in mutual fund portfolios based on market performance. *The Financial Review*, 40, 481-495.

Tan, O. F. (2015). Mutual fund performance: Evidence from South Africa, *Emerging Markets Journal*, 5(2), 48-57.

Tangjitprom, N. (2014). The effect of fund size on performance: The evidence from active equity mutual funds in Thailand, *Research Journal of Finance and Accounting*, 5(10), 82-87.

Udenwa, T. A. & Uwaleke, J. U. (2015). *Understanding Nigerian financial system*, Port Harcourt: Pearl Publishers.

Ugwoke, O. U. & Onyeanu, O. O. (2013).An examination of the unit trust scheme/mutual fund as a veritable vehicle of investment in Nigerian stock market, *Research Journal of Finance and Accounting*, 4(6), 176-184.