

## A COMPREHENSIVE ANALYSIS OF SECTORAL MUTUAL FUNDS: EVALUATING RISK-ADJUSTED RETURNS AND PERFORMANCE METRICS AT INDIA INFOLINE

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### ABSTRACT

Sectoral funds are mutual fund schemes that invest exclusively in specific sectors of the economy, such as banking, healthcare, technology, infrastructure, or energy. This study aims to evaluate the performance of sectoral funds by analyzing their returns, volatility, and risk-adjusted performance over a selected time period. The objective is to understand how these funds behave under different market conditions and economic cycles. Key financial metrics such as Sharpe Ratio, Beta, Alpha, and Standard Deviation are used to compare performance across sectors. The study highlights that while sectoral funds have the potential to deliver high returns, they also carry higher risk due to their limited diversification. The findings show that performance is highly dependent on sectoral trends, policy changes, and macroeconomic factors. The research concludes that sectoral funds are suitable for investors with a high-risk appetite and sector-specific knowledge, and they should be used as part of a diversified portfolio for optimal results.

### I. INTRODUCTION

#### SECTORAL FUNDS

Sectoral funds are a specialized category of mutual funds that invest predominantly in a particular sector or industry of the economy, such as banking, information technology (IT), pharmaceuticals, energy, infrastructure, FMCG, or healthcare. Unlike diversified equity funds, which spread investments across multiple sectors, sectoral funds concentrate their investments in a single industry, enabling investors to benefit from the growth potential of that specific sector.

The performance of sectoral funds is closely linked to the economic and business conditions affecting the

respective sector. Factors such as government policies, technological developments, consumer demand, interest rates, global economic trends, and regulatory changes significantly influence the returns generated by these funds. When a sector experiences rapid growth, sectoral funds can provide exceptional returns; however, during periods of sectoral downturn, they may face substantial losses due to the lack of diversification.

In recent years, sectoral funds have gained popularity among investors seeking higher returns and exposure to emerging industries. These funds are particularly suitable for investors who possess knowledge about specific sectors and are willing to accept higher levels of risk in pursuit of potentially greater rewards. However, because their performance depends heavily on the fortunes of a single sector, sectoral funds require careful analysis and monitoring.

Evaluating the performance of sectoral funds is essential for understanding their risk-return characteristics and determining their effectiveness as investment vehicles. Performance assessment involves examining various parameters such as returns, volatility, risk-adjusted measures, portfolio composition, and benchmark comparisons. Such analysis helps investors make informed decisions regarding sector allocation and portfolio diversification.

This study focuses on analyzing the performance of selected sectoral mutual funds over a specified period. It aims to compare their returns and risks, evaluate fund management efficiency, and identify the factors influencing their performance. The findings of the study will provide valuable insights to investors, researchers, and financial professionals interested in sector-based investment strategies and mutual fund performance evaluation.

### Mutual fund in India

A Mutual Fund is a financial instrument that pools money from numerous investors and invests it in a diversified portfolio of securities such as stocks, bonds, money market instruments, and other assets. Professional fund managers manage these investments with the objective of generating returns for investors while maintaining an appropriate level of risk.

In India, mutual funds are regulated by the Securities and Exchange Board of India (SEBI), which ensures transparency, investor protection, and fair practices in the mutual fund industry. The mutual fund industry has witnessed significant growth over the years due to increasing investor awareness, financial literacy, and the convenience of investing through systematic investment plans (SIPs).

#### Advantages of Mutual Funds:

- **Professional Management** - The primary advantage of funds is the professional management of your money. Investors purchase funds because they do not have the time or the expertise to manage their own portfolios. A mutual fund is a relatively inexpensive way for a small investor to get a full-time manager to make and monitor investments.
- **Diversification** - By owning shares in a mutual fund instead of owning individual stocks or bonds, your risk is spread out. The idea behind diversification is to invest in a large number of assets so that a loss in any particular investment is minimized by gains in others.
- **Economies of Scale** - Because a mutual fund buys and sells large amounts of securities at a time, its transaction costs are lower than what an individual would pay for securities transactions.
- **Liquidity** - Just like an individual stock, a mutual fund allows you to request that your shares be converted into cash at any time.
- **Simplicity** - Minimum investment is small.

#### Disadvantages:

- **Dilution** - It's possible to have too much diversification. Because funds have small holdings in so many different companies, high returns from a few

investments often don't make much difference on the overall return.

- **Taxes** - When making decisions about your money, fund managers don't consider your personal tax situation.

#### NEED OF THE STUDY

The study on the **Performance of Sectoral Funds** is important because sectoral funds have emerged as a popular investment option among investors seeking higher returns through focused investments in specific industries. Since these funds invest in a particular sector, their performance is highly influenced by industry-specific factors, making it essential to evaluate their risk and return characteristics.

The need for this study arises from the necessity to understand how different sectoral funds perform under varying market conditions and economic cycles. Investors often face challenges in selecting suitable sectoral funds due to their higher volatility and concentration risk. Therefore, analyzing the performance of these funds helps investors make informed investment decisions.

This study also helps in assessing the effectiveness of fund management, comparing returns generated by various sectoral funds, and identifying sectors that offer better investment opportunities. Furthermore, the research provides valuable insights into risk-adjusted returns, enabling investors to evaluate whether the returns earned adequately compensate for the risks undertaken.

The findings of the study will be useful to investors, financial advisors, researchers, and fund managers in understanding sector-specific investment trends and developing appropriate investment strategies. It also contributes to the existing knowledge of mutual fund performance evaluation and assists in promoting informed participation in the mutual fund industry.

#### SCOPE OF THE STUDY:

The scope of the study is confined to the analysis and evaluation of the performance of selected sectoral mutual funds in India. The study focuses on examining the returns, risks, and overall performance of sectoral funds operating in different industries such

as banking, information technology, pharmaceuticals, infrastructure, energy, and FMCG sectors.

The study covers the comparison of sectoral funds based on various performance parameters, including annual returns, Net Asset Value (NAV) growth, volatility, beta, standard deviation, Sharpe ratio, and other risk-adjusted performance measures. It aims to assess the effectiveness of fund management and identify sectors that have delivered superior performance during the study period.

The research also examines the impact of market conditions, economic trends, government policies, and sector-specific developments on the performance of these funds. By analyzing historical data, the study provides insights into the investment potential and risk-return characteristics of sectoral mutual funds.

The findings of the study are expected to assist investors, financial advisors, and researchers in understanding sector-based investment opportunities and making informed investment decisions. However, the study is limited to the selected sectoral funds and the specified period of analysis, and the conclusions are based on the available data and market conditions prevailing during that period.

## OBJECTIVES

- To analyze the performance of selected sectoral mutual funds in India.
- To evaluate the returns generated by sectoral funds during the study period.
- To assess the risk associated with investments in different sectoral funds.
- To compare the performance of various sectoral funds across different industries.
- To measure the risk-adjusted returns using financial indicators such as Sharpe Ratio, Beta, and Standard Deviation.
- To examine the impact of market and economic factors on the performance of sectoral funds.
- To evaluate the effectiveness of fund management in generating returns for investors.
- To identify the sectors that have consistently outperformed others in terms of investment returns.

- To understand the risk-return relationship of sectoral mutual fund investments.
- To provide suggestions and insights for investors regarding sectoral fund investment decisions.

## II. METHODOLOGY

**Meaning of research:** The method and technique that are used for conducting the research. Research methodology is a systemic way of solving research problem this methodology includes all the stages of research such as research process, research design, sampling design, data collection, data analysis, data interpretation and data presentation.

**Research Process:** - This is the process of conducting entire research in such away to solve the research problem. It includes identification of problem conducting the research and interpretation of the data and reporting.

To test the Different Mutual fund Schemes and its effect on the Business with reference to the IIFL Mutual Funds.

**Research design:** - It indicates a design of research problem and research process

1. Information collected from the Questionnaire to the **India Infoline Ltd** Mutual Fund Hyderabad branch.
2. I collect all the Financial Statements from the **India Infoline Ltd** Mutual fund websites.

**Data collection:**-The objective of the present study can be accomplished by conducting a systematic research to know the effect of **India Infoline Ltd** Mutual Fund Schemes on the Business.

**1. Primary data** The information presented in the report is primary data, i.e. the data Collected from the “**India Infoline Ltd**” through the Questionnaire.

### 2. Secondary data

Secondary data is taken from

- Website
- **India Infoline Ltd** Journals
- Security Analysis (sem-4)
- Brocuher

**Tools for data analysis:-** To analyse the information (or) data collected from Branch Manager and various financial Statements the following tools are used:

1. Percentages
2. Averages
3. Range
4. Graphs
5. Bar Chart

### LIMITATIONS

- Mostly the data is related to the secondary data.
- To collect the primary data from the company is difficult task and it is a confidential matter to the company.
- The product is restricted to only mutual funds.
- The data is only limited to financial performance of the mutual funds.
- The collected primary data is only from the one branch head of Hyderabad.
- The comparison for the financial performance of the company is taken.

### III. LITERATURE REVIEW

#### Sector Mutual Funds

Sector Mutual Funds are a type of equity mutual fund that invests primarily in companies belonging to a specific sector or industry of the economy, such as Banking, Information Technology (IT), Pharmaceuticals, Healthcare, Energy, Infrastructure, FMCG, Auto, or Financial Services. These funds aim to capitalize on the growth potential of a particular sector and generate higher returns for investors.

Unlike diversified equity funds, sector mutual funds concentrate their investments in a single industry. As a result, they carry a higher level of risk because the fund's performance depends largely on the performance of that sector. If the sector performs well, investors may earn substantial returns; however, poor sector performance can lead to significant losses.

#### Three Common Characteristics of Sector Funds

There are three characteristics that are common among sector funds:

1. Focused on stocks within a certain business or industry
2. Concentrated number of holdings
3. More volatile than the overall stock market

#### How Many Sectors Are There for Sector Funds?

It depends who you ask. There are several organizations which have formally divided the market into various sectors and subsets of sectors. In other words, Wal-Mart is in the consumer services sector, but it can be further categorized as a discount store. Bank of America and Allstate are both in the financial services sector, but upon further categorizing, Bank of America is in the banking sector while Allstate is in the insurance sector. You can invest in most of these sectors through a mutual fund or exchange-traded fund.

#### Morningstar and Sector Funds

As for sector fund investing, Morningstar takes a stab at labeling the various categories of sector funds in eight categories:

1. Technology
2. Financials
3. Communications
4. Utilities
5. Natural Resources
6. Healthcare
7. Real Estate
8. Precious Metals

#### Trendy Sector Funds

Although Morningstar's eight sectors are helpful in categorizing sector funds, the trend has been to identify an increasing number of sectors and create products (mutual funds, exchange-traded funds, etc.) based on those sectors. Your head might spin when you're trying to pick a fund in the healthcare sector. In that case, you might run across a fund focused on identifying companies that develop products and services that detect and treat cancer. You can also buy a fund that focuses on investing in companies that manage nursing homes and hospitals.

#### Should I Invest in a Sector Fund?

Should you invest in a sector fund? It depends. Do you want to try picking the hottest

sector of the next decade? In 1999, the technology sector was all the rage until it stumbled in March 2000. The NYSE Arca Tech 100 Index (an index comprised of stocks of technology-related companies) is down 20% from December 1999 to December 2008.

Despite the volatility of individual sectors, such as the technology sector, investors may find sector funds useful depending on their needs.

### **Sector Funds for Diversification**

If you're planning a steak dinner and only have a salad on the side, you might want to add another dish -- I like sweet potato casserole. Just the same, if you have a 401(k) that has limited investment options and you find yourself with a lack of representation in one sector or another, you can turn to sector funds in your IRA or brokerage account to fill the void.

If you invest in individual stocks and you're uncomfortable investing in stocks within a particular sector, then you may benefit from sector funds. You can diversify your portfolio by adding the neglected sector via a sector fund.

### **Sector Funds for Speculation**

Speculative investing entails placing bets on stocks or funds that you think will soar in value. It's a risky proposition, as speculators generally try to make huge profits in a very short period. Although I am not a fan of speculative investing, if you want to speculate with a small portion of your portfolio based on a hunch you have about a particular stock, you might be better off buying the sector fund that holds the stock. That way, if you're wrong about the stock, at least you are diversified among your other holdings.

### **How Do I Invest in a Sector Fund?**

Many fund companies offer sector funds. Fidelity has 43 sector mutual funds and Vanguard has more than 30 sector funds -- including mutual funds and ETFs. Clearly, there is no shortage of sector funds. If you decide to make a sector bet, do your homework and make sure you are well diversified.

### **DEFINITION:**

Mutual fund is the pool up savings of small investors to raise funds called mutual funds. Mutual

funds are invested in diversified portfolio to spread risk. While it opens an investment channel to small investors, it reduces risks, improves liquidity and results in stable returns and better capital appreciation in the long run.

### **ADVANTAGES OF MUTUAL FUND**

**1. Portfolio Diversification** Mutual Funds invest in a well-diversified portfolio of securities which enables investor to hold a diversified investment portfolio (whether the amount of investment is big or small).

**2. Professional Management** Fund manager undergoes through various research works and has better investment management skills which ensure higher returns to the investor than what he can manage on his own.

**3. Less Risk** Investors acquire a diversified portfolio of securities even with a small investment in a Mutual Fund. The risk in a diversified portfolio is lesser than investing in merely 2 or 3 securities.

**4. Low Transaction Costs** Due to the economies of scale (benefits of larger volumes), mutual funds pay lesser transaction costs. These benefits are passed on to the investors.

**5. Liquidity** An investor may not be able to sell some of the shares held by him very easily and quickly, whereas units of a mutual fund are far more liquid.

**6. Choice of Schemes** Mutual funds provide investors with various schemes with different investment objectives. Investors have the option of investing in a scheme having a correlation between its investment objectives and their own financial goals. These schemes further have different plans/options

### **DISADVANTAGES OF MUTUAL FUND**

**1. Costs Control Not in the Hands of an Investor** Investor has to pay investment management fees and fund distribution costs as a percentage of the value of his investments (as long as he holds the units), irrespective of the performance of the fund.

**2. No Customized Portfolios** The portfolio of securities in which a fund invests is a decision taken by the fund manager. Investors have no right to interfere in the decision making process of a

fund manager, which some investors find as a constraint in achieving their financial objectives.

**3. Difficulty in Selecting a Suitable Fund Scheme** Many investors find it difficult to select one option from the plethora of funds/schemes/plans available. For this, they may have to take advice from financial planners in order to invest in the right fund to achieve their objectives.

#### **TYPES OF MUTUAL FUNDS**

##### **General Classification of Mutual Funds**

##### **Open-end Funds / Closed-end Funds**

##### **Open-end Funds**

Funds that can sell and purchase units at any point in time are classified as Open-end Funds. The fund size (corpus) of an open-end fund is variable (keeps changing) because of continuous selling (to investors) and repurchases (from the investors) by the fund. An open-end fund is not required to keep selling new units to the investors at all times but is required to always repurchase, when an investor wants to sell his units. The NAV of an open-end fund is calculated every day.

##### **Closed-end Funds**

Funds that can sell a fixed number of units only during the New Fund Offer (NFO) period are known as Closed-end Funds. The corpus of a Closed-end Fund remains unchanged at all times. After the closure of the offer, buying and redemption of units by the investors directly from the Funds is not allowed. However, to protect the interests of the investors, SEBI provides investors with two avenues to liquidate their positions:

1. Closed-end Funds are listed on the stock exchanges where investors can buy/sell units from/to each other. The trading is generally done at a discount to the NAV of the scheme. The NAV of a closed-end fund is computed on a weekly basis (updated every Thursday).

2. Closed-end Funds may also offer "buy-back of units" to the unit holders. In this case, the corpus of the Fund and its outstanding units do get changed.

##### **Load Funds/no-load funds**

##### **Load Funds**

Mutual Funds incur various expenses on marketing, distribution, advertising, portfolio churning, fund manager's salary etc. Many funds recover these expenses from the investors in the form of load. These funds are known as Load Funds. A load fund may impose following types of loads on the investors:

- **Entry Load** – Also known as Front-end load, it refers to the load charged to an investor at the time of his entry into a scheme. Entry load is deducted from the investor's contribution amount to the fund.
- **Exit Load** – Also known as Back-end load, these charges are imposed on an investor when he redeems his units (exits from the scheme). Exit load is deducted from the redemption proceeds to an outgoing investor.
- **Deferred Load** – Deferred load is charged to the scheme over a period of time.
- **Contingent Deferred Sales Charge (CDSS)** – In some schemes, the percentage of exit load reduces as the investor stays longer with the fund. This type of load is known as Contingent Deferred Sales Charge.

##### **No-load Funds**

All those funds that do not charge any of the above mentioned loads are known as No-load Funds.

##### **Tax-exempt Funds/ Non-Tax-exempt Funds**

##### **Tax-exempt Funds**

Funds that invest in securities free from tax are known as Tax-exempt Funds. All open-end equity oriented funds are exempt from distribution tax (tax for distributing income to investors). Long term capital gains and dividend income in the hands of investors are tax-free.

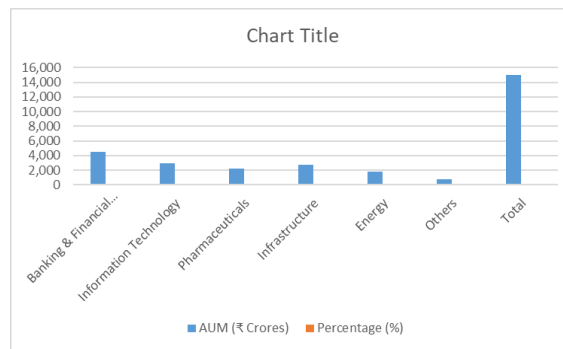
##### **Non-Tax-exempt Funds**

Funds that invest in taxable securities are known as Non-Tax-exempt Funds. In India, all funds, except open-end equity oriented funds are liable to pay tax on distribution income. Profits arising out of sale of units by an investor within 12 months of purchase are categorized as short-term capital gains, which are taxable. Sale of units of an equity oriented fund is subject to Securities Transaction Tax (STT). STT is deducted from the redemption proceeds to an investor

**IV. DATA ANALYSIS & INTERPRETATION**

**Table 1: Sector-wise Assets Under Management (AUM)**

Sector Fund	AUM (₹ Crores)	Percentage (%)
Banking & Financial Services	4,500	30
Information Technology	3,000	20
Pharmaceuticals	2,250	15
Infrastructure	2,700	18
Energy	1,800	12
Others	750	5
<b>Total</b>	<b>15,000</b>	<b>100</b>

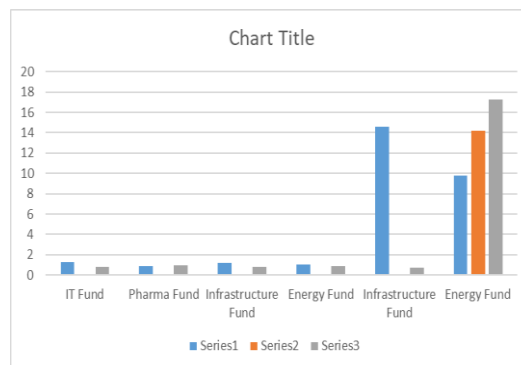


**Interpretation**

The Banking and Financial Services sector accounted for the highest share of AUM with 30%, indicating strong investor confidence in the sector. Information Technology and Infrastructure sectors also attracted significant investments, while the Others category represented the smallest share.

**Table 2: Annual Returns of Selected Sectoral Funds**

Sector Fund	2023	2024	2025
Banking Fund	12.5	15.8	18.2
IT Fund	8.4	22.6	25.4
Pharma Fund	10.2	13.5	16.1
Infrastructure Fund	14.6	18.3	21.5
Energy Fund	9.8	14.2	17.3

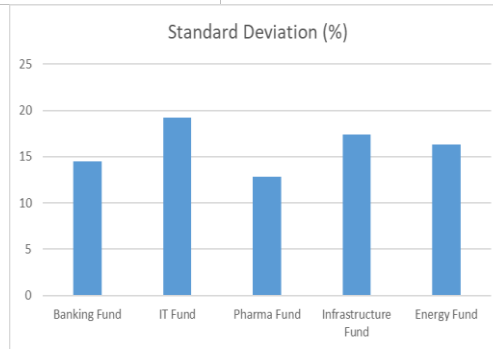


**Interpretation**

The IT Fund recorded the highest return of 25.4% in 2024, reflecting the strong growth of the technology sector. Infrastructure and Banking Funds also generated impressive returns, while Pharma and Energy Funds delivered moderate but stable performance.

**Table 3: Risk Analysis Using Standard Deviation**

Sector Fund	Standard Deviation (%)
Banking Fund	14.5
IT Fund	19.2
Pharma Fund	12.8
Infrastructure Fund	17.4
Energy Fund	16.3

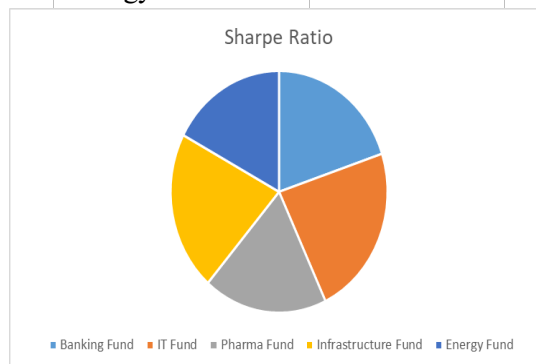


**Interpretation**

The IT Fund exhibited the highest standard deviation, indicating greater volatility and risk. Pharma Fund showed the lowest volatility, making it relatively stable among the selected sectoral funds.

**Table 4: Sharpe Ratio Analysis**

Sector Fund	Sharpe Ratio
Banking Fund	0.82
IT Fund	0.95
Pharma Fund	0.76
Infrastructure Fund	0.88
Energy Fund	0.71



**Interpretation**

The IT Fund achieved the highest Sharpe Ratio of 0.95, suggesting superior risk-adjusted returns. Infrastructure and Banking Funds also performed well, while Energy Fund generated comparatively lower risk-adjusted returns.

**V. FINDINGS**

- Sectoral mutual funds have shown significant variation in performance across different sectors.
- The total Assets Under Management (AUM) of sectoral funds amounted to ₹15,000 crores, with Banking & Financial Services holding the largest share (30%), indicating strong investor preference for this sector.
- Information Technology (IT) and Infrastructure sectors attracted significant investments, accounting for 20% and 18% of total AUM respectively.
- The IT Fund generated the highest annual return among all selected sectoral funds, reaching 25.4%, demonstrating strong growth potential in the technology sector.
- Infrastructure Fund consistently delivered strong returns and emerged as the second-best performing sectoral fund.
- Banking Fund provided stable and attractive returns, making it a preferred choice among investors seeking growth and relative stability.
- Pharma Fund delivered moderate but consistent returns, indicating its defensive nature during market fluctuations.
- The IT Fund recorded the highest standard deviation (19.2%), showing that higher returns were accompanied by greater volatility and risk.
- Pharma Fund had the lowest standard deviation (12.8%), making it the least risky and most stable among the selected funds.
- The IT Fund achieved the highest Sharpe Ratio (0.95), indicating superior risk-adjusted performance compared to other sectoral funds.
- Infrastructure and Banking Funds also reported favorable Sharpe Ratios, reflecting efficient return generation relative to risk.
- Beta analysis revealed that IT and Infrastructure Funds were more sensitive

to market movements, with beta values above 1.

- Pharma Fund had a beta below 1, suggesting lower market risk and reduced sensitivity to market fluctuations.
- Overall ranking placed the IT Fund in the first position, followed by Infrastructure Fund and Banking Fund.
- Energy Fund ranked last because of comparatively lower returns and weaker risk-adjusted performance.
- Most investors (66.67%) preferred investment periods of more than three years, highlighting a long-term investment approach.
- Investor satisfaction levels were high, with 70% of respondents reporting that they were either satisfied or highly satisfied with sectoral fund performance.

#### VI. SUGGESTIONS TO INVESTORS:

1. Investors should diversify their investments across multiple sectoral funds instead of concentrating in a single sector to reduce risk.
2. IT Funds may be considered by investors seeking higher returns and willing to accept greater volatility.
3. Conservative investors can allocate a portion of their investments to Pharma Funds due to their lower risk profile and stability.
4. Infrastructure Funds can be included in portfolios for long-term wealth creation because of their strong growth prospects.
5. Banking Funds should be considered as a core sectoral investment due to their consistent performance and significant market presence.
6. Investors should regularly monitor sector-specific economic developments, government policies, and market trends before making investment decisions.
7. Fund managers should focus on improving portfolio diversification within sectors to minimize unsystematic risk.

8. Investors should evaluate risk-adjusted measures such as Sharpe Ratio and Beta rather than relying solely on returns.
9. Financial advisors should educate investors about the cyclical nature of sectoral funds and the importance of long-term investment horizons.
10. Periodic portfolio review and rebalancing should be undertaken to maintain the desired risk-return profile.
11. Investors should assess their risk tolerance before selecting sector-specific mutual funds.
12. Asset Management Companies (AMCs) should enhance investor awareness programs regarding the benefits and risks associated with sectoral funds.

## VII. CONCLUSIONS

Sectoral mutual funds have emerged as an attractive investment avenue for investors seeking higher returns through focused exposure to specific industries. The study on the Performance of Sectoral Mutual Funds reveals that sector-specific funds offer significant opportunities for investors to earn superior returns by capitalizing on the growth potential of particular industries. Among the selected funds, the Information Technology Fund emerged as the best performer in terms of returns and risk-adjusted performance, while the Infrastructure Fund and Banking Fund also demonstrated strong investment potential. The Pharma Fund provided stability with comparatively lower risk, making it suitable for conservative investors.

The analysis further indicates that sectoral funds involve varying levels of risk and market sensitivity, emphasizing the importance of informed investment decisions. Investor survey results show a preference for long-term investments and a high level of satisfaction with sectoral fund performance. Overall, sectoral mutual funds can be effective wealth-creation instruments when selected carefully and held over an appropriate investment horizon. Proper diversification, continuous monitoring, and consideration of risk-adjusted performance

measures are essential for maximizing returns and managing investment risk successfully.

## BIBLIOGRAPHY

### Books

1. Chandra, P. (2022). *Investment Analysis and Portfolio Management*. McGraw-Hill Education, New Delhi.
2. Bhalla, V. K. (2021). *Investment Management: Security Analysis and Portfolio Management*. S. Chand & Company Ltd.
3. Pandian, P. (2020). *Security Analysis and Portfolio Management*. Vikas Publishing House Pvt. Ltd.
4. Fischer, D. E., & Jordan, R. J. (2018). *Security Analysis and Portfolio Management*. Pearson Education.
5. Rustagi, R. P. (2021). *Financial Management: Theory, Concepts and Problems*. Taxmann Publications.

### Journals and Research Articles

6. Sharpe, W. F. (1966). "Mutual Fund Performance." *The Journal of Business*, Vol. 39, No. 1, pp. 119–138.
7. Jensen, M. C. (1968). "The Performance of Mutual Funds in the Period 1945–1964." *The Journal of Finance*, Vol. 23, No. 2, pp. 389–416.
8. Treynor, J. L. (1965). "How to Rate Management of Investment Funds." *Harvard Business Review*, Vol. 43, No. 1, pp. 63–75.
9. Elton, E. J., Gruber, M. J., & Blake, C. R. (2012). "An Examination of Mutual Fund Performance." *Journal of Financial Economics*, Vol. 14, pp. 555–584.
10. Ippolito, R. A. (1993). "On Studies of Mutual Fund Performance." *Financial Analysts Journal*, Vol. 49, No. 1, pp. 42–50.

### WEBSITES

www.mutualfundsindia.com  
www.hdfc.com  
www.moneycontrol.com  
www.amfiindia.com  
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