

PERFORMANCE EVALUATION OF CLOSED END MUTUAL FUNDS IN NEPAL

A Dissertation Submitted to the Dean, Faculty of Managements in Partial Fulfillment
of the Requirements for the Master's Degree

By:

Sweta Chaudhary

Shanker Dev Campus

Campus Roll No.: 853/076

Exam Symbol No: 24282/20

T.U. Regd. No.: 7-2-921-154-2015

Kathmandu Nepal

June, 2024

CERTIFICATE OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled "**Performance evaluation of closed end mutual funds in Nepal**". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

.....

Sweta Chaudhary

REPORT OF RESEARCH COMMITTEE

Ms. Sweta Chaudhary has defended the research proposal entitled "**Performance evaluation of closed end mutual funds in Nepal** " successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Madhusudan Gautam and submit the thesis for evaluation and viva voce examination.

Signature:

Madhusudan Gautam

Dissertation supervisor

Dissertation Proposal Defended Date

.....

Dissertation Viva Voce Date

.....

Asso. Prof. Dr Sajeep Kumar Shrestha

Head of Research Committee

Signature:

Dissertation Viva Voce Date

.....

APPROVAL SHEET

We have examined the dissertation entitled "**Performance evaluation of closed end mutual funds in Nepal** " presented by Sushma Shrestha for the degree of Master of Business Studies (MBS). We hereby certify that the dissertation is acceptable for the award of the degree.

.....

Madhusudan Gautam
Dissertation Supervisor

.....

Internal Examiner

.....

External Examiner

.....

Asso. Prof. Dr Sajeeb Kumar Shrestha
Chairperson, Research Committee

.....

Asso. Prof. Dr Krishna Prashad Acharya
Campus Chief

Acknowledgments

This thesis on the “Performance evaluation of closed end mutual funds in Nepal” is submitted in partial fulfillment of the requirements for the degree of Master of Business Studies (MBS) under the faculty of management at Tribhuvan University.

I would like to express my sincere gratitude to all those who have contributed to the successful completion of my research. This study would not have been possible without the support and guidance of several individuals and institutions. First and foremost, I am deeply indebted to my supervisor, Madhusudan Gautam of Shanker Dev Campus, Tribhuvan University. His invaluable insights, constructive feedback, and unwavering support throughout the research process have been instrumental in shaping this thesis. His guidance has not only enhanced my academic capabilities but also instilled in me a deeper understanding of the subject matter. I am also grateful to the faculty members and administrative staff at Shanker Dev Campus for their constant encouragements and for providing a conducive academic environment. Their support and resources have been essential in carrying out this research.

A special thanks to the staffs of the respective banks, Shanker Dev Campus Library, TU Central Department Library and the mutual funds industry in Nepal who provided me with the necessary data and insights. Their knowledge have significantly enriched this study. I would also like to express my thankfulness to my friends, my family members as well as known people who supported as well as inspired me directly or indirectly to complete this thesis. With help and support, I have been able to complete this work.

Sweta Chaudhary

Table of Contents

	<i>Page No.</i>
<i>Certification of Authorship</i>	<i>ii</i>
<i>Report of Research Committee</i>	<i>iii</i>
<i>Approval Sheet</i>	<i>iv</i>
<i>Acknowledgements</i>	<i>v</i>
<i>Table of Contents</i>	<i>vi</i>
<i>List of Table</i>	<i>viii</i>
<i>List of Figure</i>	<i>ix</i>
<i>Abbreviations</i>	<i>x</i>
<i>Abstract</i>	<i>xii</i>
CHAPTER – I INTRODUCTION	1-7
1.1 Background of the Study	1
1.2 Problem Statement	4
1.3 Objectives of the Study	6
1.4 Rational of the Study	7
1.5 Limitations of the Study	7
CHAPTER – II LITERATURE REVIEW	8-25
2.1 Conceptual Review	8
2.1.1 Mutual Fund	8
2.1.2 Regulation of Mutual Fund	11
2.1.3 Nepal Stock Exchange limited	13
2.2 Theoretical Review	13
2.2.1 Efficient Market Hypothesis	14
2.2.2 Capital Assets Pricing Model (CAMP)	15
2.2.3 Fama-French Three Factor Model	16
2.2.4 Style Box Theory	16
2.2.5 Darvas Box Theory	16
2.3 Empirical Review	17
2.4 Research Gap	25

CHAPTER – RESEARCH METHODOLOGY	26-33
3.1 Research Design	26
3.2 Population and Sample	26
3.3 Source of Data	27
3.4 Data Procedures	27
3.5 Method of Data Analysis	27
3.6 Research Frame work	30
CHAPTER – IV RESULTS AND DISCUSSIONS	34-48
4.1 Descriptive Statistics	34
4.2 Correlation Analysis	37
4.3 Regression Analysis	39
4.4 Discussion	45
CHAPTER – V SUMMARY AND CONCLUSION	49-53
5.1 Summary	49
5.2 Conclusion	50
5.3 Implications	51
Reference	
Appendix	

List of Tables

Table 1 Summary of Empirical Review	22
Table 2 List of Sample of Selected Mutual Fund	26
Table 3 Descriptive Statistics of Mutual Fund	34
Table 4 Correlation Analysis	38
Table 5 OLS Regression Output (ROA as Dependent Variable)	40
Table 6 Fixed Effect Regression Output (ROA as Dependent Variable).....	41
Table 7 TEST Result of Likelihood Ratio (Polled OLS vs Fixed Effect)	42
Table 8 OLS Regression Output (ROE as Dependent Variable)	43
Table 9 Fixed Effect Regression Output (ROE as Dependent Variable)	44
Table 10 Test Result of likelihood Ratio (Pooled OLS vs Fixed Effect)	45

List of Figure

Figure 1 Research Framework	30
-----------------------------------	----

Abbreviations

CMF	:	Citizen Mutual Fund – I
DPR	:	Dividend Payout Ratio
FAG	:	Fund Assets Growth
KEF	:	Kumari Equity Fund
LEMF	:	Laxmi Equity Fund – 1
MGMT	:	Management
MPS	:	Market per Share
NAV	:	Net Assets Value
NEF	:	Nabil Equity Fund
NEPSE	:	Nepal Stock Exchange
NIBLPF	:	NIBL Pragati Fund
NIBSF2	:	NIBL Samriddi Fund - 2
NRB	:	Nepal Rastra Bank
NSIF	:	NMB Sulav Investment Fund – II
ROA	:	Return on Assets
SAEF	:	Sanima Equity Fund
SEBON	:	Securities Board of Nepal
SEF	:	Siddhartha Equity Fund
SFMF	:	Sunrise First Mutual Fund
GDPG	:	Gross Domestic Product Growth
ROE	:	Rate of Return
AMCs	:	Assets Managements Companies
OLS	:	Ordinary Least Squares
I	:	Inflation Rate
ROR	:	Rate of Return

Abstract

This study aims to examine the performance of listed close end mutual funds in Nepal. For this purpose, ten close end mutual funds are selected as sample size of the study which was matured only, during 2016/17-2020/21. The secondary data are used to examine the analysis of financial performance of selected mutual funds in Nepal. The secondary data used in this study are obtained from published annual reports and websites of the close end mutual fund companies. This study employed descriptive and casual comparative research design. The tools used on the study are statistical tools, which are descriptive statistics, correlation coefficient and regression analysis. Return on assets and Return on equity are the selected dependent variables while the remaining variables—Dividend Payout Ratio (DPR), Fund Assets Growth (FAG), Fund Size (FS), Management Fee (MF), GDP Growth (GDPG), and Inflation Rate (I)—are independent variables.

The result found that of return on assets has significant positive relationship with dividend payout ratio, fund size, fund assets growth and GDP growth rate. In addition, Dividend payout ratio, fund assets growth and GDP growth rate also have significant positive association between return on equity, suggesting that higher dividend payout ratio, fund size, fund assets growth and growth rate in GDP may lead to increase profitability of mutual funds. Further regression analysis further confirmed the significance effect of fund size and fund assets growth on return on assets and return on equity showing increases in fund size and fund assets growth associated with increases in return on assets and return on equity. However there was significant negative impact of management fee implies that increase in management fee can decrease the return on equity of mutual funds in Nepal. Other variables such as dividend per share, GDP growth and inflation rate had statistically insignificant impact on profitability of mutual funds in Nepal.

Keywords: *Return on Assets, Return on Equity, Dividend per share, Fund size, Fund assets growth ratio, Management fee, GDP growth & Inflation rate*

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Mutual fund is an investment fund that pools money from various investors and invests the funds in stock, bonds, short-term money-market instruments and other securities. Small investors that lack the time or experience to manage a portfolio when making capital market investments typically like this diversified portfolio investment instrument (Kumar,2019; Hussain,2017). Compared to directly investing in the stock market, investing in the mutual fund market has less risk and is safer (Nicolescu et al., 2020). Mutual funds are organizations created to help small investors who are unable to make direct investments in a variety of securities. Mutual funds are well-liked investing options for people looking to get exposure to a variety of asset classes with comparatively small investment amounts because they offer professional management, liquidity, and diversity.

Mutual funds are managed by profession fund managers who create specific portfolios with regards to the investment objectives. In Nepal Securities Board of Nepal (SEBON) currently regulated the mutual fund industry in Nepal under the securities act,2016. The Nepal Industrial Development Corporation (NIDC) Capital Market established the "NCM Mutual Fund 1993" in 1993, marking the beginning of the mutual fund industry in Nepal. The NCM Mutual Fund, 1993 was transformed into a close-end fund in 2002 under the name "NCM Mutual Fund, 2002" after its term ended in 2001 (Thapa & Rana, 2011).On the Nepali stock exchanges, there are presently 33 closed-end mutual funds and 7 open-end mutual funds listed. On the other hand, mutual funds have only been around for ten years in Nepal. Our primary selection consists of closed-ended mutual funds, each with a five-, seven-, or ten-year fixed maturity date and an initial public offering (IPO).

An investing firm that holds or bundles other publicly traded assets is known as a closed-end fund (CEF). Although their corporate activity mostly consists of investing money in the securities of other businesses and managing these two investment holdings for income and profit, they function similarly to any other business firm. A CEF is often listed on a national exchange, where its shares are bought and sold in transactions with other investors rather than the fund itself. This is in contrast to an

open-end mutual fund, which issues and redeems shares directly with investors at net asset value (NAV). Accordingly, the market value of a fund's shares is determined by market supply and demand, and CEF capitalization is fixed, or closed (University of Puerto Rico,2009).

In Nepal NEPSE is where closed-ended mutual funds are listed and traded. They compute Net Assets Value (NAV) independently, regardless of trade value. Mutual fund NAV, or face value, is 10 Nepalese Rupees (NPR) per unit at the moment of issuance. A mutual fund's net asset value (NAV) is determined using the method outlined in Section 23 of the Mutual Fund Guidelines, 2012, which are published by the Securities Board of Nepal. Closed-end funds typically adhere to the stated aim, such as capital appreciation or current income, and focus on stocks or fixed income instruments. Like closed-end country funds, funds can also be extremely specialized, investing in a particular kind of security or in a certain area or nation. They can also borrow money to increase the leverage of their investment positions and issue significant securities like debentures or preferred shares.

Every day, the net asset value (NAV) of mutual fund shares is determined by deducting fund liabilities from the overall market value of the portfolio's assets. The net asset value is divided by the total number of outstanding shares to determine the price per share. The establishment of a capital market that can satisfy the nation's financial needs can lead to economic growth. Financial institutions, which can generate savings from the general public and provide capital for investment purposes, are essential parts of the financial system. One such financial organization is the mutual fund business, which generates capital by selling small units to the general public and uses it to support investments across a range of industries (Rani & Hooda, 2017).

Mutual funds make extensive stock investments, and their performance is typically measured by observing changes in the fund's overall market capitalization, which is obtained by adding together the returns of all of the individual assets. Generally, units or shares of mutual funds can be bought or redeemed at the fund's current net asset value (NAV), which is also frequently referred to as NAVPS. The total value of the securities in the portfolio is divided by the total number of outstanding shares to get the net asset value (NAV) of a fund (Chen, 2018).

Insufficient capital management by the fund can result in insolvency or inadequate management fees, which could ultimately destroy shareholder value and cause the entire financial organization to collapse. Thus, keeping the return at its optimal level is crucial to the institution's continued profitability and smooth operation. According to the study conducted in this regard by (Gruning & Bratonovic,2004), mutual funds need to have a well-defined risk management policy that is communicated throughout the entire organization and a NAV control strategy that lays out specific guidelines for the management of assets and liabilities in order to manage capital and return (Malik & Rafique, 2013).

Numerous studies have determined that the size of a mutual fund is primarily influenced by the capital market's maturity, highly regulated, highly structured investments, demographics, and the general economic development of a nation (ICB Assets Management Company Limited,2018; Kabir Biplob,2017).

A certified fund manager selects and oversees the investments in a mutual fund, making choices on the investors' behalf. A yearly dividend and the entire amount due at the conclusion of the investment's maturity period are paid to investors. Institutions and the general public are the sources of funds for mutual funds. A mutual fund scheme's "unit holder" is every investor in mutual funds. According to their respective investment amounts, each unit holder has an equal and proportionate share in the profits and losses of the funds. Rather than any one security in which the fund is invested, investors are entitled to gains and losses earned on the entire portfolio.

The performance evaluation of the mutual fund depends on various factors such as financial performance, operational performance and overall effectiveness. Financial performance includes return on equity, return on assets, earning per share, stock price and sale growth. Operational performance contains efficiency, market share and innovation. Overall effectiveness includes survival, aim achievement reputation, and perceived overall performance. In this study, ROA and ROE is used as a proxy of fund performance.

Mutual funds offer an accessible way for individual investors to access professional management and diversification, helping them build diversified investment portfolios aligned with their financial goals.

1.2 Problem Statement

Investment Company Institute (ICI, 2020) highlighted that the actively managed equity mutual funds have higher expense ratios than passively managed equity mutual funds. These exorbitant expenses may reduce investors' earnings and detract from the fund's overall image. Liquidity has a positive but statistically insignificant influence on ROA and ROE, according to Jain, Singal, and Dwivedi (2021). Similarly, a study by Rahman and Subot (2022) discovered that the variable most significantly connected to ROA is dividend payout, and earning per unit has a significant positive relation with ROA. In comparison, fund size, asset growth, and management fee have less of an impact on ROA.

In Modigliani and Miller's dividend irrelevance theory, The cost of capital and the stock price of the company are unaffected by the dividend. In accordance with this theory, Foong et al.'s (2007) analysis of firm performance and dividend-related factors using multiple regressions. The study focused on Malaysia in order to ascertain the relationship between dividend payout and firm performance using data gathered from plantation and trading firms in the country between 1992 and 2000. The authors discovered that, among Malaysian trading/services and plantation firms, there was a negligible or nonexistent correlation between dividend payout and firm performance.

Malkiel (1977) contended that large dividend payout ratios are advantageous to investors. The Swedish market study's findings indicated that the greater the dividends given, the higher the discount, which runs counter to the anticipated outcomes (Egerot and Hagman, 2011). High dividends are preferred by investors because they indicate a favorable outlook for future cash flows, according to Starks and Yoon (1995).

According to Nobel laureate James Tobin's Q theory, company financial conditions depend on the manager's willingness or investment expenditure by minimizing the cost of capital. Asset growth is not more significant, if the manager cannot use those assets efficiently. In similar to the Q theory, (Titman et al., 2003) applied regression analysis on 40 countries including the USA. The authors found that 13 countries had positively significant relationships and 26 countries had negatively significant relationships with asset growth and firm performance. The authors concluded that

asset growth impact depends on the country's condition, as in the case of developed countries impact of asset growth is more visible than developing or underdeveloped countries.

Rahman (2022) discovered that while the weight of the top 10 investments, dividend yield, and fund age have no effect on the CEF discount, fund size and maturity have a significant positive and turnover has a significant negative impact. Additionally, fund size had a negative correlation with return on equity, while earning per unit had a positive correlation with return on equity.

According to Chen et al. (2004) there are advantages on economic of scale, such as large volume of resources have lower expense ratios. Conversely, opponents believe that a comparatively high asset base corrode fund performance due to trading costs associated with liquidity or price impact (Roger Lowenstein, 1997). Additionally, large fund can be invested in junk portfolios and erode fund performance. On the other hand, a small fund can be poured easily in its best ideas and can invest in the optimal stock, whereas, a large fund cannot. However, there is mixed evidence that fund return decline with fund size (Grinblatt & Titman, 1989). Needless to say, there is no consensus on this issue.

Rahman (2022) demonstrated that the size of mutual funds and management fees do not correlate over the long term. Earnings per unit has a major favorable short-term impact on management fees. The rise of a fund's assets, however, has little bearing on management costs. Based on the findings of this study, income per unit is thought to be the best way to guarantee the stability and safety of financial institutions. Tian et al. (2022) revealed fund performance and management costs are negatively correlated. The findings indicated that managers could increase shareholder value by cutting costs.

Dahlquist et al (2000) find out that mutual funds with low administrative fees perform better than funds with higher fees. Funds whose trading activity is high also show good performance as well as funds with good past performance. A research done by Harris (1997) is another study that indicates the positive relationship between low administration fees and high return.

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.

The growth of GDP, interest rates, and inflation are examples of macroeconomic factors that can significantly affect mutual fund returns. These factors may have an impact on the relative performance of investments and the general level of economic activity, which may have an impact on the outcomes of mutual funds that make certain asset class investments. According to F Stevenson & Paterson's (2007) research, there is evidence that macroeconomic factors like GDP growth, inflation, and interest rates can significantly affect the performance of mutual fund schemes that were offered in the UK at the time.

Based on the above literature, this study tries to address the following issues:

- What is the existing financial performance of selected mutual fund?
- Is there any relationship between fund size, DPR, fund assets growth, management fees, gross domestic product growth, inflation rate, ROA and ROE?
- What is the impact of fund size, DPR, fund assets growth, management fees, gross domestic product growth, and inflation rate on ROA and ROE?

1.3 Objective of the Study

The main objective of the study is to evaluate the performance of closed end mutual fund schemes in Nepal. The specific objectives are follows:

- To identify the existing financial performance of selected mutual fund.
- To examine the relationship between fund size, DPR, fund assets growth, management fees and ROA.
- To analyze the impact of fund size, DPR, fund assets growth and management fees on ROA.

1.4 Rationale of the Study

The concepts of mutual funds are new in the context of Nepal and investors may not sufficient knowledge and information about mutual fund which directly influence the mutual fund market. This research study will help to evaluate the performance of selected mutual funds and also provide the information about mutual funds. Evaluating historical performance of mutual funds helps both investors as well as portfolio managers for further investments. It enables investors to asses as to how much return has been generated by the portfolio managers and in generating such risk what level has been assumed.

An investor can also appraise the comparative performance of different fund managers. Similarly fund managers would also be able to know their performance over time and also vis-a-vis that of other competitors in the industry. The evaluation also provides a mechanism for identifying strengths and weaknesses of fund managers in the investment process, which helps them to take corrective actions.

1.5 Limitations of the Study

In Nepal there is on comprehensive study has been done so far about mutual fund. The concept of mutual funds in Nepal is new compare to other developed countries. The study is not extensive, it is the limited research conducted only for clear knowledge about the performance evaluation of the selected closed end mutual fund in Nepal. There are 33 closed end mutual funds trading in NEPSE, where only 10 close end mutual funds are considered for the study. In past years mutual funds are less attraction compared to shares of commercial banks, insurance, development and finance and micro finance but in current scenario mutual fund gaining popularity. This study is based on secondary data but the data available is limited so the study has to continue from the available data provided by the mutual fund websites. Number of the observation is small as the study includes only 5 years data. And limited literature review has been reviewed from the Nepal and most of the literature has been reviewed form the foreign countries. Some of the literature is far away from the applicability in the context of Nepal.

CHAPTER-II

LITERATURE REVIEW

This chapter is basically concerned with literature review related to performance evaluations of close end mutual funds in Nepal. This chapter has been divided in to following parts.

- Conceptual Review
- Theoretical Review
- Empirical Review

2.1 Conceptual Review

This section reviews prior studies on mutual fund schemes, their financial success, and their relationship to stock exchange indices. It also evaluates the body of literature that is currently available on the topic.

2.1.1 Mutual fund

A mutual fund is a type of investment vehicle that pools money from multiple investors to purchase a diversified portfolio of securities such as stock, bonds, money market instruments, and other assets. Mutual fund are managed by professional fund managers who make decisions on behalf of the investor based on the fund's objectives. The two types of mutual fund schemes that are commonly identified are closed-end and open-ended models. A closed end fund scheme is a mutual fund that has a predetermined maturity period, a defined number of mutual fund units, and is issued through a new fund offer. An open-ended fund plan is a financial pool where the number of units that can be sold or bought back is unlimited. Open ended plans don't have a set time to maturity.

Assets Management Companies (AMCs), also known as merchant bankers in Nepal, often offer a variety of mutual fund plans and invest a little sum as seed money. Occasionally, governing laws or rules specify a minimum required portion of seed capital, and fund managers invest in seed capital in accordance with those guidelines. Mutual fund managers make investments in a variety of securities, including stocks,

bonds, and other assets, in accordance with guidelines provided by the relevant regulators. In Nepal, the fund sponsor designates the fund manager to oversee the mutual fund management, and the fund supervisor serves as an oversight body similar to the board, which reviews the fund manager's actions on a regular basis.

By directing low-income investors' funds and circulating them throughout the economy as assets and investments in profitable financial instruments and assets, mutual funds play a crucial role in the capital market. Individual and institutional investors' wealth is invested in a variety of financial securities through mutual funds. It essentially pools the resources of several investors and expertly allocates them among various financial products. It invests the funds and distributes resources primarily into bonds, stocks, and cash and equivalent assets (Mahar et al., 2021).

The first mutual fund scheme issuer in Nepal was NIDC Capital Market, which launched "NCM Mutual Fund 2050" in 1993 and "NCM Mutual Fund-2059" in 1993–1994. Similar to this, the Citizen Investment Trust-managed "Citizen Unit Scheme 2052" was launched as an open-ended mutual fund in 1994–1995 and is still in existence today. These three mutual funds functioned in an unregulated and unmonitored environment (Shrestha et al., 2020).

Even if they lack the knowledge or experience in making such investments, small investors can still access a professionally managed and diversified portfolio of stocks, bonds, debentures, treasury bills, and other securities through mutual funds, which act as a collection of investable funds. Units, or each investor's share of the fund's assets, are owned by each mutual fund investor. Investors take part in the appreciation or depreciation of the portion of their assets. Better fund performance benefits investors, whereas poor fund performance could result in a decline in the value of their investment. Multiple closed-end and open-ended mutual fund schemes can be managed by the same securities manager.

Closed-End Mutual Fund Schemes

A closed-end mutual fund is a type of investment fund that raises a fixed amount of capital through an initial public offering (IPO) and then lists its shares for trading on a stock exchanges. Unlike open-end mutual fund, which continuously issue and redeem shares at the net assets value (NAV), closed-end funds have a fixed number of shares that are traded among investors on the open market.

An investing firm that holds or bundles other publicly traded assets is known as a closed-end fund (CEF). They function similarly to any other commercial corporation, but the majority of their corporate activity is managing their investment holdings for profit and income by investing funds in the securities of other businesses. A CEF is often listed on a national exchange, where its shares are bought and sold in transactions with other investors rather than the fund itself. This is in contrast to an open-end mutual fund, which issues and redeems shares directly with investors at net asset value (NAV). This indicates that the market value of a fund's shares is determined by market supply and demand, and that the CEF capitalization is fixed, or closed. Therefore, an important characteristic that makes closed-end funds unique is that they provide contemporaneous and observable market-based prices and rates of return for the fund's stocks which can then be compared with the underlying asset portfolios. Closed-end funds specialize in either stocks or fixed income securities, and usually follow consistently the stated objective, such as current income or capital appreciation. Funds can also be highly specialized, investing in a specific type of security or in a particular region or country like the closed-end country funds (University of Puerto Rico, 2009).

Mutual fund schemes with a predetermined fund size and a specified maturity date are known as closed-end mutual fund schemes. To raise money for investments, these funds first offer their units for sale to the general public through a New Fund Offer (NFO). They work with a set quantity of units. In context of Nepal (Mutual Fund Regulations, 2010) closed-end schemes have a four-day subscription period with a fifteen-day extension option. The units in these schemes are then listed on NEPSE. In the context of Nepal, investors who wish to purchase or sell units of closed-end fund schemes can do so from the Nepal Stock Exchange through securities brokers.

Open-End Mutual Fund Schemes

An infinite number of shares can be issued by a diversified portfolio of pooled investor capital, known as an open-end fund. Investors can purchase shares directly from the fund sponsor, who also redeems them. The daily price of these shares is determined by their net asset value (NAV). Exchange-traded funds (ETFs) and mutual funds are primarily open-ended.

Shares are issued by open-end funds to customers upon request. Investments are welcome at all times. When shares are bought, the fund issues fresh replacement shares, and when shares are sold, they are taken off of the market. At their NAV, shares are purchased and traded as needed. For mutual funds, the daily net asset value is determined at the conclusion of the trading day and is based on the value of the fund's underlying securities. The fund might liquidate some of its holdings to cover the selling investors' costs if a significant portion of the shares are redeemed. Open-end funds issue shares to clients upon request. We always welcome investments. The fund removes shares from the market when they are sold and issues new shares in exchange for the ones that are purchased. Shares are bought and sold at their NAV as needed. The value of the fund's underlying securities is the basis for calculating the daily net asset value for mutual funds, which is established at the end of the trading day. If a sizable percentage of the shares are redeemed, the fund may have to liquidate some of its assets to pay the costs incurred by the selling investors (H. kent baker et al., 2020).

Liquidity, or the ability to convert an open-end mutual fund into cash right away, is one of its main characteristics. An open-end fund allows investors to buy and sell mutual fund units at any time, and the fund is obligated to buy back units from investors who want to sell. Because open-ended mutual funds allow participants to enter or exit the fund based on their required investment, they are a popular option for individual investors. Units in open end funds are not listed on secondary markets and do not have a maturity period. Rather, they are purchased and sold at Net Assets Value, which is determined at the conclusion of each trading day, directly through the fund management or asset management businesses.

2.1.2 Regulation of Mutual Fund

The highest regulating organization for Nepal's capital market is the Securities Board of Nepal (SEBON) through Mutual Fund Regulations, 2067 (2010 A.D.). In addition to regulations, SEBON has issued Mutual Fund Directive, 2069 (2012 A.D.) to explain various provisions related to mutual funds. SEBON clearance is a prerequisite for any mutual fund scheme to operate and regulate in the market. Under this, there are four parties involved in the formation and management of Mutual Fund scheme.

- Fund Sponsor
- Fund Supervisor
- Fund Manager
- Depository

Fund Sponsor

A fund sponsor is an entity, typically a financial institution, assets, management firm, or an investment company, that creates, manages, and markets an investment fund. The mutual fund schemes are created and promoted by fund sponsors. Financial institutions, insurance companies, and non-banking financial institutions established under special acts are all eligible to register mutual funds and serve as fund sponsors in accordance with the Mutual Fund Regulations published by the Securities Board of Nepal. Institutions seeking to be appointed as fund sponsors must meet the standards set forth by SEBON. The fund sponsor names fund managers, fund supervisors, and the depository to oversee the mutual funds after receiving clearance from SEBON.

Fund Supervisor

In Nepal, the fund sponsor appoints five individuals who meet the requirements outlined in the SEBON laws to serve as fund supervisors. Supervising funds in the best interests of unitholders is one of the fund supervisor's main tasks.

Fund Manager

The mutual fund scheme is managed by fund sponsors through the appointment of fund managers or assets managers. A fund manager in Nepalese context is any merchant banker who holds a SEBON license. A fund manager's main responsibilities include registering and overseeing mutual fund schemes and making effective investments with the scheme's assets for the benefit of unitholders. The fund management is required to provide seed capital to the mutual fund schemes it manages, equal to at least fifteen percent of the initial scheme size. If the fund manager is not able to invest seed capital, then fund sponsor is required to invest in seed capital after obtaining approval from SEBON. Fund Manager receives fund management fees for managing the mutual fund schemes.

Depository

A depository is a facility, institution, or organization responsible for holding and safeguarding financial assets, such as securities (stock, bond, etc.). On the behalf of clients. Depositories streamline the process of transferring ownership and settlement of these assets, making it easier and more secure for investors to manage their holdings. With the fund supervisor's approval, the fund manager selects the depository. In Nepal, the fund manager serves as a depository, facilitating transactions between unit holders, preserving securities, and managing unit records, among other duties.

Currently, fund manager can charge up to 1.5% of Net Assets Value as fund management fees and up to 0.2% of Net Assets Value as depository fees. Both the fund management fees and depository fees are charged as expenses to the fund.

2.1.3 Nepal Stock Exchange Limited

The sole stock exchange in Nepal is called NEPSE. Investors can purchase and sell stocks on this secondary market. There are 75 licensed brokers and 249 listed businesses in the NEPSE at the moment. NEPSE's primary goal is to give corporate and government assets unfettered marketability and liquidity by enabling trades on its trading floor via members who operate as market intermediaries, including brokers and market makers.

The secondary market, also known as the Nepal Stock Exchange Limited (NEPSE), is where investors buy or sell shares from other investors using the NEPSE-provided system via its members, who are known as securities brokers. NEPSE is now Nepal's only securities exchange. The sole secondary market index in Nepal that tracks the movement of stocks listed on the stock exchange is the NEPSE Index. Since mutual funds in Nepal have a significant investment concentration in NEPSE-listed equities, we can compare NEPSE's growth to the growth or performance of mutual funds and determine whether or not mutual funds have outperformed NEPSE's growth.

2.2 Theoretical Review

This part of literature review focuses on the theoretical review of mutual fund (investment companies) investment companies undertake the task of pooling the fund and investing in securities. Investment companies are specialized intermediaries that purchase securities and offer investors units in order to arise capital. Investment firms

issue the units as securities to attract capital from investors. In exchange for their professional services, they charge investors fee. The investors receive any benefits that arise from appreciation in the value of the securities, while the managers of the funds received fixed management fees. Thus, a company that investments in marketable securities and other investment categories like real assets might be referred to as an investment company. The most often used type of investment company is a mutual fund (Aryal,2021).

There are a number of ideas and theories surrounding mutual funds that are frequently examined and debated. The following are some important mutual fund theories:

2.2.1 Efficient Market Hypothesis

Efficient Market Hypothesis (EMH), one of the most eminent and influential of modern financial theories, assumes that all relevant information is rapidly incorporated in security prices as released. The investment theory known as the "efficient markets hypothesis" was mainly inspired by ideas from Eugene Fama's research, which was described in his 1970 book "Efficient Capital Markets".The EMH, one of the most accepted and eminent financial theories, stated that new information readily incorporated in security prices and market activities or analysis of historical and present data cannot help investors to predict future or to earn above average risk adjusted profit. Moreover, expected return based on this price is consistent with risk, implying that arbitrage opportunities are not viable to consistently identify and exploit. EMH is primarily based on random walk model, according to which information comes into market in random and unpredictable manner and price changes are thus expected to be random and independent. It is suggested that above average return is associated with above average risk. Efficient market hypothesis rests on three crucial arguments or assumptions:

- Investors are assumed to be rational and value securities on the basis of maximum expected utility.
- If investors are not rational, their trades are assumed to be random, offsetting any effect on prices.
- Rational arbitragers are assumed to eliminate any influence irrational investors have on market/security prices

According to this theory, it is not possible to consistently outperform the market because all available information is already reflected in the asset prices. This implies that it is difficult to beat the market consistently through mutual fund investment strategies. The efficient market hypothesis (EMH), alternatively known as the efficient market theory, is a hypothesis that states that share prices reflect all information and consistent alpha generation is impossible. The Efficient Market Hypothesis (EMH) states that stocks on exchanges always trade at their fair value, meaning that investors cannot buy cheap stocks or sell them for high prices. Consequently, professional stock selections and market timing should not be able to outperform the market as a whole; the only option for an investor to get larger returns is to make riskier bets. Despite being a mainstay of contemporary finance theory, the EMH is quite contentious and frequently called into question. Some who hold this belief contend that using technical or fundamental analysis to forecast market movements or look for cheap stocks is useless.

2.2.2 Capital Assets Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) was introduced by William Sharpe (1964) and John Lintner (1965), resulting in a Nobel Prize for Sharpe in 1990. It is built on the earlier work of Harry Markowitz (1959) who developed the “mean-variance model” or model of portfolio choice. The model is used to determine a theoretically appropriate required rate of return of an asset, and thus the price could be also expected if firms can estimate the expected cash flows.

The relationship between systematic risk, or the broad risks associated with investment, and expected return for assets, particularly stocks is explained by the Capital Asset Pricing Model (CAPM). It's a financial model that shows that risk and the necessary return on investment are correlated linearly. Capital Asset Pricing Theory Assumption.

Differential Borrowing and Lending Rates

Friend and Blume (1970) suggested that the apparent mismatch between the ex-ante predictions of the CAPM and the observed ex-post relationship between the risk and return of securities traded on the New York Stock Exchange might be explained by the disparity in lending and borrowing rates. These authors contend that the difference in lending and borrowing rates among investors alone should produce an ex-ante

market risk-return trade-off. In this scenario, the risk of a security is determined by its beta coefficient, which is made up of two straight lines representing lending and borrowing opportunities and connected by a concave curve along the risk axis that results from the collection of efficient risk-portfolios for which lending and borrowing opportunities would not increase an investor's return.

2.2.3 Fama-French Three Factor Model

The Fama-French three-factor model is an extension of the Capital Assets Pricing Model (CAPM), which was developed by Eugene F. Fama and Kenneth R. French in 1992. This model takes into account the fact that small-cap and value stocks frequently beat the market. The model accounts for this outperforming propensity by adding these two more variables, which is supposed to improve its usefulness as a tool for assessing management performance.

Three components make up the Fama and French model: excess return on the market, book-to-market values, and business size. Stated differently, the three parameters that are taken into consideration are the return on the portfolio less the risk-free rate of return, small minus big (SMB), and high minus low (HML). HML accounts for value equities with high book-to-market ratios that produce higher returns relative to the market, whereas SMB accounts for publicly traded companies with tiny market caps that create higher returns.

2.2.4 Style Box Theory

Style boxes are a mutual fund classification scheme created by the financial analytics firm Morningstar, the concept was introduced in 1992 by Don Phillips. Which are designed to visually represent the investment characteristics of stocks and mutual funds. Style boxes provide a graphical representation of investing categories for both fixed-income and equity investments. A style box is a valuable tool for investors to use when determining assets allocation. There are slightly different style boxes used for equity and fixed-income investments. Style box theory is a graphical representation of an investment's characteristics.

2.2.5 Darvas Box Theory

Nicolas Darvas created the Darvas box theory in the late 1950s, a stock-focused trading method that uses highs and volume as crucial indications. Investing in equities that are hitting new highs and drawing a box around the recent highs and lows to

determine an entry point and stop-loss order placement are key components of Darvas' trading strategy. When a stock's price movement breaks above its prior high but then returns to a level that is not far from that high, it is said to be in a Darvas box. Since the Darvas box theory is not restricted to any particular time frame, the boxes are made by sketching a line between the most recent highs and lowest of the trader's chosen time frame. A technical approach called Darvas box theory enables traders to pick equities with rising transaction volume. The Darvas box hypothesis is most effective when applied to rising markets and/or bullish industry sectors.

2.3 Empirical Review

This part includes a study of academic publications and dissertations on mutual fund operations as well as an analysis of the relationship between stock exchange index performance, financial performance, and operational effectiveness. It also offers an overview of the findings drawn by earlier researchers, scholars, and organizations in the field of mutual fund research.

Treynor (1965) used the characteristic line for relating expected rate of return of a fund to the rate of return (ROR) of a suitable market average. The researcher even coined the fund performance measure taking investment risk into account. Also, to deal with a portfolio, portfolio possibility line was used to relate expected return to the portfolio owner's risk preference.

Sharpe (1966) developed a composite measure of return and risk. The researcher evaluated 34 open-end mutual funds for the period 1944-63. The study revealed that the reward to variability ratio for each scheme was significantly less than DJIA and ranged from 0.43 to 0.78. Also, it reveals that expense ratio was inversely related with the fund performance, as correlation coefficient was 0.0505. The results showed that notable performance was linked with the low expense ratio and not with the size. Also, the sample schemes showed consistency in risk measure. The analysis found that, when it came to risk, 19 of the 34 funds outperformed the benchmark, and that there was no correlation between performance and fund size. Additionally, funds with low expense ratios outperformed the benchmark in terms of performance.

Baker et al., (1985) concluded that the major determinants of dividend payments are the anticipated level of future earnings and the pattern of past dividends. The study presented an overview of the dividend related factors which a survey of 318 New

York Stock Exchanges. These factors are consistent with those identified by Lintner (1965). Their results also reveal that managers' believe dividend policy affects share value and the managers are highly concerned with dividend continuity. In addition, their findings suggest that managers of utility companies view the dividend decision somewhat differently than that of manufacturing and wholesale/retail firms.

Harris (1988) explained the large funds lead to minimum operational cost as these are capable to bargain lesser spreads. In addition, large funds have greater market domination as well as enhanced trading volumes. Moreover, due high market domination and large trade volume these funds enjoy economy of scale over fund operational cost (Brennan & Hughes, 1991).

Carhart (1997) suggested that past performance could predict future returns, largely due to the momentum effect, where funds holding high-performing stocks continued to do well in subsequent periods.

Kalapper and love (2002) conducted that Return on Assets (ROA), used as a standard indicator to measure firm operating and financial performance. Higher ROA indicates that the firm was utilized its assets more effectively for better output, which has direct advantages to shareholders. On the other side, lower ROA means the firm failed to use its assets properly, which negatively impacted shareholder value (Haniffa & Hudabia, 2006; Ibrahim et al., 2010). Many researches used ROA as an important indicator to measure firm performance some of them are (Uwuigbe & Olusanmi, 2012; Karaca & Eksi, 2012; Rouf, 2011; Shumway, 2001)

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.

Hada (2013) which examines the top mutual funds and are considered to represent mutual funds in India from 2007 to 2012. The study involved six samples and used Treynor Ratio, Sharpe Index, and Jensen models. From the research, it is concluded that mutual funds, in the long run, have better performance than the market. Long-term mutual fund returns are better than returns on similar investment instruments. Mutual funds can provide a satisfactory level of return and risk adjusted return except during a recession.

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.

Champagne et al., (2017) conducted a quarterly study on the mutual fund performance and portfolio turnover activity in the United States throughout a 5-year period, from 2011 to 2016. Portfolio turnover ratio, industry concentration index, active share, active weight, fund age, total net assets, number of stocks, and expense ratio were the independent variables. The dependent variable under investigation was the mutual fund's quarterly modified turnover. The results indicated a negative correlation between the fund's historical performance and modified turnover, indicating that managers with lower performance levels may be more likely to make portfolio changes than managers with higher performance levels. The study revealed that modified turnover can be used to forecast fund performance over a wider time horizon of one to five years.

Indro et al., (2019) analyzed the Fund size (net assets under management) affects mutual fund performance. Mutual funds must attain a minimum fund size in order to achieve sufficient returns to justify their costs of acquiring and trading on information. Furthermore, there are diminishing marginal returns to information acquisition and

trading, and the marginal returns become negative when the mutual fund exceeds its optimal fund size. In a sample of 683 nonindexed U.S. equity funds over the 1993–95 period, we found that 20 percent of the mutual funds were smaller than the breakeven-cost fund size and 10 percent of the largest funds overinvested in information acquisition and trading. In addition, we found that value funds and blend (value-and-growth) funds have more to gain than growth funds from these information activities.

Pastor and Vorsatz (2020) studied how U.S. active equity mutual funds did and how much money they attracted or lost during the COVID-19 crisis and discovered that most active funds did worse than passive funds, going against the idea that active funds do better in downturns. It was also observed with those funds who have higher star ratings and higher sustainability ratings performed better. The fact that investors keep paying attention to sustainability during a big crisis shows that they consider sustainability as essential, not optional.

Panigrahi et al., (2020) concluded that even though risk increases with the increase in inflation rate, mutual fund performance tends to improve. Garg & Srivastava (2019) also conclude that inflation and assets under management (AUM) of mutual funds are positively correlated. Gusni and Hamdani (2018) found that inflation positively affects the equity mutual fund performance. Marfo (2016) established that though inflation has a positive influence on the performance of mutual funds in Ghana, in the long-run, it showed a negative impact in the short term. Tulamy (2013) also found a positive effect of inflation on fund return, while Singh et al. (2011) found a negative relationship for inflation with stock returns for portfolios of large and medium firms. Kyereboah-Coleman and AgyireTetteh (2008) discovered a negative effect of inflation on stock market performance while Kariuki (2014) found a significant positive relationship between inflation and financial performance of listed mutual funds in Kenya. Onger (2014) investigated the effect of macroeconomic variables on the performance of non-bank financial institutions in Kenya. The study revealed that a decrease in profitability was not due to poor management but due to inflation.

Aryal (2021) tried to explained the problems and prospects of mutual funds. According to the research, the management of the mutual fund should employ a flexible and successful strategy for managing the portfolio and invest the majority of its assets in the main shares of the bank and other financial institutions in order to maximize capital appreciation and current income. Additionally, the portfolio should

be changed by substituting high-returning assets with low-returning ones. The poor return and high risk of mutual funds in comparison to the market deters investors from investing in them. For this reason, buying shares is a better investment than buying a fund. Lack of information and poor decision-making could be one of the main reasons for the mutual fund's demise.

Gyamfi Gyimah (2021) studied GDP growth measures economic performance as well as the level of economic activity. Rising GDP growth indicates economic growth and fallen GDP growth could signify a national recession. Firms use GDP growth rate to predict whether their businesses will falter or will grow. A plummeting GDP growth rate has usually been a negative signal for investors to avoid investments such as mutual funds while a rising GDP growth rate achieves the opposite effect. GDP is directly linked with the upsurge and down surge in financial markets. Investors invest according to the trend of the real GDP in the economy. However, Garg & Srivastava (2019) and Coffie (2019) found no relationship between GDP growth and the performance of mutual funds. Singh et al. (2011) found a positive relationship between GDP growth and stock returns for portfolios of big and medium firms. Kariuki (2014) found a significant positive relationship between GDP growth and equity mutual fund performance. Ongeru (2014) also established that GDP growth had a weak positive relationship with Return on Assets.

Maharjan (2021) measured the returns from four Nepalese closed-end mutual funds based on portfolio turnover ratio, Net Assets Value, Sharpe measure, Jensen measure, expenditure ratios, etc. and found out that in addition to performance assessment tools and techniques, other fund-related factors should also be considered when making investment decisions.

Virparia (2022) suggest that the investor ought to choose a scheme that aligns with their investment objective and anticipated yield. Long-term investments are better suited for equity plans. According to the research, large cap funds are not advantageous for short-term investments, but they do offer better returns initially than over the long term. Consequently, investors had to hold onto their money for a minimum of three years. The study also showed that choosing the incorrect investment period can result in missed opportunities to gain returns due to ignorance of the Mutual Fund's investing variables over a range of time periods.

Kazmi (2022) investigated the experience of the managers has a significant impact on the performance of the mutual funds. Managers with prior experience in various market scenarios are better equipped to handle them. Additionally, they typically outperform benchmarks and provide investors with greater consistency. Though they may be more willing to take on risk and employ creative techniques to generate larger returns, new managers also come with greater uncertainty. Ultimately, it is up to the investor to select the management type that best fits their needs.

Farid and Wahba (2022) the study explored by looking at how the performance of seven different types of mutual funds in Egypt evolved between 2012 and 2017, we can determine how fund size influences mutual fund performance in Egypt. The performance of mutual funds with investments in the Egyptian stock market is influenced by the size of the fund. Because they believe large funds have a higher chance of succeeding, many investors choose them; nonetheless, the fund must also perform well; size alone is insufficient. Regardless of the fund's size, investors ought to choose the one with a stronger track record of performance. As expenses have an impact on performance, investors should choose funds depending on their intended degree of risk. They should also select funds that allocate a significant amount of their budget to investment research.

Table 1

Summary of Empirical Review

S.N	Authors	Findings
1	Treynor (1965)	Rate of return has a suitable market average and it's deal with a portfolio, portfolio possibility line was used to relate expected return to the portfolio owner's risk preference.
2	Sharpe (1966)	There was no correlation between performance and fund size. Additionally, funds with low expense ratios outperformed the benchmark in terms of performance.
3	Baker et al., (1985)	The managers believe dividend policy affects share value and the

managers are highly concerned with dividend continuity.

- 4 Harris (1988) The large funds lead to minimum operational cost as these are capable to bargain lesser spreads, in addition, large funds have greater market domination as well as enhanced trading volumes.
- 5 Carhart (1997) The study suggested that past performance could predict future returns, largely due to the momentum effect, where funds holding high- performing stocks continued to do well in subsequent periods.
- 6 Kalapper and love (2002) Higher ROA indicates that the firm was utilized its assets more effectively for better output, which has direct advantages to shareholders. On the other side, lower ROA means the firm failed to use its assets properly, which negatively impacted shareholder value.
- 7 Nazir & awaz's (2010) The study findings showed that Assets turnover, family proportion, and expense ratio were positively leading mutual fund growth.
- 8 Hada (2013) Mutual funds, in the long run, have better performance than the market. Long-term mutual fund returns are better than on similar investment instruments. Mutual fund can provide a satisfactory level of return and risk adjustment return and risk adjustment return expected during a recession.
- 9 Bajracharya (2016) The performance of mutual funds was significantly impacted by lagged return, liquidity and asset, among other fund factors.
- 10 Champagne et al., (2017) There is negative correlation between the fund's historical performance and modified turnover, indicating that managers with lower performance levels may be more likely to make portfolio changes than managers with higher performance levels.

- 11 Indro et al., (2019) The fund size affect mutual fund performance. There are diminishing marginal returns to information acquisition and trading, and the marginal returns become negative when the mutual fund exceeds its optimal fund size.
 - 12 Pastor and Vorsatz (2020) The majority of active funds performed worse than passive funds during COVID -19 crisis.
 - 13 Panigrahi et al., (2020) Risk increases with the increase in inflation rate and inflation has a positive influence on the performance of mutual funds.
 - 14 Aryal (2021) The poor return and high risk of mutual funds in comparison to the market deters investors from investing in them.
 - 15 Gyamfi (2021) There positive relationship between GDP growth and stock returns for portfolios of big and medium firms. Also significant positive relationship between GDP growth and equity mutual fund performance.
 - 16 Maharajan (2021) When making investment selections, additional fund-related criteria should also be taken into account in additional to performance assessment methods and approaches.
 - 17 Kazmi (2022) The experience of the managers has a significant impact on the performance of the mutual funds. Managers with prior experience in various market scenarios are better equipped to handle them.
 - 18 Virparia (2022) The study showed that choosing the incorrect investment period can result in missed opportunities to gain returns due to ignorance of the Mutual Fund's investing variables over a range of time periods.
 - 19 Farid and Wahba (2022) The performance of mutual funds with investments is influenced by the size of the fund. They belive large funds have a higher chance of succeeding.
-

2.4 Research Gap

For investors who often invest in mutual funds, the performance evaluation of the funds is crucial. Investors can make better decisions by using the ideas and concepts this study offers about mutual funds. The data used for this calculation spans five years, from 2016–17 to 2020–21. There was insufficient time allotted for writing the report to do thorough research.

Results might have been impacted by sample size. Regression analysis, correlation analysis, and NAV were employed to obtain the research's conclusions. Since mutual funds are still in their infancy in Nepal, there is a dearth of study there compared to other nations where they are well-established, which limits the amount of data that is available. This causes variations in the outcomes, conclusions, and findings, which is one of the research gaps in this dissertation

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Research Design

The study is based on descriptive and casual research design. A descriptive study is designed to collect data correctly and systematically describe a population, situation or phenomenon. It seeks to assess the selected mutual funds and to describe and evaluate the performance of these mutual funds. Various statistical and financial tools have been used to analyze the subject matter.

3.2 Population and Sample

All the mutual fund that exists in the Nepalese financial market is 33 closed-end mutual funds. Among them, only ten closed -end mutual funds are selected for the analysis.

Table 2

List of Sample of selected Mutual Funds In Nepal

S.N	Name	Maturity Period	Date of Establishment
1	Citizen Mutual Fund-I	10 Years	Magh, 2072
2	Laxmi Equity Fund-1	7 Years	March, 2015
3	NIBL Samridi Fund-2	10 Years	April, 2019
4	NIBL Pragati Fund	7 Years	Kartik, 2073
5	Siddhartha Equity Fund	10 Years	Kartik, 2074
6	Nabil Equity Fund	7 Years	Kartik, 2073
7	Sanima Equity Fund	7 Years	December, 2017
8	Kumari Equity Fund	10 Years	Chaitra, 2076
9	NMB Sulav Investment Fund-II	10 Years	September, 2010
10	Sunrise First Mutual Fund	10 Years	Ashwin, 2076

Source: Website of Selected Sample,2023

3.3 Sources of Data

This study is mainly based on secondary data which is collected from published and unpublished sources. Secondary data have been collected in order to achieve the real and factual result out of this research. All possible and useful data available have been collected. The secondary sources of data are the information received from books, journal and article concerned with the study, annual reports and their websites.

3.4 Data Procedures

Since the data is essential to the analysis, gathering the data was a significant portion of this study. This research is totally based on the secondary data so, the accuracy in result depends upon the accuracy of secondary data. This study was conducted by collecting secondary data from the website of respective mutual fund scheme manager. The data were recorded from their monthly balance sheet. The samples of this study are ten close-end mutual funds of Nepal. To find the structure, performance and other theoretical Information secondary data has been used.

3.5 Method of Data Analysis

After the collection of research data, an analysis of those data and its interpretation of the result are required. The facts and figures collected are to be processed with a view to reduce them to the manageable proportions. Once such processing is done, the statistical treatment and meaningful Interpretation leads to formulation of the theory of finding thus the data processing comprises of editing, coding, categorization and tabulation was carried out. For the analytical analysis the following statistical tools are used.

Descriptive statistics

In the present research, certain statistical tools have been used to compare the draw and figures one meaningful conclusion there from. Short descriptions of the statistical tools have been presented here.

Mean

Mean generally refers to a type of average, which is a measure of central tendency used in statistics and mathematics to summarize a set of numbers. The most widely and popular used measure of representing the entire data by one variable is the arithmetic mean. It is calculated by simply dividing the sum of all values in a data set

by the number of values. Mean values of the different variable represent the average value for the study period.

Standard Deviation

Standard deviation is a measure of how dispersed the data is in relation to the mean. The standard deviation measures the absolute dispersion. The greater the amount of dispersion greater the standard deviation. The small standard deviations mean a high degree of uniformity of the observation as well as homogeneity of a series and vice-versa.

Correlation Analysis

One statistical method for describing how closely one variable is related to another is correlation analysis. The current investigation has employed simple correlation. The correlation coefficient between the ensuing financial variables has been computed, analyzed, and displayed in is a matrix format.

The following are the simple correlation coefficients:

- Between ROA and fund asset growth.
- Between fund asset growth and dividend payout ratio.
- Between fund size and management fees.

We can calculated correlation coefficient between two variables X and Y using following formula.

$$\text{Correlation Coefficient (r)} = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2} \sqrt{n\sum y^2 - (\sum y)^2}}$$

$r = 0$ means that the variables are correlated lies between -1 and +1 $r = -1$ implies that there is a perfect negative correlation between the variables $r = +1$ implies that there is a perfect positive correlation between the variables.

Coefficient of determination (r^2)

A measure of the degree of linear relationship or correlation between two variables one of which is dependent and the other independent is called the coefficient of determination. Stated differently, r is the overall percentage variance in the dependent variables. There are values for the coefficient of determination that range from zero to

one. Only when the unexpected variation is zero, or when every data point in the scatterplot falls precisely on the regression line, can a value of one occur.

t- Statistics: It was developed by W.S. Gosset (Pen name Student) in 1908. Then this distribution is explained by R.A. Fisher. The t-test is used to determine whether the study's assumptions about small samples are valid. The t-values are first computed and compared with the crucial values at a particular level of significance for a given degree of freedom in order to apply the t distribution. At the five percent significance level, a difference is considered significant if the computed value of 't' surpasses the table value (e.g., t 0.05). However, if t-values are smaller than the corresponding crucial of the 't' distribution, the difference is not considered significant.

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

Where, r = Sample correlation between two variables

r^2 = Coefficient Determination

n = No of pairs of observations

Level of significant: Level of significance = 5%

Critical Value: Tabulated or critical value of t at % level of significance for (n - 2) Degree of freedom obtain from 't' tables.

Decision: The null hypothesis is accepted if calculated 't' is less than or equal to the tabulated value of 't' and falls within the accepted region; if calculated 't' is larger than the tabulated 't' the null hypothesis is rejected.

Regression analysis

Regression analysis indicates movement direction but not relative movement in the variables under investigation. We can determine the relative movement in the variables with the use of regression analysis. Analysis of regression for the given variable-, have been computed and analyzed. Multiple regression analysis can be used to quantify and estimate econometrically the elements that influence MPS estimates. A statistical technique that makes it easier to estimate or forecast the value of the dependent variable from the value of the independent variable is multiple regression analysis. The dependent variable in this study is ROA, while the independent factors are DPR, fund size, asset growth, and management fees. The

standard error of estimate, multiple coefficient of determination, and least squares methods are typically used in multiple regression analysis.

The multiple regression equation is

$$\text{Model 1: ROA} = a + b_1 \text{ DPR} + b_2 \text{ FAG} + b_3 \text{ FS} + b_4 \text{ MF} + b_5 \text{ GDPG} + b_6 \text{ I}$$

$$\text{Model 1: ROE} = a + b_1 \text{ DPR} + b_2 \text{ FAG} + b_3 \text{ FS} + b_4 \text{ MF} + b_5 \text{ GDPG} + b_6 \text{ I}$$

Where a = Regression intercept, which indicates ROA does not go below this point even if other variables have zero value.

b 's = Multiple regression coefficient.

DPR = Dividend payout ratio

FAG = Fund Assets Growth

FS = Fund Size

MF = Management Fees

GDPG = Gross Domestic product growth

I = Inflation Rate

3.6 Research Framework

Independent Variable

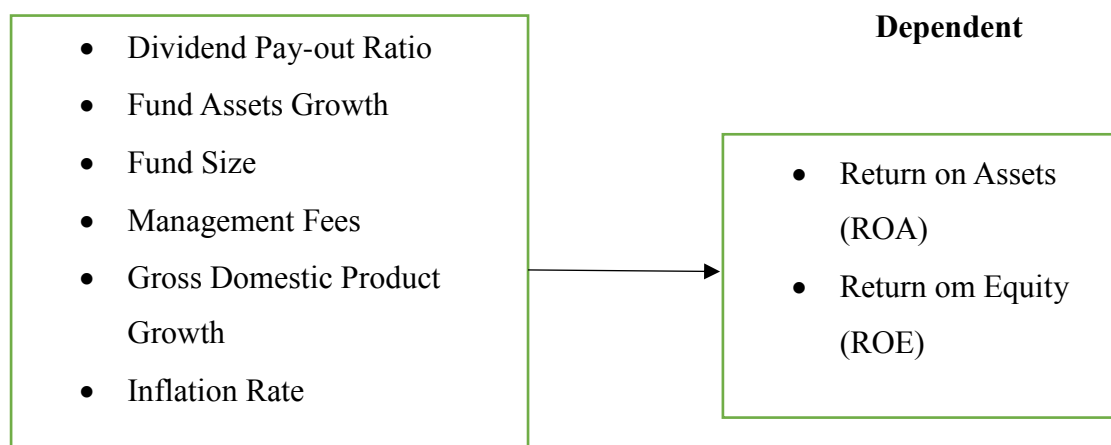


Figure 1 Research Frame Work

Source : Rahman and Subat (2022)

Return On Assets

Return on Assets (ROA) is a financial metric used to assess a company's efficiency in generating profit from its assets. This ratio, which compares a company's profit to the capital it has invested in assets, shows how well the business is doing. This ratio, which shows the returns produced from the assets that the bank owns, is most likely the most significant one when assessing the effectiveness and operational performance of manufacturing organizations. It is calculated by dividing net income by total assets. The formula is:

$$\text{Return on Assets} = \text{Net Income} / \text{Total Assets}$$

Return on Equity

Return on Equity (ROE) is a financial metric that measure the profitability of a company in relation to its shareholders' equity. Its indicates how effectively management is using a company's assets to create profits. A higher ROE suggest that a company is more efficient at generating profits from every unit of shareholders' equity. It is a key indicator used by investors to assess the financial health and performance of a company. The formula for calculating ROE is:

$$\text{ROE} = \frac{\text{Net Income}}{\text{Shareholders' Equity}} \times 100$$

Dividend Payout

Investors receive a dividend as compensation for their capital. In dividend payout, we mean the proportion of a business's profits distributed to its owners. According to (Foong et al., 2007) multiple regressions on parameters associated to dividends and company performance: Malaysia's case to ascertain the connection between company performance and dividend payout. The writers found that the association between dividend payout and company performance in is merely marginal or nonexistent. Malaysian plantation and trading companies.

Fund Assets Growth

The rate at which a company's assets rise over time is referred to as asset growth. Panel regression on asset growth and stock returns on the Asian financial markets was examined by (Yao et al., 2011). According to the study, there is a negative correlation between asset growth and firm stock effect in the case of stock returns. So the

Fund Size

Although there are several methods to determine fund size, for the purposes of this study, we used it as a stand-in for total assets. A study on the impact of fund size on the performance of balanced mutual funds in Indian funds was carried out by (Keswan, 2011). According to the analysis, there was no discernible correlation between fund performance and fund size because the standard deviation of the funds was quite low.

Management Fees

The phrase "management fees" refers to the compensation received by management for their superior use of resources in generating greater returns for the organization. Regression analysis was done by (Golec, 1996) to determine how mutual fund managers' traits affected the performance, risk, and fees of their portfolios. According to research, funds with lower management fees are better capable of producing returns than those with higher management fees.

Gross Domestic Product Growth

GDP growth measures economic performance as well as the level of economic activity. Rising GDP growth indicates economic growth and fallen GDP growth could signify a national recession. Firms use GDP growth rate to predict whether their businesses will falter or will grow. A plummeting GDP growth rate has usually been a negative signal for investors to avoid investments such as mutual funds while a rising GDP growth rate achieves the opposite effect. GDP is directly linked with the upsurge and down surge in financial markets. Investors invest according to the trend of the real GDP in the economy. However, Garg & Srivastava (2019) and Coffie (2019) found no relationship between GDP growth and the performance of mutual funds. Singh et al. (2011) found a positive relationship between GDP growth and stock returns for portfolios of big and medium firms.

Inflation Rate

The amount that a lender charges a borrower for using assets over a specific time period is known as the interest rate, and it is represented as a percentage of principal. Interest is the amount that a borrower pays a lender over and above the principal amount. The interest rate affects positively and significantly to the performance of mutual fund return and unit link. It means that the increase of the interest rate

automatically will increase the performance of mutual fund return and unit link. Similarly, the decrease of the interest rate will automatically decrease the performance of mutual fund return and unit link (Purwaningsih et al., 2017). So the final hypothesis is

CHAPTER – IV

RESULTS AND DISCUSSIONS

The study aims to evaluate the performance of closed-end mutual funds in Nepal. This chapter presents and analyzes the collected data, aiming to offer a comprehensive understanding of the mutual funds' performance. It utilizes data gathered from multiple sources and employs various analytical techniques to assess performance metrics effectively. The chapter provides a detailed presentation of the findings through descriptive analysis, highlighting key insights and trends observed in the performance of the mutual funds. Through these analyses, the study seeks to draw meaningful conclusions about the efficiency and effectiveness of closed-end mutual funds in the Nepalese financial market.

4.1 Descriptive Statistics

The descriptive statistics of the dependent and independent variables chosen for the study are presented in this section. The dataset consists of 10 quarters over the sample period from 2016/17 to 2020/21, encompassing 42 mutual funds trading on the stock exchange. This dataset is an unbalanced panel. To normalize the data for analysis purposes, the natural logarithm of fund size, fund assets growth, and management fees have been utilized (Rahman, 2017).

Table 3

Descriptive Statistics of Mutual Funds

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Observations
ROA	0.06	0.06	0.24	0.01	0.04	1.92	8.6	50
ROE	0.31	0.31	0.52	0.03	0.13	-0.4	2.49	50
DPR	1.29	0.44	12	0.13	2.42	2.92	10.91	50
FAG	244	151	1647	76	284.5	3.31	14.51	50
FS	760	644	2614	364	432.3	2.99	11.45	50
MF	38.6	37.5	80	13	14.32	0.68	3.5	50
GDPG	5.15	6.66	8.98	-2.37	4.03	-1.1	2.72	50
I	4.62	4.5	6.2	3.6	0.87	0.87	2.64	50

Source: Appendix II.

Return on Assets (ROA) measures the profitability of mutual funds relative to their total assets, reflecting how efficiently they generate earnings. In this study, the mean ROA is 0.06, indicating an average return of 6%. The ROA ranges from a minimum of 0.01 to a maximum of 0.24, with a standard deviation of 0.04, indicating variability among the funds. The skewness of 1.92 shows a positive skew, suggesting some funds have significantly higher returns, while the kurtosis of 8.60 points to a leptokurtic distribution, indicating outliers. These statistics highlight the diverse performance of the mutual funds over the sample period.

Return on Equity (ROE) measures the profitability of mutual funds relative to shareholders' equity, indicating how effectively the funds generate profits from their equity base. In this study, the mean ROE is 0.31, signifying an average return of 31%. The ROE ranges from a minimum of 0.03 to a maximum of 0.52, with a standard deviation of 0.13, demonstrating variability among the funds. The skewness of -0.41 indicates a slight negative skew, suggesting a few funds have lower returns, while the kurtosis of 2.49 points to a distribution closer to normal. These statistics underscore the varying efficiency of mutual funds in generating returns for their investors over the sample period.

The Dividend Payout Ratio (DPR) measures the proportion of earnings a mutual fund distributes to its shareholders as dividends. In this study, the mean DPR is 1.29, indicating that on average; mutual funds distribute 129% of their earnings as dividends, likely suggesting the use of retained earnings or other sources for dividend payments. The DPR ranges from a minimum of 0.13 to a maximum of 12.00, with a standard deviation of 2.42, highlighting significant variability among the funds. The skewness of 2.92 indicates a positive skew, with some funds having considerably higher payout ratios, while the kurtosis of 10.91 suggests a leptokurtic distribution, indicating the presence of outliers. These statistics reveal the diverse dividend distribution practices of mutual funds over the sample period.

Fund Assets Growth (FAG) measures the rate at which a mutual fund's assets increase over time, reflecting its ability to attract and retain investments. In this study, the mean FAG is 243.56%, indicating that, on average, mutual funds experienced significant growth in their assets. The growth rate ranges from a minimum of 76.00% to a maximum of 1647.00%, with a standard deviation of 284.45%, demonstrating considerable variability among the funds. The skewness of 3.31 indicates a strong

positive skew, suggesting that a few funds had exceptionally high growth rates. The kurtosis of 14.51 points to a leptokurtic distribution, indicating the presence of extreme outliers. These statistics highlight the varied success of mutual funds in growing their assets during the sample period.

Fund Size (FS) represents the total value of assets under management by a mutual fund, providing insight into its scale and capacity. In this study, the mean FS is 760.14 million NPR, indicating that, on average, mutual funds manage assets worth approximately 760.14 million NPR. The fund size ranges from a minimum of 364.00 million NPR to a maximum of 2614.00 million NPR, with a standard deviation of 432.31 million NPR, indicating significant variability in fund sizes among the funds. The skewness of 2.99 indicates a positive skew, suggesting that some funds have considerably larger sizes, while the kurtosis of 11.45 suggests a leptokurtic distribution, indicating the presence of outliers with exceptionally large fund sizes. These statistics provide insights into the diversity of fund sizes among mutual funds during the sample period.

The Management Fee (MF) refers to the fee charged by the mutual fund company for managing investors' assets. In this study, the mean management fee is 38.58 million NPR, indicating that, on average, mutual funds charge approximately 38.58 million NPR in management fees. The management fees range from a minimum of 13.00 million NPR to a maximum of 80.00 million NPR, with a standard deviation of 14.32 million NPR, demonstrating variability in fee structures among the funds. The skewness of 0.68 indicates a slightly positive skew, suggesting that most funds charge fees within a similar range, while the kurtosis of 3.50 suggests a distribution slightly heavier-tailed than normal, indicating the presence of some funds with higher-than-average fees. These statistics offer insights into the range and distribution of management fees among mutual funds during the sample period.

GDP Growth (GDPG) refers to the annual percentage change in the Gross Domestic Product (GDP) of a country, reflecting its economic performance and expansion over time. In this study, the mean GDP growth rate is 5.15%, indicating an average annual growth rate of 5.15% over the sample period. The GDP growth rate ranges from a minimum of -2.37% to a maximum of 8.98%, with a standard deviation of 4.03%, demonstrating variability in economic growth rates among the quarters. The skewness of -1.10 indicates a negative skew, suggesting a slight asymmetry toward lower

growth rates, while the kurtosis of 2.72 suggests a distribution slightly heavier-tailed than normal, indicating the presence of some quarters with more extreme growth rates.

Inflation Rate (I) measures the annual percentage change in the general price level of goods and services in an economy, reflecting the rate of increase in prices over time. In this study, the mean inflation rate is 4.62%, indicating an average annual inflation rate of 4.62% over the sample period. The inflation rate ranges from a minimum of 3.60% to a maximum of 6.20%, with a standard deviation of 0.87%, demonstrating relatively low variability in inflation rates among the quarters. The skewness of 0.87 indicates a slightly positive skew, suggesting that most quarters experienced inflation rates within a similar range, while the kurtosis of 2.64 suggests a distribution slightly heavier-tailed than normal, indicating the presence of some quarters with higher-than-average inflation rates. These statistics provide insights into the economic environment within which the mutual funds operate during the sample period.

4.2 Correlation Analysis

A correlation matrix is a tabular representation displaying correlation coefficients between variables, illustrating the relationships among them. Each cell in the matrix showcases the correlation between two corresponding variables. This tool serves to succinctly summarize data, providing insights into the strength and significance of correlations between variables. Correlation coefficients range from +1 for a perfect positive relationship to -1 for a perfect negative relationship, with zero indicating no linear relationship. In this study, Return on Assets (ROA) and Return on Equity (ROE) are considered dependent variables, while the remaining variables—Dividend Payout Ratio (DPR), Fund Assets Growth (FAG), Fund Size (FS), Management Fee (MF), GDP Growth (GDPG), and Inflation Rate (I)—are independent variables. Table 3 presents the correlation matrix, offering a comprehensive overview of the interrelationships among the variables under study.

Table 4

Correlation Analysis

Correlation								
Probability	ROA	ROE	DPR	FAG	FS	M_F	GDPG	I
ROA	1							
ROE	-0.01	1						
	(0.96)							
DPR	0.10	0.50	1					
	(0.95)	(0.00)						
FAG	0.85	0.42	0.44	1				
	(0.03)	(0.00)	(0.00)					
FS	0.48	-0.17	0.08	0.31	1			
	(0.00)	(0.25)	(0.59)	(0.03)				
MF	-0.11	0.20	-0.28	0.30	-0.01	1		
	(0.44)	(0.15)	(0.05)	(0.03)	(0.95)			
GDPG	0.41	0.22	0.02	-0.07	-0.23	-0.29	1	
	(0.04)	(0.02)	(0.87)	(0.63)	(0.11)	(0.04)		
I	-0.20	0.09	-0.01	-0.12	0.01	0.00	-0.76	1
	(0.00)	(0.51)	(0.93)	(0.41)	(0.93)	(0.98)	(0.00)	

Source: Appendix III.

The correlation analysis indicates significant relationships between Return on Assets (ROA) and several independent variables. Firstly, there is a strong positive correlation between ROA and Fund Assets Growth (FAG), with a correlation coefficient of 0.85 ($p < 0.05$), indicating that mutual funds with higher asset growth tend to achieve higher returns on their assets. Additionally, there is a moderate positive correlation between ROA and Fund Size (FS), with a correlation coefficient of 0.48 ($p < 0.05$), suggesting that larger mutual funds tend to generate higher returns on their assets. More over ROA exhibits a moderate significant positive correlation with GDP Growth (GDPG), with a correlation coefficient of 0.41 ($p > 0.05$), indicating that periods of

higher economic growth may have a slight adverse effect on the profitability of mutual funds. Conversely, there is a weak negative correlation between ROA and Inflation Rate (I), with a correlation coefficient of -0.20 ($p < 0.05$), indicating that periods of higher inflation may have a slight adverse effect on the profitability of mutual funds. However, there are negligible correlations between ROA and Dividend Payout Ratio (DPR), Management Fee with correlation coefficients ranging from -0.11 to 0.10 and their respective p-values exceeding the significance level of 0.05 at 5 percent level of significance.

The correlation analysis reveals several notable relationships involving Return on Equity (ROE) and the independent variables. Firstly, ROE demonstrates a moderate positive correlation with both Dividend Payout Ratio (DPR) and Fund Assets Growth (FAG), with correlation coefficients of 0.50 and 0.42 , respectively ($p < 0.05$). This suggests that mutual funds with higher dividend payout ratios and faster asset growth tend to achieve higher returns on equity. More over ROE exhibits a low degree significant positive correlation with GDP Growth (GDPG), with a correlation coefficient of 0.22 ($p > 0.05$), indicating that periods of higher economic growth may have a slight positive relationship on the profitability of mutual funds. However, there are negligible correlations between ROE and Fund Size (FS), Management Fee (MF), and Inflation Rate (I), with correlation coefficients ranging from -0.17 to 0.20 , and their respective p-values exceeding the significance level of 0.05 at 5 percent level of significance.

4.3 Regression Analysis

This study conduct a regression analysis to explore the relationship between various independent variables and two dependent variables, Return on Assets (ROA) and Return on Equity (ROE), using Ordinary Least Squares (OLS) and fixed effect regression techniques. The independent variables considered in the analysis include Dividend Payout Ratio (DPR), Fund Assets Growth (FAG), Fund Size (FS), Management Fee (MF), GDP Growth (GDPG), and Inflation Rate (I). These variables are hypothesized to impact the profitability of mutual funds, with ROA and ROE serving as proxies for fund performance. By estimating the regression coefficients, we aim to understand the extent to which these independent variables contribute to the variation in ROA and ROE, while controlling for any potential unobserved heterogeneity across different mutual funds using fixed effect regression.

Table 5

OLS Regression Output (ROA as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	0.98	0.00	1.09	0.28
FAG	2.99	0.00	-1.76	0.08
FS	1.53	0.00	3.98	0.00
GDPG	0.03	0.00	0.46	0.65
I	0.00	0.01	0.12	0.91
MF	0.02	0.00	1.67	0.10
C	-0.02	0.07	-0.21	0.84
R-squared				0.295553
Adjusted R-squared				0.197258
F-statistic				3.006792
Prob(F-statistic)				0.015252

Source: Appendix IV.

The OLS regression analysis reveals that only Fund Size (FS) exhibits a statistically significant impact on Return on Assets (ROA), with a coefficient of 1.53 ($p < 0.05$). This suggests that for every unit increase in fund size, ROA is expected to increase by 1.53 units. However, p values of other independent variables are greater than 5 percent: Dividend Payout Ratio (DPR), Fund Assets Growth (FAG), Management Fee (MF), and GDP Growth (GDPG) are not statistically significant, as their respective p-values exceed 0.05. Therefore, their impact on ROA is not considered significant in this analysis. The regression model explains approximately 29.56% of the variance in ROA, as indicated by the R-squared value. Adjusting for model complexity, the Adjusted R-squared value stands at 19.73%. The overall model is statistically significant (F-statistic = 3.006792, $p = 0.015252$), suggesting that at least one independent variable in the model has a significant effect on ROA.

Table 6

Fixed Effect Regression Output (ROA as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	0.87	0.00	-1.06	0.30
FAG	3.5	0.00	-2.77	0.01
FS	2.8	0.00	1.51	0.04
GDPG	0.00	0.00	-1.32	0.20
I	-0.02	0.01	-1.53	0.13
M_F	0.00	0.00	-0.20	0.84
C	0.18	0.10	1.77	0.09
R-squared				0.662138
Adjusted R-squared				0.513082
F-statistic				4.442194
Prob(F-statistic)				0.000154

Source: Appendix V.

In the fixed effect regression analysis, the coefficient for Fund Size (FS) is estimated to be 2.8 with a standard error of 0.00, and it yields a t-statistic of 1.51 ($p < 0.05$). This indicates that for every unit increase in fund size, Return on Assets (ROA) is expected to increase by 2.8 units, controlling for other variables and fixed effects. Similarly, for Fund Assets Growth (FAG), the coefficient is estimated to be 3.5 with a standard error of 0.00, and it yields a t-statistic of -2.77 ($p < 0.05$). This implies that for every unit increase in fund assets growth, ROA is expected to increase by 3.5 units, holding other factors constant. However, Dividend Payout Ratio (DPR), Gross Domestic Product Growth (GDPG), and Inflation Rate (I) do not show significant associations with ROA, as their respective coefficients do not reach statistical significance at the 0.05 level. Furthermore, Management Fee (M_F) also fails to exhibit a significant impact on ROA. The model's R-squared value of 0.662138 indicates that approximately 66.21% of the variance in ROA is explained by the

independent variables and fixed effects. The Adjusted R-squared value, which accounts for the number of predictors, is 0.513082. Additionally, the F-statistic of 4.442194 with a Prob. (F-statistic) of 0.000154 suggests that the overall regression model is statistically significant; implying that at least one independent variable or fixed effect has a significant effect on ROA.

Table 7

Test result of Likelihood Ratio (Pooled OLS VS Fixed effect)

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.10	(9,34)	0.00
Cross-section Chi-square	36.74	9.00	0.00

Source: Appendix VI.

The provided effects test results indicate that the fixed effects model significantly improves the fit compared to the ordinary least squares (OLS) model for explaining Return on Assets (ROA). The Cross-section F-test (F-statistic = 4.10, p-value = 0.00) and the Cross-section Chi-square test (Chi-square = 36.74, p-value = 0.00) both reject the null hypothesis that fixed effects are unnecessary. This means that accounting for unobserved heterogeneity across cross-sections (e.g., firms) is crucial, and thus, the fixed effects model is the preferred method for analyzing ROA in this dataset.

Table 8

OLS Regression Output (ROE as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	0.02	0.01	-2.07	0.04
FAG	4.3	0.00	-2.00	0.005
FS	0.00	0.00	-1.09	0.28
GDPG	-0.02	0.01	-2.22	0.03
I	-0.05	0.03	-1.56	0.13
MF	0.00	0.00	0.43	0.67
C	0.66	0.21	3.21	0.00
R-squared				0.408052
Adjusted R-squared				0.325454
F-statistic				4.940243
Prob(F-statistic)				0.000636

Source: Appendix VII.

The OLS regression analysis reveals several insights into the relationship between independent variables and Return on Equity (ROE). Dividend Payout Ratio (DPR) shows a statistically significant positive impact on ROE, as indicated by its coefficient of 0.02 and a t-statistic of -2.07 ($p < 0.05$). This suggests that higher dividend payout ratios are associated with higher impact on returns on equity. Similarly, Fund Assets Growth (FAG) also demonstrates a significant positive impact on ROE, with a coefficient of 4.3 and a t-statistic of -2.00 ($p < 0.05$), implying if one unit increase in fund assets can increase returns on equity By 4.3 units . However, Fund Size (FS), Gross Domestic Product Growth (GDPG), and Inflation Rate (I) do not exhibit statistically significant relationships with ROE, as their respective coefficients do not reach significance at the 0.05 level. Furthermore, Management Fee (MF) does not appear to have a significant effect on ROE.

The model's R-squared value of 0.408052 indicates that approximately 40.81% of the variance in ROE is explained by the independent variables included in the model. The Adjusted R-squared value, which accounts for the number of predictors, is 0.325454. Additionally, the F-statistic of 4.940243 with a Prob. (F-statistic) of 0.000636 suggests that the overall regression model is statistically significant, implying that at least one independent variable has a significant effect on ROE.

Table 9

Fixed Effect Regression Output (ROE as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	-0.02	0.01	-1.92	0.06
FAG	3.7	0.00	0.00	0.00
FS	6.52	0.00	-2.58	0.01
GDPG	-0.01	0.01	-1.19	0.24
I	-0.02	0.03	-0.62	0.54
MF	-2.3	0.00	1.22	0.03
C	0.44	0.28	1.60	0.12
R-squared				0.733290
Adjusted R-squared				0.615624
F-statistic				6.231948
Prob(F-statistic)				0.000005

Source: Appendix VIII.

Dividend Payout Ratio (DPR) exhibits a coefficient of -0.02 with a t-statistic of -1.92 ($p = 0.06$), indicating a negative but marginally insignificant association with ROE. In addition Fund Assets Growth (FAG) shows a significant positive impact on ROE, with a coefficient of 3.7 ($p < 0.05$), suggesting that higher growth in fund assets is associated with increased returns on equity. Moreover Fund Size (FS) also demonstrates a significant positive effect on ROE, with a coefficient of 6.52 ($p <$

0.05), indicating that larger fund sizes correlate with higher returns on equity. Management Fee (MF) display statistically negative significant impact with ROE because of having p value 0.03. The beta coefficient show that if one unit increase in management can decrease return on equity by 2.3 units . However Gross Domestic Product Growth (GDPG) and Inflation Rate (I), inflation rate do not have significant impact on return on equity.

The model's R-squared value is 0.733290, indicating that approximately 73.33% of the variance in ROE is explained by the independent variables and fixed effects. The Adjusted R-squared value, which adjusts for the number of predictors, is 0.615624. The F-statistic of 6.231948 with a p-value of 0.000005 suggests that the overall regression model is statistically significant; indicating that at least one independent variable or fixed effect has a significant effect on ROE.

Table 10

Test result of Likelihood Ratio (Pooled OLS VS Fixed effect)

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.61	(9,34)	0.00
Cross-section Chi-square	39.86	9.00	0.00

Source: Appendix IX.

The likelihood ratio tests for Return on Equity (ROE) indicate that the fixed effects model significantly improves the fit compared to the ordinary least squares (OLS) model. The Cross-section F-test (F-statistic = 4.61, p-value = 0.00) and the Cross-section Chi-square test (Chi-square = 39.86, p-value = 0.00) both strongly reject the null hypothesis that fixed effects are unnecessary. These results suggest that the fixed effects model better accounts for unobserved heterogeneity across firms, making it the preferred method for analyzing ROE in this dataset.

4.4 Discussion

The purpose of the study is to evaluate the performance of closed-end mutual funds by implementing various evaluating techniques. This study used mean, median, maximum, minimum, standard deviation, skewness, kurtosis, and NAV. Under which the funds with higher NAV are more attractive for investment. Lower ROA and DPR

are preferable than higher ones, which means CMF1 is preferable in terms of ROA and NEF is preferable in terms of DPR. The "Mean" represents the average value of each variable. For instance, the mean ROA indicates the average return on assets across the mutual funds studied. The study performed by Otten and Bams (2002) found that fund size and assets growth are negatively related to risk-adjusted performance while fund assets are positively related. So, in this study, higher size and DPR have negative effects on the investment.

The results indicate that ROA exhibits weak positive correlations with DPR and fund assets growth, suggesting a slight tendency for these variables to move together in the same direction. However, these correlations are not statistically significant. On the other hand, there is a moderately strong positive correlation between ROA and Fund Size, indicating a significant tendency for larger fund sizes to be associated with higher ROA. This correlation is statistically significant. Additionally, the correlation between ROA and management fees is weakly positive, suggesting a minor tendency for higher management fees to be associated with higher ROA. However, this correlation is not statistically significant.

The study conducted by Bajracharya (2016) concluded that DPR and FAG have a moderately strong positive correlation, implying a significant relationship between higher dividend payout ratios and greater fund assets growth. This correlation is statistically significant. Moreover, there is a moderately strong positive correlation between Fund Size and FAG, indicating that larger fund sizes are associated with higher fund assets growth. This correlation is also statistically significant.

Dhandayuthapani and Arunpratheep (2018) concluded that regression results indicate that Fund Size has a statistically significant positive relationship with ROA, as evidenced by its coefficient and a low p-value. This suggests that larger mutual fund sizes are associated with higher returns on assets. The coefficients for DPR, FAG, and MGMT_F were not statistically significant at the conventional significance level. This means that there is no strong evidence to conclude that these variables have a significant linear relationship with ROA. It implies that there are other factors not considered in this regression model that also contribute to the variation in ROA among mutual funds in Nepal.

The findings of this study reveal that the correlation between ROA and Fund Assets Growth is strong and positive, indicating that higher asset growth is associated with increased returns. This finding is consistent with the study by Bajracharya (2016), which also found a positive relationship between fund assets growth and returns. Additionally, the correlation between ROA and Fund Size is moderately strong and positive, suggesting that larger fund sizes contribute to better performance. This is in line with the study by Dhandayuthapani and Arunpratheep (2018), which concluded that larger mutual fund sizes are associated with higher returns on assets.

However, the results show a weak positive correlation between ROA and management fees, indicating that higher management fees do not significantly impact the returns on assets. This finding is consistent with the study by Otten and Bams (2002), which found that management fees do not have a significant impact on risk-adjusted performance. Additionally, the correlation between ROA and inflation rate is weakly negative, suggesting that higher inflation rates have a minor adverse effect on returns. This is supported by the study by Dave and Raval (2018), which found that higher inflation rates are associated with lower returns on assets.

The fixed effect regression analysis reveals that Fund Size and Fund Assets Growth are significant predictors of ROA. Specifically, an increase in fund size and fund assets growth is associated with an increase in ROA. This is consistent with the findings of Dhandayuthapani and Arunpratheep (2018), which showed that larger mutual fund sizes and higher asset growth contribute to better performance. However, the coefficients for DPR, GDP Growth, Inflation Rate, and Management Fee were not statistically significant, indicating that these variables do not have a strong linear relationship with ROA. This implies that other factors not considered in this regression model may contribute to the variation in ROA among mutual funds in Nepal.

For ROE, the fixed effect regression analysis shows that Fund Assets Growth and Fund Size are significant predictors, with positive associations. This is consistent with the findings of Bialkowski and Otten (2018) and Cumby and Glen (2019), which also found positive relationships between fund assets growth, fund size, and equity returns. However, the study finds no statistically significant relationships between ROE and other variables such as DPR, GDP Growth, Inflation Rate, and Management Fee. This

suggests that these variables do not have a significant impact on equity returns in the context of Nepalese mutual funds.

The study's findings both align with and contrast with previous research. Dave and Raval (2018) revealed that fund assets growth had a statistically significant negative impact on ROA, suggesting that an increase in fund assets growth is associated with a decrease in ROA among the mutual funds in the sample. This contrasts with the positive correlation found in this study. The differences may be due to market-specific factors or variations in sample sizes and periods. Additionally, Dave and Raval (2022) reviewed that public sector mutual fund schemes generally perform better than risk-free returns offered by post office schemes. They also emphasized the importance of incorporating both standard deviation and simple average returns over the investment period for better decision-making. This study corroborates the importance of these metrics by showing that higher fund sizes and asset growth are associated with better performance, reinforcing the significance of thorough performance analysis.

Moreover, the results indicate that the fixed-effects model is more appropriate for this analysis, considering individual-specific effects that are correlated with the independent variables. This model better accounts for unobserved heterogeneity and individual characteristics among cross-sections in the panel data. The fixed-effects model results, including R-squared, adjusted R-squared, F-statistic, and other goodness-of-fit statistics, indicate a good fit for the data. This suggests that the model effectively explains the variation in ROA and ROE among the mutual funds in the sample.

In summary, this study provides valuable insights into the performance dynamics of closed-end mutual funds in Nepal. The findings highlight the positive impact of fund size and asset growth on ROA and ROE, emphasizing the importance of economies of scale and effective asset management in enhancing mutual fund performance. Additionally, the study underscores the minor impact of management fees and macroeconomic conditions such as inflation on returns, suggesting that these factors may not significantly influence mutual fund profitability in the Nepalese context. Overall, the study contributes to the broader literature on mutual fund performance and offers practical insights for investors, fund managers, and policymakers in emerging markets like Nepal.

CHAPTER – V

SUMMARY AND CONCLUSION

5.1 Summary

The dissertation titled "Performance Evaluation of Mutual Funds in Nepal: A Five-Year Study" aims to assess the performance of closed-end mutual funds in Nepal by analyzing a sample of ten mutual funds over a five-year period from 2016/17 to 2020/21. Mutual funds, managed by professional money managers, pool resources from shareholders to invest in diversified portfolios of securities with the objective of generating capital gains or income for investors. This research evaluates the impact of several factors on key performance metrics, specifically Return on Assets (ROA) and Return on Equity (ROE). Utilizing both descriptive and causal research designs, the study employs secondary data collected from mutual fund websites, the Nepal Stock Exchange, Share Sansar, and Nepal Rastra Bank reports.

The dependent variables in this analysis are ROA and ROE, which serve as indicators of the financial performance of the mutual funds. The independent variables considered in the study include Dividend Payout Ratio (DPR), Fund Assets Growth (FAG), Fund Size (FS), Management Fee (MF), GDP Growth (GDPG), and Inflation Rate (I). Data analysis was conducted using E-views software, employing techniques such as descriptive statistics, correlation, and regression analyses to interpret the data and draw meaningful conclusions.

The findings from this study reveal several significant relationships between the independent variables and the performance metrics. Firstly, there is a statistically significant positive relationship between fund size (FS) and fund assets growth (FAG) with ROA. This indicates that larger fund sizes and higher growth in fund assets positively contribute to the returns on assets. This positive correlation suggests that economies of scale and effective asset management are crucial for enhancing the performance of mutual funds in terms of ROA. In contrast, the analysis shows a significant negative correlation between the inflation rate (I) and ROA. Higher inflation rates adversely affect the performance of mutual funds, reducing the returns on assets. This finding highlights the sensitivity of mutual fund performance to macroeconomic conditions, particularly inflation, which can erode investment returns and negatively impact the overall performance of the funds. Furthermore, the study

finds a positive association between the dividend payout ratio (DPR) and fund assets growth (FAG) with ROE. Higher dividend payouts and substantial asset growth are associated with improved equity returns. This indicates that mutual funds that distribute a significant portion of their earnings as dividends and exhibit robust asset growth tend to provide better returns to their equity holders. These results underscore the importance of effective dividend policies and growth strategies in maximizing shareholder value.

However, the impact of management fees (MF) on ROE is found to be negative. Higher management fees reduce the returns on equity, suggesting that increased costs associated with higher fees diminish the net gains available to shareholders. This finding emphasizes the need for mutual fund managers to carefully consider the cost structures and fee arrangements to ensure they do not adversely impact the returns for investors.

Overall, the study provides valuable insights into the performance dynamics of mutual funds in Nepal. The positive influence of fund size and asset growth on both ROA and ROE highlights the benefits of scale and effective growth strategies. Conversely, the negative impact of inflation and management fees on performance metrics calls for prudent economic policies and cost management practices. The research contributes to the broader understanding of mutual fund performance in emerging markets, offering practical recommendations for investors, fund managers, and policy makers. In conclusion, this dissertation presents a comprehensive evaluation of the factors influencing mutual fund performance in Nepal, emphasizing the critical role of fund size, asset growth, dividend policies, and management fees. The findings serve as a valuable reference for optimizing mutual fund investments and enhancing returns in the context of Nepal's financial market. The study's implications extend to stakeholders seeking to improve mutual fund performance through strategic management and informed policy decisions.

5.2 Conclusion

The comprehensive analysis of mutual fund performance through correlation and regression techniques reveals several critical insights into the factors influencing returns on assets (ROA) and returns on equity (ROE). The findings highlight that fund size and asset growth are significant determinants of mutual fund profitability.

Specifically, larger funds and that experiencing robust asset growth tend to generate higher returns on both assets and equity. This underscores the importance of economies of scale and effective asset management in driving mutual fund performance, providing valuable guidance for investors seeking to optimize their investment decisions.

Additionally, the study identifies the nuanced impact of management fees and dividend payout ratios on mutual fund returns. While fund size and asset growth positively correlate with performance, higher management fees negatively impact ROE, emphasizing the need for cost-efficiency in fund management. Conversely, higher dividend payout ratios positively influence ROE, suggesting that funds with consistent dividend payouts are likely to deliver better equity returns. These findings suggest a balanced approach, where investors must weigh the benefits of fund size and growth against the costs associated with management fees to achieve optimal returns.

The comparative analysis between pooled OLS and fixed effects models demonstrates the superiority of the fixed effects approach in capturing the unobserved heterogeneity among mutual funds. This methodological choice provides a more accurate representation of the factors influencing mutual fund performance, reinforcing the robustness of the results. Overall, this study provides a detailed understanding of the dynamics affecting mutual fund returns, offering actionable insights for investors and fund managers aiming to enhance fund performance through strategic asset growth, cost management, and effective dividend policies.

5.3 Implications

Based on the above following implications are forwarded:

- Focus on increasing the size of mutual funds and promoting asset growth to enhance ROA and ROE, as larger fund sizes and higher asset growth positively impact these performance metrics.
- Carefully manage and potentially reduce management fees to improve ROE, since higher fees negatively affect equity returns. Efficient cost structures are crucial for maximizing net returns for shareholders.

- Implement robust dividend payout policies, as higher dividends are positively associated with better equity returns. Consistent and attractive dividend payouts can improve investor satisfaction and loyalty.
- Develop strategies to mitigate the adverse effects of inflation on fund performance, such as diversifying investments and including inflation-protected securities in the portfolio.
- Regulators should consider implementing regulations to cap excessive management fees to prevent high fees from eroding investor returns and to keep mutual funds competitive.
- Work towards maintaining stable macroeconomic conditions, particularly controlling inflation, to support the financial performance of mutual funds.
- Enhance transparency requirements for mutual funds to provide clearer insights into their fee structures, asset growth, and performance metrics, fostering investor confidence.
- Investors should prioritize mutual funds with larger sizes and higher asset growth, as these funds tend to deliver better returns on assets and equity.
- Be mindful of the management fees charged by mutual funds, as lower fees can lead to higher net returns on equity.
- Consider funds with strong and consistent dividend payout histories, as these are likely to yield better equity returns.
- Stay informed about macroeconomic conditions, especially inflation rates, which can significantly impact mutual fund performance.
- Competitors should analyze and emulate the strategies of successful funds that demonstrate large size and robust asset growth to enhance their competitive positioning.
- Benchmark management fees against top-performing funds to ensure competitiveness and attractiveness to potential investors.
- Focus on improving ROA and ROE by adopting best practices in asset management and cost control.
- Further research should extend study periods to assess the long-term impacts of the identified variables on mutual fund performance.
- Explore other potential variables that could influence mutual fund performance, such as market conditions, investment strategies, and fund manager expertise.

- Conduct comparative studies across different markets and regions to understand how the performance dynamics of mutual funds vary globally.
- Incorporate qualitative research methods to gain deeper insights into the management practices and investor behaviors that drive mutual fund performance.

These implications provide actionable insights for fund managers, regulators, investors, competitors, and researchers, helping them make informed decisions and strategic improvements based on the findings.

REFERENCE

- Asad, M., & Siddiqui, D. A. (2019). Determinants of mutual funds' performance in Pakistan. *International Journal of Social and Administrative Sciences*, 4 (2), 85-107.
- Aryal, P. (2012). Performance evaluation of mutual funds in Nepal. *Unpublished Master's Degree Thesis*. Office of the Dean, Faculty of Management, T.U.
- Bajracharya, R.B. (2016). Mutual fund performance in Nepalese mutual fund units. *Journal of Advanced Academic Research*, 3(11), 92-100.
- Baker, H.K., Farrelly, G.E. & Edelman, R.B. (1985). A survey of management views on dividend policy. *Financial Management*, 14,-78-84
- Chen, U. (2018). Performance Comparison of Mutual Funds in Pakistan. *African Journal of Business Management*, 5(14), 5583-5593
- Chen, J., Hong, H., Huang, M., & Kubik, J. D. (2004). Does Fund Size Erode Mutual Fund Performance? The Role of Liquidity and Organization. *The American Economic Review*, 94(5), 1276
<http://dx.doi.org/10.1257/0002828043052277>
- Champagne, C., Karoui, A. & Patel, S. (2017). Portfolio turnover activity and mutual fund performance. *Managerial Finance*, 44(3), 326-356.
- Coffie, M. S. (2019). An empirical analysis of the impact of macroeconomic factors on open-end mutual fund prices in Ghana. *Ashesi University*.
<http://hdl.handle.net/20.500.11988/501>.
- Carhart, M. M (1997). On persistence in mutual fund performance. *The journal of finance*, 52(1), 57-82.
- Dahlquist, M., Engström, S., Söderlind, P. (2000). Performance and Characteristics of Swedish Mutual Funds. *The Journal of Financial and Quantitative Analysis*. 35(3), 409-423
- Foong, S. S., Zakaria, N. B., & Tan, H. B. (2007). Firm Performance and Dividend Related Factors: The Case Of Malaysia. *Labuan Bulletin of International Business & Finance*, 5(603), 97–111.
- Fama, E. F. & French, K. R.(2009).Luck Versus Skill in the Cross Section of Mutual Fund Returns, *The Journal of Finance*, Vol. 65, No. 5.
DOI: <https://doi.org/10.1111/j.1540-6261.2010.01598.x>
- Fama, E. F. & French, K. R.(1992).The Cross-Section of Expected Stock Returns,

The Journal of Finance, Vol. XLVII, No. 2.

DOI: <https://doi.org/10.2307/2329112>

- Farid, S. & Wahba, H. (2022). The effect of fund size on mutual funds' performance in Egypt. *Future Business Journal*, 2022, 8(1):27. Retrieved from <https://doi.org/10.1186/s43093-022-00135-7>.
- Farrelly, G.E., Baker, H.K. & Edelman, R.B. (1986). Corporate dividend : views of the policymakers. *Akron Business and Economic Review*, 17, 62-74
- Golec, J. H. (1996). The effects of mutual fund managers' characteristics on their portfolio performance, risk and fees. *Financial Service Review*, 5(2), 137-147
- Grinblatt, M., Titman, S. (1989). Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings. *The Journal of Business*, 62(3), 393-416.
<http://dx.doi.org/10.1086/296468>
- Garg, M. & Srivastava, S. (2019). Correlation Among the Macroeconomic Variables and Mutual Funds in India: A Descriptive Study. *International Journal of Management and Social Sciences*,8(2.4).
- Harris, J. (1997). Big fees, small results. *Canadian Business*, 70(11), 34-44
- H. Kent Baker, et al.(2020).The savvy investor's guide to building wealth through Traditional investments. *Emerald publishing limited*, 126-128
- Hada, B. S. 2013. Critical Studies of Risk and Return on Mutual Funds. *International Journal of Research in Commerce & Management*, 4(06).
- Haniffa, R., & Hudaib, M. (2006). Corporate governance structure and performance of Malaysian listed companies. *Journal of Business Finance and Accounting*, 33(7-8), 1034-1062.
- ICB Asset Management Company Limited. (2018). ICB AMCL Close End Mutual Funds Annual Report 2017-2018.
- Indro, D.C., Jiang, C.X., and Lee, W. Y. (2019). Mutual Fund Performance : Does Fund Size Mater?. *Financial Analysis Journal*, 55(3).
- Jain, M., Singal, P. K., & Dwivedi, A. (2021). Performance Evaluation of Mutual Fund: A Study of Selected Research. *A Bi- annual Refereed International Research Journal*, 4(1),63-68.
- Kumar, V. (2019). Performance Analysis of Select Equity Mutual Funds in India. *Research Review International Journal of Multidisciplinary*, 04(05), 1476-1479.
- KESWAN, M. S. (2011). The Conditional Performance of Indian Mutual Funds: An

- Empirical Study. *International Journal of Multidisciplinary Research*, 1(4), 14–38.
- Kabir Biplob, M. N. (2017). Performance Evaluation of Bangladeshi Mutual Fund: An Analysis of Monthly Return Based on Net Asset Value. *International Journal of Economics & Management Sciences*, 06(03), 428. <https://doi.org/10.4172/2162-6359.1000428>
- Kazmi, S. A., (2022). Evaluating the performance of sector mutual funds. *Thomas Jefferson University*. Retrieved from https://jdc.jefferson.edu/diss_masters/29.
- Klapper, L. F., & Love, I. (2002). Corporate Governance, Investor Protection and Performance in Emerging Markets. In *World Bank Policy Research Working Paper* 2818. <https://doi.org/10.2139/ssrn.303979>
- Karaca, S. S., & Eksi, I. H. (2012). The Relationship between Ownership Structure and Firm Performance: An Empirical Analysis over? stanbul Stock Exchange (ISE) Listed Companies. *International Business Research*, 5(1), 172–181. <https://doi.org/10.5539/ibr.v5n1p172>
- Lintner, J. (1956). The distribution of incomes of corporations among dividends, retained earnings and taxes. *American Economic Review*, 46, 97-113
- Malik, M. F., & Rafique, A. (2013). Commercial Banks Liquidity in Pakistan: Firm Specific and Macroeconomic Factors. *Romanian Economic Journal*, 16(48).
- Malkiel, B. G. (1977). The Valuation of Closed -end Investment Company Shares. *The Journal of Finance*, 32(3), 847-859.
- Malkiel, B. G. (2003). The Effective Market Hypothesis and Its Critics. *Journal of Economic Perspective*, 17(1), 59-82.
- Maharjan, R. (2021). Performance evaluation of closed-end mutual funds in Nepal: A comparative study of GIMES1, NEF, LEMF and CMF1. Doctoral dissertation, Faculty of Management, Tribhuvan University, Nepal.
- Nicolescu, L., Tudorache, F. G., & Androniceanu, A. (2020). Performance risk analysis on mutual funds versus stock exchanges in young financial markets. *Journal of International Studies*, 13(1), 279–294. <https://doi.org/10.14254/2071-8330.2020/13-1/18>
- Nazir, M. S., & Nawaz, M. M. (2010). The determinants of mutual fund growth in Pakistan. *International Research Journal of Finance and Economics*, 54(10), 1051- 1060.

- Poudel, N. P. (2010). Scenario of the mutual fund industry in Nepal: A discussion. Pragmaan: *Journal of Management*, 41,1-12
- Pastor, L. & Vorsatz, M.B. (2020). Mutual fund performance and flows during the COVID19 Crisis. *The Review of Asset Pricing Studies*. 10(4), 791-833.
- Pant, R., Ghimire, B., & Dahal, R. k. (2022). Determinants of Mutual Fund Performance in Nepal. *Nepal Journal of Multidisciplinary Research*, 5(5), 1-16.
- Panigrahi, A., Karwa P., & Joshi, P. (2020). Impact of macroeconomic variables on the performance of mutual funds: a selective study. *Journal of Economic Policy and Research*,(115)
- Purwaningsih, S. S., Suryani, A., Bandung, D. E. (2017). Towards The Extended Use Of Basic Science For Enhancing Health, Environment, Energy And Biotechnology. ISBN: 978-602-60569-5-5
- Rahman, M. R., Rahman, M., & Subat, A. (2021). Assessment of Performance of Mutual Funds Listed in Dhaka Stock Exchange, Bangladesh. *The Journal of Management Theory and Practice*, 3(1), ISSN: 2716-7089.
- Rani, L. and Hooda, J., (2017). Dynamic Relationship between Stock Prices and Exchange Rates: Evidence from three South Asian Countries. *International Business Research*, 2(2): 167-174
- Rahman, S. A., (2021). Impact of COVID-19 on the social, economic, environmental and energy domains: Lessons learnt from a global pandemic. *Sustainable production and consumption*, 26, 343-359.
- Rahaman, F. (2022). Discount puzzle of closed -end mutual fund : A case of Bangladesh. Assistant Professor, *Department of Organization Strategy & Leadership*, 13(1), 1-13
- Roger, L. (1997). Buffett: The Making of an American Capitalist. *Orion publisher. Economics*, 21, 123-142. [http://dx.doi.org/10.1016/0304-405X\(88\)90034-7](http://dx.doi.org/10.1016/0304-405X(88)90034-7)
- Roger, L. (1997). Buffett: The Making of an American Capitalist. *Orion publisher*
- Rouf, M. A. (2011). The Relationship Between Corporate Governance and Value of the Firm in Developing Countries: Evidence from Bangladesh. *The International Journal of Applied Economics and Finance*, 5(3), 237–244.
- Shrestha, D. P., & Shrestha. Y. M. (2020). Factors Influencing Investment in Mutual Fund Schemes of Nepal. *Journal of Business and Social Sciences Research*, Vol V, NO.2, (ISSN: 2542- 2812).

<https://doi.org/10.3126/jbssr.v5i2.35231>

- Stevenson, F., & Paterson, C. (2007). The impact of macroeconomic variables on mutual fund performance in the UK. *Journal of Financial Research*, 30(1), 143-162.
- Sharpe, W.F. (1966). Mutual fund performance. *Journal of Business*, 39 (supplement), 119- 138
- Shumway, T. (2001). Forecasting bankruptcy more accurately: A simple hazard model. *Journal of Business*, 74(1), 101 –124. <https://doi.org/10.1086/209665>
- Saqib Wahab Mahar, Dr. Ghulam Muhammad Mangnejo and Muhammad Ali Brohi. (2021). Determinants of Mutual Funds Performance: A Review Article. *Research Journal of Social Sciences & Economics Review*, 2(2),61-67. DOI: [https://doi.org/10.36902/rjsser-vol2-iss2-2021\(61-67\)](https://doi.org/10.36902/rjsser-vol2-iss2-2021(61-67)).
- Singh, T., Mehta, S., & Varsha, M. S. (2011). Macroeconomic factors and stock returns: Evidence from Taiwan. *Journal of Economics and International Finance*, 2(4), 217–227.
- Thapa, K., & Rana, S. B. (2011). *Investment Management* (3rd ed.). Kathmandu: *Asmita Books Publishers & Distributors Private Ltd.*
- Tain, Y., Wan, G., Shi, J., Liu, W., & Shen, W. (2022). Performance Evaluation Model of Short-term Mutual Funds Based on Return-Variance Liquidity. *Security and Communication Network*.
- Treynor, J.L., 1965. How to rate management of investment funds. *Harvard Business Review*, 43(1): 63-75.
- Titman, S., John, K. C., Xie, W. F., Wei, K. C. J., & Xie, F. (2003). Capital Investments and Stock Returns Capital Investments and Stock Returns (No. 9951). <http://www.nber.org/papers/w9951>
- Upadhyaya, T. and Chhetri, S. (2019) Performance Base Empirical Analysis of Mutual Fund of financial risk management, 8(2) 43-54. doi: [10.4236/jfrm.2019.82004](https://doi.org/10.4236/jfrm.2019.82004).
- University of Puerto Rico. (2009). The Closed-End Funds Puzzle: *A Survey Review*, 14(2), 39-57.
- UWUIGBE, U., & OLUSANMI, O. (2012). An Empirical Examination of the Relationship between Ownership Structure and the Performance of Firms in Nigeria. *International Business Research*, 5(1), 208 –215. <https://doi.org/10.5539/ibr.v5n1p208>

- Virparia, V. (2022), Performance analysis of mutual funds in India. *International Journal of Management, Public Policy and Research*, 1(3), 22-34
- Yao, T., Yu, T., Zhang, T., & Chen, S. (2011). Asset growth and stock returns: Evidence from Asian financial markets. *Pacific Basin Finance Journal*, 19(1), 115-139.

Appendix I Panel data

year	MF	FS	DPR	FAG	M F	ROA	ROE	GDPG	I
2016/17	Nabil	654	1	298	13	0.133	0.292	8.98	4.50
2017/18	Nabil	825	7	311	17	0.052	0.138	7.62	4.20
2018/19	Nabil	512	12	302	16	0.061	0.103	6.66	4.60
2019/20	Nabil	541	7	307	21	0.083	0.147	-2.37	6.20
2020/21	Nabil	1982	8	1647	23	0.026	0.032	4.84	3.60
2016/17	Ciizen	662	6.4	662	58	0.068	0.132	8.98	4.50
2017/18	Ciizen	782	0.34	782	62	0.096	0.148	7.62	4.20
2018/19	Ciizen	364	0.86	364	71	0.088	0.231	6.66	4.60
2019/20	Ciizen	875	0.79	875	68	0.092	0.229	-2.37	6.20
2020/21	Ciizen	1039	0.82	1039	80	0.099	0.289	4.84	3.60
2016/17	Laxmi	532	3.2	112	40	0.12	0.31	8.98	4.50
2017/18	Laxmi	613	0.56	108	21	0.062	0.36	7.62	4.20
2018/19	Laxmi	557	0.25	132	36	0.066	0.29	6.66	4.60
2019/20	Laxmi	726	0.63	182	41	0.072	0.4	-2.37	6.20
2020/21	Laxmi	913	0.72	227	58	0.085	0.46	4.84	3.60
2016/17	NIBLS	448	1.9	108	33	0.08	0.28	8.98	4.50
2017/18	NIBLS	492	0.32	154	36	0.09	0.26	7.62	4.20
2018/19	NIBLS	510	0.36	162	42	0.012	0.3	6.66	4.60
2019/20	NIBLS	536	0.48	148	45	0.016	0.31	-2.37	6.20
2020/21	NIBLS	662	0.52	159	48	0.028	0.42	4.84	3.60
2016/17	NIBLP	632	0.13	96	31	0.032	0.264	8.98	4.50
2017/18	NIBLP	628	0.32	103	36	0.033	0.452	7.62	4.20
2018/19	NIBLP	533	0.33	118	40	0.061	0.382	6.66	4.60
2019/20	NIBLP	742	0.38	124	42	0.071	0.428	-2.37	6.20

2020/21	NIBLP	768	0.41	132	47	0.082	0.254	4.84	3.60
2016/17	Sidd E	669	0.21	108	28	0.087	0.392	8.98	4.50
2017/18	Sidd E	614	0.25	107	31	0.087	0.452	7.62	4.20
2018/19	Sidd E	2214	0.35	114	32	0.092	0.041	6.66	4.60
2019/20	Sidd E	2614	0.45	118	37	0.168	0.382	-2.37	6.20
2020/21	Sidd E	1646	0.55	76	34	0.241	0.428	4.84	3.60
2016/17	Sani E	542	0.19	111	21	0.023	0.124	8.98	4.50
2017/18	Sani E	567	0.26	126	24	0.051	0.158	7.62	4.20
2018/19	Sani E	614	0.31	131	32	0.057	0.287	6.66	4.60
2019/20	Sani E	682	0.33	145	39	0.063	0.312	-2.37	6.20
2020/21	Sani E	715	0.41	164	43	0.078	0.042	4.84	3.60
2016/17	Kum E	662	0.32	116	26	0.032	0.245	8.98	4.50
2017/18	Kum E	634	0.37	128	32	0.038	0.264	7.62	4.20
2018/19	Kum E	732	0.41	136	38	0.045	0.312	6.66	4.60
2019/20	Kum E	714	0.46	142	46	0.052	0.334	-2.37	6.20
2020/21	Kum E	765	0.47	154	58	0.057	0.381	4.84	3.60
2016/17	NMB S	576	0.24	156	20	0.026	0.36	8.98	4.50
2017/18	NMB S	582	0.37	162	31	0.029	0.38	7.62	4.20
2018/19	NMB S	614	0.43	167	39	0.031	0.47	6.66	4.60
2019/20	NMB S	628	0.49	178	43	0.036	0.49	-2.37	6.20
2020/21	NMB S	665	0.56	218	47	0.045	0.52	4.84	3.60
2016/17	Sun MF	538	0.27	132	29	0.019	0.291	8.98	4.50
2017/18	Sun MF	549	0.38	146	35	0.027	0.324	7.62	4.20
2018/19	Sun MF	564	0.46	154	42	0.031	0.391	6.66	4.60
2019/20	Sun MF	667	0.49	166	46	0.037	0.468	-2.37	6.20
2020/21	Sun MF	712	0.55	171	51	0.042	0.514	4.84	3.60

Appendix II Descriptive Statistics of Mutual Funds

	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Observations
ROA	0.06	0.06	0.24	0.01	0.04	1.92	8.60	50
ROE	0.31	0.31	0.52	0.03	0.13	-0.41	2.49	50
DPR	1.29	0.44	12.00	0.13	2.42	2.92	10.91	50
FAG	243.56	151.00	1647.00	76.00	284.45	3.31	14.51	50
FS	760.14	644.00	2614.00	364.00	432.31	2.99	11.45	50
MF	38.58	37.50	80.00	13.00	14.32	0.68	3.50	50
GDPG	5.15	6.66	8.98	-2.37	4.03	-1.10	2.72	50
I	4.62	4.50	6.20	3.60	0.87	0.87	2.64	50

Appendix III Correlation Analysis

Correlation	ROA	ROE	DPR	FAG	FS	M_F	GDPG	I
ROA	1							
ROE	-0.01 (0.96)	1						
DPR	0.10 (0.95)	0.50 (0.00)	1					
FAG	0.85 (0.03)	0.42 (0.00)	0.44 (0.00)	1				
FS	0.48 (0.00)	-0.17 (0.25)	0.08 (0.59)	0.31 (0.03)	1			

MF	-0.11	0.20	-0.28	0.30	-0.01	1		
	(0.44)	(0.15)	(0.05)	(0.03)	(0.95)			
GDPG	0.41	0.22	0.02	-0.07	-0.23	-0.29	1	
	(0.04)	(0.02)	(0.87)	(0.63)	(0.11)	(0.04)		
I	-0.20	0.09	-0.01	-0.12	0.01	0.00	-0.76	1
	(0.00)	(0.51)	(0.93)	(0.41)	(0.93)	(0.98)	(0.00)	

Appendix IV OLS Regression Output (ROA as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	0.98	0.00	1.09	0.28
FAG	2.99	0.00	-1.76	0.08
FS	1.53	0.00	3.98	0.00
GDPG	0.03	0.00	0.46	0.65
I	0.00	0.01	0.12	0.91
MF	0.02	0.00	1.67	0.10
C	-0.02	0.07	-0.21	0.84
R-squared				0.295553
Adjusted R-squared				0.197258
F-statistic				3.006792
Prob(F-statistic)				0.015252

Appendix V Fixed Effect Regression Output (ROA as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	0.87	0.00	-1.06	0.30
FAG	3.5	0.00	-2.77	0.01
FS	2.8	0.00	1.51	0.04
GDPG	0.00	0.00	-1.32	0.20
I	-0.02	0.01	-1.53	0.13
M_F	0.00	0.00	-0.20	0.84
C	0.18	0.10	1.77	0.09
R-squared				0.662138
Adjusted R-squared				0.513082
F-statistic				4.442194
Prob(F-statistic)				0.000154

Appendix VI Test result of Likelihood Ratio (Pooled OLS VS Fixed effect)

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.10	(9,34)	0.00
Cross-section Chi-square	36.74	9.00	0.00

Appendix VII OLS Regression Output (ROE as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	0.02	0.01	-2.07	0.04
FAG	4.3	0.00	-2.00	0.005
FS	0.00	0.00	-1.09	0.28
GDPG	-0.02	0.01	-2.22	0.03
I	-0.05	0.03	-1.56	0.13
MF	0.00	0.00	0.43	0.67
C	0.66	0.21	3.21	0.00
R-squared				0.408052
Adjusted R-squared				0.325454
F-statistic				4.940243
Prob(F-statistic)				0.000636

Appendix VIII Fixed Effect Regression Output (ROE as Dependent variable)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DPR	-0.02	0.01	-1.92	0.06
FAG	3.7	0.00	0.00	0.00
FS	6.52	0.00	-2.58	0.01
GDPG	-0.01	0.01	-1.19	0.24
I	-0.02	0.03	-0.62	0.54
MF	-2.3	0.00	1.22	0.03
C	0.44	0.28	1.60	0.12
R-squared				0.733290

Adjusted R-squared	0.615624
F-statistic	6.231948
Prob(F-statistic)	0.000005

Appendix IX Test result of Likelihood Ratio (Pooled OLS VS Fixed effect)

Effects Test	Statistic	d.f.	Prob.
Cross-section F	4.61	(9,34)	0.00
Cross-section Chi-square	39.86	9.00	0.00

PERFORMANCE EVALUATION OF CLOSED END MUTUAL FUN...

By: Sweta Chaudhary

As of: Jun 23, 2024 11:18:48 AM
16,660 words - 83 matches - 15 sources

Similarity Index
18%

Mode: Summary Report ▼

sources:

575 words / 3% - Internet from 19-Apr-2022 12:00AM
elibrary.tucl.edu.np

537 words / 3% - Internet from 20-Oct-2021 12:00AM
www.tandfonline.com

430 words / 2% - from 01-Jun-2023 12:00AM
www.nepjol.info

154 words / 1% - Internet from 29-Jan-2023 12:00AM
www.researchgate.net

130 words / 1% - Internet from 25-Aug-2022 12:00AM
www.researchgate.net

207 words / 1% - Internet from 21-Jun-2020 12:00AM
docplayer.net

197 words / 1% - Internet from 24-Sep-2022 12:00AM
www.coursehero.com

195 words / 1% - Internet from 29-Jul-2020 12:00AM
mafiadoc.com

128 words / 1% - from 15-May-2024 12:00AM
elibrary.tucl.edu.np

122 words / 1% - from 12-May-2023 12:00AM
epe.lac-bac.gc.ca

119 words / 1% - Internet from 29-Aug-2019 12:00AM
www.utccmbaonline.com

117 words / 1% - Internet from 25-Sep-2022 12:00AM
www.apjor.com

95 words / 1% - ProQuest
[Ajufunbaya, Kamaldeen Olaitan. "Credit Risk Management, Financial Reforms and Financial Performance of Selected Deposit Money Banks in Nigeria", Kwara State University \(Nigeria\), 2024](#)