

Determinants of Mutual Fund Performance in Nepal

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Received: September 28, 2022; Revised & Accepted: October 27, 2022

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Abstract

This study examines how internal and macroeconomic factors influence mutual fund performance. This study includes an analysis of the impact of internal characteristics such as fund size, fund age, cash ratio, and expense ratio. The macroeconomic factors are the commercial bank rate, the inflation rate, and the stock index. Six mutual funds from the list of closed-end mutual funds were selected as a sample for descriptive and causal-comparative analysis to draw conclusions. Fund size, fund age, cash ratio, expense ratio, commercial bank rate, inflation rate, and Nepal Stock Exchange (NEPSE) index are predictor variables and risk-adjusted performance evaluation approach Sharpe's ratio as a dependent variable in this study. Findings show that mutual funds' performance in Nepal had not satisfactory except NIBL Pragati Fund (NIBLPF). Likewise, evidence suggests that fund age has a significant favorable impact on performance. In contrast, cash ratios, expense ratios, bank rates, inflation, and stock indexes have a significant negative impact on mutual fund performance in Nepal. In contrast, the factors determining fund size are contradictory, but the market index has no effect on Nepalese mutual fund performance. Hence, a fund's internal and macroeconomic forces are major determinants of its performance in Nepal.

Keywords: Cash ratio; Expense ratio; Fund age; Fund size; Sharpe's measure

1. Introduction

A mutual fund is a type of investment that pools the money of investors and invests it on their behalf. It is a mechanism for collecting cash from a group of investors and investing them in stocks, bonds, and other securities. Each investor has units that represent a portion of the fund's assets. Professional fund managers that specialize in the management of mutual funds construct specific portfolios based on the investment objectives. A mutual fund's portfolio comprises all of its secured securities. They are a popular choice among investors since they are skilled at managing portfolios. Mutual funds provide the attributes of professional management, diversity, affordability, and liquidity. The justification for a mutual fund is that many investors lack the time and expertise to handle their money.

Mutual funds are entities that collect funds from various investors and invest them in securities such as stocks, bonds, and short-term loans (Choudhary & Chawla, 2014). Both open-ended and closed-ended funds exist. Trading on the stock exchange has no impact on closed-ended funds. A share's value is determined by supply and demand (Sharma & Thapa, 2019). Since the regular and unexpected redemption of closed-ended funds does not have a significant impact, fund managers are not concerned about fund management. Consequently, in exchange for a management fee, qualified fund managers manage the investor's money for their gain while working on behalf of the mutual fund. Investment prospects in mutual funds are expanding, and many investors consider them to be a wise decision (Derbali et al., 2020). Investors utilize the Sharpe ratio, also known as the reward-to-variability ratio, which William Sharpe first established in 1966 to better comprehend the return on an investment in relation to its risk. This ratio is the average excess return over the risk-free rate for each measure of volatility or total risk. Volatility is a metric used to describe price fluctuations in an asset or portfolio. By subtracting the risk-free rate from the mean return, investors can more easily distinguish the advantages from taking on risk. The return on a risk-free investment is, therefore, the return that investors can anticipate if they decide not to take any risks (Bacon, & Chairman, 2009).

Three methods of analysis Sharpe Ratio, Treynor Ratio, and Jensen differential way of measuring used to assess risk-adjusted performance (Shah et al., 2005). Bossert et al. (2010) claimed that because the information ratio encourages managers to adhere to the benchmark, it should be complemented with additional measures, such as the active share measure, to account for the level of activity in the portfolio. Finally, the long-term track record is essential for distinguishing talented managers from lucky ones because luck is often fleeting over time. Mutual funds and their performance evaluation are crucial for all investors, including portfolio managers, according to Shah et al. (2005). Investors may have the chance to evaluate the performance of portfolio managers through historical performance evaluation. They can make assumptions about the amount of return generated and the level of risk taken in order to generate such returns. To protect their investment, investors must be aware of the variables influencing the performance of mutual funds. Consequently, the mutual fund sector is crucial in determining how to allocate best and direct the economy's spare resources (Nazir & Nawaz, 2010). In light of this, the main concern for this analysis was: Which factors in Nepal significantly impact the performance of mutual funds?

2. Research Objectives

The study's primary goal is to assess the mutual funds' performance as they are now traded on the capital market in Nepal. These specific goals are:

- i) To examine the evaluation of the selected funds based on the funds' performance, compute the Sharpe ratio.
- ii) To evaluate the mutual funds' determinates into account the fund's specific as well as macroeconomic variables.

3. Literature Review

Numerous studies and analyses have been done on various aspects of mutual funds. The following list includes some significant studies.

According to Shah et al.'s (2005) findings, Pakistani mutual funds could add value, as seen by their favorable after-cost alphas. Three evaluation methods were used to assess risk-adjusted performance, including the Sharpe Ratio, Treynor Ratio, and Jensen differential measure. In addition, Afza and Rauf (2009) studied different fund qualities, such as liquidity, 12B-1, and lagged return, which significantly impacts mutual fund performance. The Sharpe ratio is used to evaluate the performance of funds using pooled time series and cross-sectional data, paying close attention to various fund attributes such as fund size, expense ratio, age, turnover, loads, and liquidity. Unlike management fees and risk-adjusted returns, which have a negative correlation with mutual fund growth.

Nazir and Nawaz's (2010) findings showed that assets turnover, family proportion, and expense ratio were positively leading mutual fund growth. The panel data from 13 family equity mutual funds from 2005 to 2009 were examined, and fixed effect and random effect models were used to figure out what made mutual funds grow in Pakistan. The study by Abramov and Akshentseva (2015) aimed to fill up some of the knowledge gap about the mutual fund industry in Russia. It examined the share return, net flow, and management firm fee in Russia as three performance measures for mutual funds. The report was based on a unique dataset that covers the first 13 years of Russia's collective investment market and describes the attributes of 755 mutual funds. Mutual fund returns could surpass inflation, the yield on government bonds, and the return from the 50/50 strategy. Between 2000 and 2013, the abnormal return, net flow, and management company fee followed the same regularity as their equivalents internationally. Mutual funds were thus among the key participants in the Russian financial scene. They also demonstrated how expanding operations and improving the efficiency and transparency of cost management were essential for developing sustainable collective investment in Russia.

Hussain et al. (2016) explored the underperformance of all mutual funds, the sector as a whole, and the portfolios in Pakistan due to insufficient selection skills on the part of fund managers. But it was found that closed-ended funds outperform open-ended funds in terms of performance. On the other hand, Bhagyasree and Kishori (2016) demonstrated that 14 out of 30 open-end mutual scheme performances surpassed benchmarked returns, similar to empirical

findings in India. Additionally, the outcome revealed that some schemes had underperformed; these schemes had a diversification issue.

Ahmad et al. (2017) evaluated the fund-specific factors that affect both conventional and Islamic mutual fund performance in Pakistan as stand-ins for fund performance; the Sharpe ratio, Sortino ratio, Information Ratio, and Jensen Alpha were employed. While age has a positive and significant association with conventional funds' performance, liquidity has a positive and significant relationship with the Sharpe ratio for Islamic funds. In the case of traditional funds, the expense ratio and Sharpe ratio are inversely correlated. Similarly, Asad and Siddiqui (2019) explored how different fund qualities affect the returns of Pakistani mutual funds. Ten different mutual fund types were chosen over the period of 2015 to 2017, and the impact of six micro and two macro variables unique to each fund on its returns was examined. Results indicated that the risk and expenditure ratio was positively correlated with mutual fund return. Risk return coefficient, fund size, and fund age are a few factors that have no impact on fund returns. Meanwhile, there is a negative link between risk-adjusted return and macroeconomic variables like GDP and interest rates. According to the research by Robiyanto et al. (2019), Sharia mutual funds perform best when measured using the Sharpe and Jensen methodologies. In different research, all schemes had positive Sharp ratios, demonstrating that the funds were yielding higher returns than the risk-free rate.

Poudel (2010) explored that the mutual fund market in Nepal is quite limited, and investors have not yet accepted mutual funds as their preferred investment option. Mutual fund operations in Nepal have a very constrained range and coverage. Mutual funds, however, can have a significant impact on the Nepalese financial system. Existing mutual fund institutions must improve the quality of their services by implementing cutting-edge technology and emphasizing timely information transmission. Nepalese investors have an alternative to bank deposits: alternatives such as mutual funds. Bajracharya (2016) evaluated the performance of six Nepalese mutual funds using the Treynor ratio return as the dependent variable and assets, expenditures, turnover, age, liquidity, and lag of the Treynor ratio return as the independent variables from 2012 to 2016. The findings showed that the performance of mutual funds was significantly impacted by lagged return, liquidity, and asset, among other fund factors.

Sharma (2018) reported that according to the Sharpe measure, two mutual funds outperformed one another while the LVF underperformed. In addition, there were inverse relationships between LVF1 return and NEPSE return and strong positive relationships between NIBSF1 and NMBSF1 return and market return. Thapa (2019) revealed that, with the exception of GIMES-1, all of the selected mutual funds' performance had lower with more risk than the market over the study period. With the highest Sharpe, Treynor, and Jensen measure value among the chosen mutual funds, LVF1 was recognized as a top performer. Likewise, Maharjan (2021) assessed the performance of four Nepali closed-end mutual funds from 2017 to 2019. The evaluation was made based on the NAV, expenditures ratio, portfolio turnover ratio, Jensen measure, Treynor ratio, and Sharpe ratio. The outcome suggested that other fund-related factors should be considered when making investment decisions in addition to performance assessment tools and techniques.

The extensive literature review on factors influencing mutual fund performance from a global viewpoint makes it abundantly evident that the mutual fund sector has been crucial to expanding capital markets globally. Empirical research has allowed us to identify several understudied research areas in Nepal. Many performances measuring methods are used to evaluate mutual fund performance. A single one of them was the Sharpe ratio. While developing the conceptual framework, the study employed Asad and Siddiqui (2019), previously tested certain variables like fund size, fund age, risk-return coefficient, and macroeconomic parameters (GDP and interest rate) as independent variables. Therefore, the study's conceptual framework, depicted in Figure 1, was constructed in light of a review of elements that influence performance evaluation and previous research. Sharpe's ratio, a performance measuring tool, and macroeconomic variables like inflation rate, bank interest rate, and NEPSE index were the key predictors, while fund-specific characteristics like size, age, cash ratio, and expenses ratio were the independent variables.

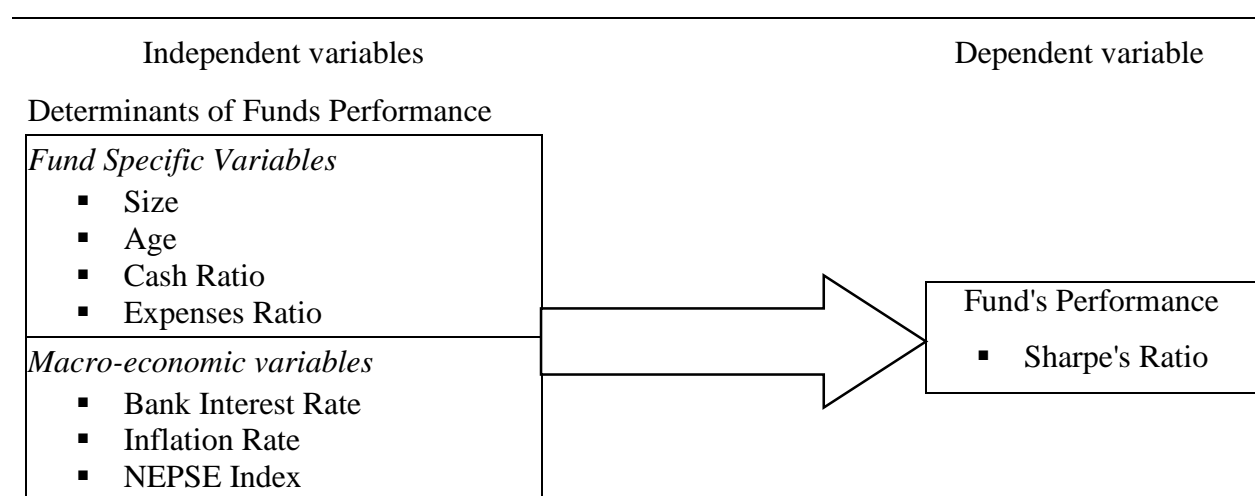


Figure 1 The conceptual framework

4. Research Gap

Published research papers in Nepal were limited to the primary intention of comparing the performance of individual mutual funds with that of other mutual funds, as well as the market index's performance. Prior studies have compared, ranked, and evaluated mutual funds as individual funds. In contrast with the previous studies, this study has used the common Sharp Ratio risk adjustment technique to examine the risk and return performance of mutual funds. The variables in this study that independently determine mutual fund performance include fund-specific parameters like fund size, age, cash ratio, and expense ratio, as well as macroeconomic indicators like inflation rate, bank interest rate, and NEPSE index. Previously, Maharjan's (2021) study used the return as the dependent variable and assets, expenses, and turnover as the independent variable. Investments in mutual funds decisions are influenced significantly by macroeconomic conditions (Kumari & Debnath, 2022). So, the review confirms that, in addition to performance assessment tools and procedures, other fund-related factors should be considered when making investment decisions. Prior research was restricted to analyzing those performance factors, highlighting the remaining gap and distinguishing it

from past studies. Since mutual funds are still developing in Nepal, most of the publications analyzed in this study about mutual funds were from other nations. As a result, there were very few articles available about Nepalese mutual funds.

5. Research Methodology

Based on descriptive and causal-comparative research, this study design examined the determinant of the fund's performance of mutual funds. The population comprises twenty-five closed-end mutual funds established and listed on the Nepal Stock Exchange (NEPSE). The sample consists of six closed-end mutual funds: (i) Global IME Sammunat Yojana-1 (GIMES1), (ii) Laxmi Equity Fund (LEMF), (iii) Nabil Equity Fund (NEF), (iv) NIBL Pragati Fund (NIBLPF), (v) Sanima Equity Fund (SAEF), and (vi) Siddhartha Equity Fund (SEF), all of which have a minimum three-year track record.

This study has examined the performance of mutual funds using secondary data. A monthly periodic financial report published by mutual fund schemes, monthly reports of NEPSE, and Bulletins of Nepal Rastra Bank (NRB) were used to collect the data. The data was gathered, entered, and calculated into an excel sheet, which was then analyzed using the statistical package for social sciences (SPSS). Fund's performance evaluation tool Sharpe's ratio, was employed as a dependent variable in this study. The study has chosen fund-specific variables such as size of the fund, age of the fund, cash ratio, expenses ratio, and macroeconomic variables such as inflation rate, bank interest rate, and NEPSE index as independent variables. This study was limited to the historical nature of the data. Therefore, any general inferences drawn from it should be applied with caution.

An ordinary least square regression model was used to determine the impact of independent factors: Fund specific variables such as size of the fund, age of the fund, cash ratio, expenses ratio, and macro-economic variables such as inflation rate, bank interest rate, and NEPSE index. The study employed linear regression, which identifies the line that most closely fits the data in terms of a particular mathematical criterion, and multiple regression models to determine the relationship between fund performance as measured by Sharpe's ratio and each of the explanatory or independent variables. The following describes the regression model used in this study:

Mutual Fund Performance (MFP),

$$= \alpha + \beta_1 (\text{SIZE}_{it}) + \beta_2 (\text{AGE}_{it}) + \beta_3 (\text{CR}_{it}) + \beta_4 (\text{ER}_{it}) + \beta_5 (\text{INF}_{it}) + \beta_6 (\text{BIR}_{it}) + \beta_7 (\text{NEPI}_{it}) + \varepsilon_{it}$$

Where,

α = Constant

β_1, \dots, β_7 = Estimated parameters of the mutual fund performance

SIZE_{it} = size of the fund for the period t

AGE_{it} = age of the fund for the period t

CR_{it} = Cash ratio of the fund for the period t

ER_{it} = Expenses ratio of the fund for the period t

INF_{it} = Inflation rate for the period t

BIR_{it} = Bank interest rate for the period t

$NEPI_{it}$ = NEPSE index for the period t

ϵ_{it} = Error term of mutual fund performance

6. Analysis and Findings

Sharpe's ratio is a well-known performance evaluation technique that indicates the fund's reward-to-variability. This study evaluates the performance of mutual fund samples based on this ratio.

Table 1

Performance of Sample Mutual Funds

Mutual Fund Scheme	N	Minimum	Maximum	Mean	Std. Deviation
GIMES1	36	-1.05	0.90	-0.0031	0.49177
LEMF	36	-1.81	1.73	-0.1006	0.76384
NEF	36	-1.17	1.25	-0.1233	0.55989
NIBLPF	36	-0.96	1.11	0.0028	0.51115
SAEF	36	-4.18	1.67	-0.4314	1.17170
SEF	36	-4.47	2.09	-0.5875	1.34280

Table 1 displays the performance of mutual funds by Sharpe's ratio scheme. The highest variability in Sharpe's ratio was observed for Siddhartha Equity Fund, whereas the scheme with the least variability was observed for Global IME Samunnat Yojana-1. The highest fund performance by Sharpe's ratio was observed for NIBLPF. Only this fund was capable of earning returns in excess of the risk-free rate. All other funds except NIBLPF were unable to perform better in terms of Sharpe's ratio. This indicates that Nepalese mutual funds are struggling with their performance.

Table 2

Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
SIZE	216	7.28	23.77	11.2973	3.46563
AGE	216	9	65	35.50	12.7540
Cash Ratio	216	0.66	64.79	22.9068	15.13666
Expenses Ratio	216	0.16	7.30	1.1367	0.76320
Inflation Rate	216	- 1.30	2.58	0.4093	0.71492
Bank Interest Rate	216	6.66	10.30	8.7913	1.18626
NEPSE Index	216	1128.19	2883.41	1556.7929	566.56134
Sharpe's Ratio	216	- 4.47	2.09	- 0.2072	0.89163

Table 2 shows the mean, standard deviation, minimum, and maximum values for listed mutual funds. Sharpe's ratio assesses the portfolio's risk premium versus its total risk. Sharpe's ratio ranges from - 4.47 % to 2.09 %, with a mean of -0.2072 and a standard deviation of 0.8916. Size ranges from 7.28 to 23.77 rupees, with a mean of 11.2972 and a standard deviation of

3.4656. Age ranges from 9 to 65 months, with a mean of 35.50 and a standard deviation of 12.7540. The cash ratio ranges from 0.66 % to 64.79 %, with a mean of 22.9068 and a standard deviation of 15.1366. The expenses ratio ranges from 0.16 % to 7.33 %, with a mean of 1.1367 and a standard deviation of 0.7632. Inflation ranges from - 1.30 % to 2.58 %, with a mean of 0.4093 and a standard deviation of 0.7149. Commercial bank rates range from 6.66 % to 10.30 %, with a mean of 8.7913 and a standard deviation of 1.1862. The NEPSE index ranges from 1128.19 to 2883.41 points, with a mean of 1556.7929 and a standard deviation of 566.5613. The NEPSE index has the biggest standard deviation, whereas inflation has the lowest.

Table 3

Pearson Correlation

Variables	SIZE	AGE	CR	ER	INF	BIR	NEPI	SR
SIZE	1							
AGE	0.579**	1						
CR	0.071	-0.394**	1					
ER	-0.156*	-0.091	0.072	1				
INF	-0.026	-0.090	-0.031	-0.087	1			
BIR	-0.860**	-0.770**	0.048	0.185**	0.070	1		
NEPI	0.941**	0.655**	0.015	-0.151*	-0.046	-0.902**	1	
SR	0.220**	0.461**	-0.208**	-0.241**	-0.208**	-0.413**	0.300**	1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 3 displays the correlation analysis of the study variables. The sample includes 216 observations for different periods. The association between mutual fund performance measured by Sharpe's ratio and independent (fund specific as well as microeconomic) variables for all sample funds across time periods were explained. An increase in independent variables results from the dependent variable Sharpe's ratio. Since the strongest correlation was found between independent variables NEPSE index and the size of the fund is significant at 1 % level of significance, all the correlations could be considered as low. NEPSE index and the commercial bank's interest rate have the lowest correlation at 1 % level of significance. The results demonstrate that the fund performance has a significant positive relation with size of the fund, age of the fund, and the commercial bank's interest rate at 1 % level of significance. Similarly, fund performance has significant negative relation with cash ratio, expenses ratio, and inflation rate at 1 % level of significance.

Table 4

Regression Results of Funds' Performance

Mod el	(Constan t)	SIZE	AGE	CR	ER	BIR	INF	NEPI	R ²	Adjusted R ²	F	Sig
1	-0.845 (-4.170**)	0.056 (3.293**)							0.048	0.044	10.841	0.001
2	-1.350 (-8.441**)		0.032 (7.591**)						0.212	0.208	57.618	<0.001
3	0.073 (0.674)			-0.012 (-3.103*)					0.043	0.039	9.630	0.002
4	0.112 (1.060)				-0.281 (-3.627*)				0.058	0.054	3.156	<0.001
5	2.523 (6.077**)					-0.311 (-6.636*)			0.171	0.167	44.036	<0.001
6	-0.101 (-1.472)						-0.259 (-3.111*)		0.043	0.039	9.681	0.002
7	-0.941 (-5.535**)						0.000 (4.592**)		0.090	0.085	21.089	<0.001
8	-1.235 (-5.405**)	-0.017 (-0.830)	0.035 (5.628**)	0.000 (-0.093)					0.215	0.204	19.409	<0.001
9	-0.989 (-4.227**)		0.030 (6.694**)	-0.001 (-0.342)	-0.233 (-3.341*)				0.252	0.242	23.845	<0.001
10	0.507 (3.743**)				-0.288 (-0.012)		-0.294		0.149	0.137	12.403	<0.001

20	3.992 (2.586*)	-0.132 (-2.870*)	0.018 (2.680**)		-0.413 (-3.317*)		0.000 (0.582)	0.268	0.254	19.3 40	<0.0 01	
21	-1.052 (-4.302**)	-0.102 (-2.181*)	0.030 (4.475**)	-0.001 (-0.248)			0.001 (2.019*)	0.230	0.216	15.7 88	<0.0 01	
22	3.929 (2.535*)	-0.126 (-2.819*)	0.016 (2.043*)	-0.003 (-0.782)	-0.231 (-3.375*)	-0.363 (-2.927*)	-0.224 (-3.125*)	0.000 (0.700)	0.334	0.311	14.8 74	<0.0 01

Table 4 presents the results of a regression model examining the elements that impact the performance of mutual funds, including predictor variables such as fund size, age of fund, cash ratio, expenses ratio, commercial bank interest rate, inflation rate, and NEPSE index. The sample has 216 observations from various time periods. Using the symbols (**) and (*), the t-values in parentheses indicate whether the result is significant at 1 % and 5 % levels of significance respectively. In addition, Table 4 contains the R-square and F-statistic values for each model employed in the inquiry.

This study sheds light on Sharpe's ratio-based regression of independent variables on mutual fund performance. It illustrates that the size of a mutual fund has not been shown to have a substantial impact on the approach used to evaluate its performance. Sharpe's ratio as beta coefficients were inconsistently at 1% level of significance. It demonstrates that the size of a mutual fund has no influence on its performance on the Nepalese stock market. Given that all equity beta coefficients were consistently positive and statistically significant at the 1% level of significance, it has been found that age is a significant factor in determining the performance of mutual funds. It implies that the performance of a mutual fund would improve as its age increases. Additionally, it has been shown that the cash ratio plays a crucial role in determining the performance of mutual funds, as the beta coefficients of all equities were continuously negative and statistically significant at the 1% level of significance. It implies that the fund's performance will improve as the cash ratio increases. Similarly, it has been found that the expense ratio plays a crucial role in influencing the performance of mutual funds, since all equity beta coefficients were continuously negative and statistically significant at the 1% level of significance. It implies that the fund's performance would exceed the expense ratio. Similar conclusions have been reached regarding the effect of commercial bank interest rates on the performance of mutual funds, where beta coefficients were consistently negative and statistically significant at the 1% significance level across all equations. It implies that the fund's performance would improve if the bank rate increased.

In addition, it has been revealed that the rate of inflation has a substantial impact on the performance of mutual funds, since the beta coefficients of all equities are constantly negative

and statistically significant at the 1% level of significance. It implies that the fund's performance would decline if the rate of inflation rose. However, it has been exposed that the NEPSE index is not a significant factor influencing the performance of mutual funds, as beta coefficients for all equities are inconsistently significant at the 1% level of significance. This suggests that the NEPSE index has a negligible impact and has no consequence on the performance of mutual funds on the Nepalese stock market. Age has a positive effect on the Sharpe ratio performance of a mutual fund, whereas cash ratio, expense ratio, inflation rate, and bank rate have a negative effect. Furthermore, Nepalese mutual fund studies reveal an uneven association between fund size and NEPSE index.

7. Discussions

The results of this analysis indicate that, with the exception of NIBLPPF, mutual funds in Nepal have not performed as expected. A negative Sharpe's ratio means that either the risk-free rate is higher than the return on the portfolio or the predicted return on the portfolio is projected to be negative. If the Sharpe ratio is negative, the performance is not acceptable. It shows that a mutual fund's performance is struggling to give investors a positive numerator value return. Sharpe's ratio is a widely used metric for comparing risk-adjusted return to other factors in order to assess mutual funds' financial performance in comparison to other current schemes. This policy was developed by William F. Sharpe in 1966. The central bank determines the rate on Treasury bills in the money market, which is regarded as risk-free. Additionally, the return on a mutual fund can be impacted by the management of the fund's operations, a trader's strategy, or an investor's investing habits. If in those circumstances, a mutual fund's return exceeds the risk-free rate, it is said to have earned excess return.

Sharpe (1966) asserted that there is a small correlation between fund size and performance, high mutual fund performance is associated with low expense ratios. The analysis also showed that some of the schemes underperformed; these schemes had a problem with diversification. The standard of Sharpe's ratio performance can be used to categorize mutual fund performance as either doing well or outperforming. Afza and Rauf (2009) found that variables including 12B-1, liquidity, and lag return have a significant impact on the performance of mutual funds. The Sharpe ratio is used to evaluate the performance of funds using pooled time series and cross-sectional data, paying close attention to various fund attributes such as fund size, expense ratio, age, turnover, loads, and liquidity. According to studies by Ahmad et al. (2017), new money and turnover both considerably increase the Sharpe ratio. While age has a positive and significant relationship with conventional funds' performance, liquidity has a positive and significant relationship with the Sharpe ratio for Islamic funds. For conventional funds, the relationship between the expense ratio and the Sharpe ratio is inverse. Similarly, Asad and Siddiqui (2019) investigated the relationship between risk and expense ratio and mutual fund return. Risk return coefficient, fund size, and fund age are a few examples of factors that have no impact on fund returns. Meanwhile, there is a negative link between risk-adjusted return and macroeconomic variables like GDP and interest rates. According to Nazir and Nawaz (2010), the study role of funds is significantly stronger in developing nations where potential investors lack the resources and expertise necessary to invest in the capital markets as well as the risk tolerance necessary for direct investments in hazardous stocks.

The current situation of the Nepali mutual fund market can be ascertained by reading Nepalese literature. According to Poudel (2010), investors in Nepal have not yet adopted mutual funds as their preferred investing strategy. In Nepal, the mutual fund market is similarly quite small. The scope and coverage of mutual fund operations in Nepal are extremely limited. The Nepalese financial system, however, may be significantly impacted by mutual funds. By implementing better technology and placing a greater emphasis on timely information transmission, existing mutual fund organizations can improve the quality of their services.

Likewise, evidence suggests that fund age has a significant favorable impact on performance, whereas cash ratios, expense ratios, bank rates, inflation, and stock indexes have a significant negative impact on mutual fund performance in Nepal. In contrast, the factors that determine fund size are contradictory, but the market index has no impact on Nepalese mutual fund performance. Hence, the fund's internal and macroeconomic forces are major determinants of the fund performance in Nepal. The findings of this study have theoretical and conceptual implications for the variables that determine mutual fund performance in Nepal and Sharpe's measurement.

8. Conclusions

This study gives a general review of the Nepalese mutual fund market and uses Sharpe's ratio performance evaluation methodology to look into the factors that affect mutual fund performance. The primary determinants that affect the performance of mutual funds are macroeconomic factors like inflation rate, bank interest rate, and NEPSE index, as well as fund-specific features like size, age, cash ratio, and expense ratio.

This study reveals that the size of a mutual fund has not been identified as a key element influencing the performance measurement method since it has no influence on its performance on the Nepalese stock market. It suggests that fund managers are unable to balance fund size and performance. The study showed that age had been proven to be a crucial factor in affecting the performance of mutual funds. The existence of a positive correlation shows that the performance of a mutual fund improves as its age increases. Moreover, it has been found that the cash ratio plays a crucial role in influencing the performance of mutual funds due to its large negative correlation. It implies that the fund's performance will improve as the cash ratio increases. Therefore, fund managers must preserve their cash and cash equivalents to improve the profitability of mutual fund schemes. Similarly, it has been found that expense ratios have a crucial influence in determining the performance of mutual funds due to persistently negative and statistically significant relationships. It suggests that the fund's performance would exceed its expense ratio. The fund with lower expenses provides investors with a greater return. Regarding the impact of commercial bank interest rates on the performance of mutual funds, a negative and statistically significant link has been determined across the board. It implies that the fund's performance would improve if the bank rate increased. It implies that investors are drawn to mutual funds if banks offer their consumers low-interest rates. Additionally, it has been revealed that the rate of inflation has a strong negative and statistically significant relationship with the performance of mutual funds. It implies that the fund's performance would decline if the rate of inflation rose. However, it has been revealed that the NEPSE index does

not have a major impact on the performance of mutual funds. This suggests that the NEPSE index has a negligible impact and has no consequence on the performance of mutual funds on the Nepalese stock market. It occurs due to the fund manager's limited management capacity. It should be correlated with the market index, with a strong positive correlation indicating the performance of the funds.

The evidence indicates that the age of the fund has a favorable impact on its performance as assessed by Sharpe's ratio, whereas the cash ratio, expense ratio, inflation rate, and bank rate have a negative impact. In addition, the size of the fund has inconsistent relationships, and the fact that the NEPSE index has a relatively low effect further indicates that Nepalese mutual fund schemes have inconsistent relationships. In developing countries like Nepal, where potential investors lack the tools, knowledge, and facilities necessary to invest in the capital markets and the risk tolerance required for direct investments in risky companies, it is concluded that studying the factors that influence fund performance becomes significantly more important. This study seeks to be the first to examine the multiple factors that influence the growth of mutual funds.

9. Implications

Investors are advised to do a comprehensive market analysis that significantly impacts their return. When reviewing performance, the governance of mutual funds should examine a range of elements, including risk-adjusted assessment approaches. As a result, they will have enhanced managerial skills. Fund-specific and macroeconomic factors also substantially impact the success of mutual fund schemes. In Nepal, there are not many financially savvy investors with specialized skills. Mutual funds can be the greatest way for novice investors to enter the stock market because there is a minimal market risk for their investments. Mutual fund determinants are used to evaluate both the overall and individual performance of mutual funds. This study can assist owners of mutual funds, investors, securities analysts, and fund managers in properly managing and diversifying their portfolios. This study could prove valuable to the government in establishing new bylaws, regulations, guidelines, and norms to advance Nepalese mutual funds. This course teaches financial and academic students about the important aspects that determine the performance of mutual funds. Due to the fact that previous studies made this analysis possible, it may be useful for future studies on mutual funds.

10. Limitations and Avenues for Future Research

Due to the historical nature of the study's data, any generalizations should be interpreted with caution. This research contains existing closed-end mutual fund schema with the latest three fiscal years of data (2018/19 to 2020/21) but excludes mature schemas within this time period. This analysis does not cover open-end mutual funds. In Nepal, both firm-specific and macroeconomic factors impact the performance of mutual funds. Various trending performance measurement techniques, such as Sharpe, Treynor, Jensen's measure, and information ratio, are utilized to examine the risk-adjusted assessment of fund schemes. Additionally, the performance of mutual funds is used to evaluate economic growth, capital market trends, and investment patterns. It is difficult to evaluate how macro issues affect the returns of mutual

funds because fund performance is largely influenced by micro factors and the fund manager's market forecasts. However, macroeconomic issues impact the fund market as a whole as well as specific fund types. Therefore, more studies are necessitated to assess the mutual fund component of behavioral finance.

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