COMPARATIVE ANALYSIS OF SECTORAL MUTUAL FUND SCHEMES WITH REFERENCE TO UTTARAKHAND

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THESIS COMPLETION CERTIFICATE

This is to certify that the thesis on "Comparative Analysis of Sectoral Mutual Fund Schemes with reference to Uttarakhand" by **Ankur Mittal** in Partial completion of the requirement for the award of the Degree of Doctor of Philosophy (Management) is an original work carried out by him under our joint supervision and guidance. It is certified that the work has not been submitted anywhere else for the award of any other diploma or degree of this or any other University.

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DECLARATION

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgement has been made in the text.

(Ankur Mittal)

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CONTENTS

CERTIFICATE FROM SUPERVISORS	i
DECLARATION BY THE RESEARCHER	ii
ACKNOWLEDGEMENT	iii
EXECUTIVE SUMMARY	xi
LIST OF FIGURES	xii
LIST OF TABLES	xiii
LIST OF ABBREVIATIONS	xiv

Chapter 1: INTRODUCTION **4-64**

1.1 Financial Sector Liberalization

1.2 Indian Financial Sector

1.3 5th Mutual Fund Summit in 2009

1.4 Wealth Report by Goldman Sachs

1.5 Mutual Funds: An Overview

1.5.1 Organization of a Mutual Fund

1.6 Mutual Fund Function within strict regulatory framework

1.6.1 A Brief History of Mutual Funds and their Regulation in India

1.6.2 Regulations pertaining to distribution and costs of Mutual Funds

1.6.3 Regulation pertaining to transparency of mutual fund products

1.7 Association of Mutual Funds in India (AMFI)

1.7.1 The objectives of Association of Mutual Funds in India

1.8 History of Mutual Fund in India

1.8.1 First Phase – 1964-87

1.8.2 Second Phase – 1987-1993 (Entry of Public Sector Funds)

1.8.3 Third Phase – 1993-2003 (Entry of Private Sector Funds)

1.8.4 Fourth Phase – since February 2003

1.9 Types of Mutual Funds

1.9.1 By Structure

1.9.2 By Investment Objective

1.9.3 Other Schemes
1.10 Benefits of Mutual Fund investment
1.11 Limitation of Mutual Fund Investment
1.12 Mutual Fund Accounting
1.12.1 Performance Evaluation of Mutual Funds
1.12.2 Presentation of Accounts
1.12.3 Accounting Policies
1.12.4 Annual Report
1.13 The Risk-Return Trade-off
1.13.1 Risk associated with Mutual funds
1.14 Recent Trends in Mutual Fund industry
1.15 Current Scenario of the Mutual Fund Industry
1.16 Growth in Asset Under Management (AUM)
1.16.1 AUM Growth
1.16.2 AUM Base and growth relative to the global industry
1.16.3 AUM to GDP Ratio
1.17 Impact of the Global Financial Crisis
1.18 Future Scenario
1.19 Recommendation on "Launch of Dedicated Infrastructure Funds" (DIF's) by Mutual Funds Companies
1.20 Uttarakhand at a Glance
1.20.1 Geography and Location
1.20.1 Recent Developments in Uttarakhand State
1.21 Household Savings in Uttarakhand State

Chapter 2: REVIEW OF LITERATURE 67-126

2.1 Mutual Fund: A Global Perspective
2.2 Mutual Fund: The Indian Scenario
2.3 Theories of Mutual Fund
2.3.1 Theories of Regulation
2.3.2 Theories of Risk Measurement
2.4 Empirical Review
2.4.1 Review of Studies on Mutual Funds performance

2.4.2 Review of Empirical Studies on Mutual Fund Costs and Fees
2.4.3 Empirical Studies on Fund Size and Returns
2.4.4 Fund Style and Fund Returns
2.5 Empirical studies on Indian Mutual Funds

Chapter 3: RESEARCH METHODOLOGY 129-149
3.1 Rationale of the Study
3.2 Statement of the Problem
3.3 Objectives of the Study
3.4 Scope of the Study
3.5 Research Design
3.5.1 Data Collection
3.6 Sampling Frame
3.6.1 Secondary Data Collection
3.6.2 Primary Data Collection
3.7 Data Analyses & Interpretation
3.7.1 Tools for Secondary Data Analysis
3.7.2 Tools for Primary Data Analysis
3.8 Formulation of Hypothesis
3.9 Limitations of the Study

Chapter 4: DATA ANALYSIS & DATA INTERPRETATION 152-186

Part A- Secondary Data Analysis

4.1 Risk and Return Analysis
4.2 Results of Sharpe and Treynor Ratio
4.3 Result of Jensen Alpha Model
4.4 Fama's Component of Investment Performance
4.4.1 Performance on Risk
4.4.2 Performance on Diversification
4.4.3 Performance on Net Selectivity
Conclusion

Part B- Primary Data Analysis

4.5 Sample Profile of Investors

4.5.1 Gender of Investors

4.5.2 Age of Investors

4.5.3 Annual Income

4.5.4 Annual savings

4.5.5 Investment in Mutual fund as a % of Savings

4.5.6 Education Level

4.5.7 Name of the Mutual fund scheme

4.5.8 Month of investment

4.5.9 Area profile of Investors

4.6 Study of Investment consultant recommendations

4.6.1 Spearman's Coefficient of Correlation

4.6.2 Determination of underlying factors affecting the choice of investors in investing into sectoral mutual fund schemes.

Conclusion

Chapter 5: PERFORMANCE OF DEDICATED INFRASTRUCTURE FUNDS 189-201

5.1 Infrastructure Financing

5.2 Visible Growth Prospects

5.3 Policy Reforms to provide huge business potential

5.4 Infrastructure spending to remain strong in XIIth Five Year Plan

5.5 Improving liquidity conditions

5.6 Infrastructure funds: More than a Sectoral Fund

5.7 Infrastructure Companies: Underperformed in the Early Global Economic Recovery

5.8 Key Points for Infrastructure Funds

5.9 Infrastructure gets a massive push in India

5.10 Infrastructure funds in India and their sector allocation

5.11 Assets growth of Infrastructure funds have not kept pace with markets

5.12 Performance Attribution analysis points to Industrial Materials, Energy and Utilities sectors as the main culprits for underperformance

5.13 Performance of Dedicated Infrastructure Schemes vis-à-vis Diversified equity mutual fund schemes.

5.14 Bull and Bear Market

Conclusion

Chapter 6: FUTURE SCOPE OF GROWTH OF SECTORAL MUTUAL FUNDS 205-225

6.1 Areas of Concern

6.1.1 Low level of Customer Awareness

6.1.2 Inadequate reach of funds / distributors to retail investors

6.1.3 Limited innovation in product offering

6.1.4 Multiple Regulatory Frameworks

6.2 Future Outlook

6.3 Eight Indian MFs in World's 25 best funds in a decade

6.4 Investor contribution remains skewed towards the corporate sector.

6.5 All roads lead to increased investor awareness

6.6 Financial Inclusion : The new buzz in the Financial Services Sector

6.6.1 Reaching out to Tier 2 & Tier 3 cities

6.6.2 Investor awareness has to spread its wings to lead sustainable growth of the Industry

6.7 The Industry adapts to Changing Regulations

6.7.1 Entry Load

6.7.2 Direct Tax Code

6.7.3 Documentation

6.7.4 Disclosure of Investor Complaints in the Annual Report

6.7.5 Fund of Fund Schemes

6.8 Next step for the Mutual Fund Industry

6.8.1 Diverse Range of Products

6.8.2 Regulation for MF Distributors

6.8.3 Recommendations to re-visit the eligibility norms of AMCs

6.8.4 Trading through stock exchange platforms

6.8.5 Real Estate Mutual Funds

Conclusion

Chapter 7: SUMMARY, CONCLUSIONS & SUGGESTIONS 228-234

7.1 Summary

7.2 Conclusions

7.3 Suggestions

References **235-245**

Appendices

Annexure I : Questionnaire for Investment Consultant/ Broker

Annexure II :Questionnaire for Investors

Annexure III: **Bird Eye view on Sectoral Mutual Fund Scheme Performances**

Personal Resume

EXECUTIVE SUMMARY

Chapter 1 begins with the financial sector liberalization and Indian financial sector reforms. It further discusses the evolution of mutual fund industry and the emergence of the capital market with focus on mutual funds. The later part of the chapter draws attention towards the recommendations on Launch of Dedicated Infrastructure Fund by Mutual Fund Companies. At the end overview of Uttarakhand State and household savings in Uttarakhand has been presented with the help of statistics.

Chapter 2 is concerned with the review of global and Indian empirical studies on Mutual Funds performance evaluation.

Chapter 3 is concerned with the research methodology adopted. It includes the rationale of the study, followed by statement of the research problem, planning of the research projects, framing the hypotheses and explaining how the data collection was performed.

Chapter 4 deals with the Empirical Analysis and the Interpretation of Secondary & Primary data for performance evaluation of sectoral mutual fund schemes with various tools like Sharpe ratio, Treynor Ratio, Jensen Alpha model, Fama decomposition model, coefficient of correlation, rank correlation and factor analysis.

Chapter 5 analysis the performance of dedicated infrastructure funds vis-a-vis the diversified equity fund and also examines the performances of DIF's and diversified equity fund over Bull & Bear phases.

Chapter 6 discusses the scope of growth of sectoral mutual funds in the future.

The conclusions, suggestions are presented in **Chapter 7**. It discusses about the suggestive measures which may be adopted by various agencies like SEBI, AMFI for better future of mutual funds.

LIST OF FIGURES

S.No.	Figure	Particulars
1	Figure 1.1	Mutual fund flow chart
2	Figure 1.2	Organization of mutual fund
3	Figure 1.3	Phases of Indian mutual fund industry
4	Figure 1.4	Types of mutual funds
5	Figure 1.5	Risk associated with mutual funds
6	Figure 1.6	Risk hierarchy of mutual funds
7	Figure 1.7	Growth in asset under management
8	Figure 4.1:	Gender of investors
9	Figure 4.2:	Age of Investors
10	Figure 4.3:	Annual Income
11	Figure 4.4:	Annual Savings
12	Figure 4.5	Investment in Mutual funds as a % of savings
13	Figure 4.6:	Educational Profile
14	Figure 4.7:	Name of Mutual fund Scheme
15	Figure 4.8:	Month of Investment in Mutual fund
16	Figure 4.9	Area profile of Investors
17	Figure 6.1	Investor Contributions as of March 31, 2010
18	Figure 6.2	AUM in 2009 & 2010

LIST OF TABLES

S.No	Tables	Particulars
1	Table 1.1	Uttarakhand geography
2	Table 1.2	Uttarakhand at a Glance
3	Table 4.1	Risk and Return of sample Mutual fund schemes
4	Table 4.2	Sharpe and Treynor Ratio Ranking
5	Table 4.3	Jensen Alpha
6	Table 4.4	Fama's component of Investment Performance
7	table 4.5	Gender of investors
8	Table 4.6	Age of Investors
9	Table 4.7	Annual Income
10	Table 4.8	Annual Savings
11	Table 4.9	Investment in Mutual funds as a % of savings
12	Table 4.10	Educational Profile
13	Table 4.11	Name of Mutual fund Scheme
14	Table 4.12	Month of Investment in Mutual fund
15	Table 4.13	Area profile of Investors
16	Table 4.14	WAS and Ranking of Aspect in Selection of Sectoral Mutual Funds Schemes of Investors
17	Table 4.15	WAS and Ranking of Aspect in Selection of Sectoral Mutual Fund Schemes to Investors by Brokers
18	Table 4.16	Calculation of Spearman Coefficient of Correlation
19	Table 4.17	KMO and Bartlett's Test
20	Table 4.18	Communalities
21	Table 4.19	Rotated Component Matrix
22	Table 4.20	Identified Factors
23	Table 5.1	Comparative Analysis of DIF vis-à-vis Diversified Equity funds
24	Table 5.2	Performance of DIF's and Diversified equity funds in Bull & Bear Phase

LIST OF ABBREVIATIONS

NAV	Net Asset Value
AUM	Asset under Management
SEBI	Security and Exchange Board of India
CAPM	Capital Asset Pricing Model
UTI	Unit Trust of India
AMC	Asset Management Company
ELSS	Equity Linked Savings Schemes
RBI	Reserve Bank of India
BSE	Bombay Stock Exchange
CRISIL	Credit Rating & Institutional Services of India Limited
AMFI	Association of Mutual fund India
BRIC	Brazil Russia India & China
DIF's	Dedicated Infrastructure Funds
MF's	Mutual Funds

This Thesis is Dedicated
to
My Parents
&
My Daughter
Who have been consistent source of inspiration

CHAPTER 1
INTRODUCTION

Mobilization, allocation and channelization of savings along with the risk management system significantly contribute for the development of a financial market. Matured financial market stimulates savings by ensuring better rate of return. Liberalization, Privatization and Globalization, (LPG) phenomena have been instrumental in the acceleration of development of global development of financial market in India. For upliftment of depressing financial sector, more vibrant and efficient, reforms were introduced in the beginning of 1990's.

The transparency in operations along with the formation of SEBI, liberalization of foreign capital norms resulted in the emergence of mutual funds in the public and private sectors. The financial sector reforms and the opening up of the liberalized economy resulted in thrusting up the traditionally protected mutual fund industry to a greater level of competitive environment.

The emergence of an intensely competitive structure in the place of the earlier monolithic scenario is the biggest structural change in the Indian Mutual Fund Industry (IMFI) during the last decade.

1.1 Financial Sector Liberalization

Financial sector liberalization was one of the major reforms, which have taken place in majority of the developing countries in the eighties. The major objectives of financial sector reform were to improve the allocative efficiency of resources and to accelerate the growth process of the real sector by removing structural deficiencies affecting the performance of financial institutions and financial markets.

Internationally mutual funds are key contributors to the globalization of financial market and one of the main source of capital flows to emerging economies. Mutual funds in developed countries have become one of the main instruments for investing in emerging markets (**World Bank Economic Review)**.The mutual fund industry is among the most successful recent financial innovation.

Around the world, AUM (Asset Under Management) as a percentage of GDP is less than 5% in India, as compared to 70%, 61%, 37% in US, France & Brazil respectively.**(Bank for International Settlement 2009-10)**

1.2 Indian Financial Sector

The main thrust of reforms in the financial sector was on the creation of efficient and stable financial institutions and markets. In response to reforms, the *Indian financial sector* has undergone radical transformation in the post financial liberalization

period. Reforms have altered the organizational structure, ownership pattern and domain of operations of institutions and infused competition in the financial sector.

Coupled with this, there has been increase in the growth of financial institutions like mutual funds companies in many of the developing nations in recent years. This is also relevant in the **Indian context where a large number of mutual funds were started after the financial sector reforms.** In the case of financial sector and mutual funds, reforms attempted to create a competitive environment by allowing private sector participation. When the mutual funds industry was liberalized in 1992, the UTI had held a monopoly in the market for almost 30 years. Indian retail investors had been familiarized to guaranteed high returns on their UTI investments. This good record, combined with aggressive marketing by new entrants, led to expectations of high profits by investors who began to invest strongly in the new private mutual funds.

Since the 1990's when the mutual fund space opened up to the private sector, the industry has traversed a long path, adapting itself continuously, to the changes that have come along. Growth in Assets under Management (AUM) experienced has been unprecedented, growing at a CAGR of 28% over the last four years, slowing down only over the last two years, as fallout of the global economic slowdown and financial crisis. Although investor confidence was significantly eroded and AUMs suffered a dent, the sale of mutual funds has revived over the last few quarters, which implies regained confidence of investors, striving to look at

alternate investment opportunities and any attendant higher returns, though the markets continue to be choppy.

India is undoubtedly emerging as the next big investment destination, riding on a high savings and investment rate, as compared to other Asian economies. As per a report authored by Price waterhouse cooper(PwC) **"The World in 2050"**, the average real GDP growth in India is likely to be in the range of 5.8% between 2007-50, (the actual average GDP growth between 2007-10 has been 7.6%) with per capita income rising to USD 20,000 from the current USD 2,932.

Over 50 per cent of the population is less than 25 years of age, with the proportion of working population likely to increase significantly over the next decade. The trend of rising personal incomes has been witnessed not only amongst the young population, but also the high net worth (HNI) segment, which have sizeable sums to invest.

One estimate indicates that there are more than 120,000 dollar millionaires in India and the number is increasing. The house-hold segment therefore proffers immense scope for attracting investments. India has a strong middle class of 250-300 million, which is expected to double over the next two decades.

In today's volatile market environment, mutual funds are looked upon as a transparent and low cost investment vehicle, which attracts a fair share of investor attention and helping the growth of the industry. Over time, inclusive growth across the financial sector seems to have taken centre-stage, re-designing all business strategies around this sole objective. The mutual

fund industry being no exception, various measures are being taken by fund houses and distributors to spread access and reach to the semi-urban and rural segments. Clearly, the role of technology as a growth enabler has assumed enhanced responsibility in this respect, to enable improved reach, inclined towards efficient distribution.

The landscape of the financial sector in India is continuously evolving, accredited to regulatory changes being undertaken, which is leading market participants like the asset management companies (AMCs) and distributors to restructure their strategies and adopt business models which will yield sustainable benefits.

It is worthwhile at this point to take note of some of the business and regulatory trends taking shape across the global economies, which might cast a shadow on the Indian markets. Developments on aspects of entry load, management fees paid to asset management companies, regulation of distributors and taxation of mutual funds from the investor point of view, are some of the areas which deserve to be given attention. The road ahead for the mutual fund industry will be paved by the performance of the capital markets. But, more importantly, it remains to be seen, how fund houses adapt themselves to changes in regulations, thereby shaping growth for the future. A continuously evolving regulatory framework makes it mandatory for the industry to elicit a clear growth path, making it easier to assess obstacles and tide over them with time.

1.3 5th Mutual Fund Summit in 2009

Confederation of Indian Industry (CII) 5th Mutual fund Summit in 2009 ended on the note of a vision for 2015, stating a positive outlook for assets under management growing at 15%-25%, between 2010 and 2015, the pace of growth being matched by the GDP growth rate of the economy. Profitability of the industry though, may decline substantially, as a fall out of spiraling operating costs and lower revenues. Higher penetration levels were also estimated riding on the back of the accelerated drive for investor awareness, increase in investible surplus and a younger population with the capacity to absorb higher risks (of market movements in NAVs). In addition, regulatory environment was expected to take a turn, towards an alignment of financial regulations across the financial services sector.

In current scenario the Indian mutual fund industry is undergoing a metamorphosis, which inadvertently marks a point of inflection for the market participants. However, even amidst volatile market conditions, average assets under management indicated vibrant growth levels posting a y-o-y growth of 47% in 2009-10, and the total AUM stood at Rs 613,979 crore, as of March 31, 2010. Aggregate funds mobilized during the year also grew 84%, supplemented by around 174 new schemes launched during April 2009 to March 2010. The investor base has also steadily expanded and between November 2009 to March 2010, there was an addition of 60,834 investors.

These statistics testify that the Indian mutual fund industry has weathered the financial crisis, but it cannot be denied that the

industry still continues to deal with challenges of low retail participation and penetration levels.

A large number of mutual funds operating in the country has intensified competition and led to product innovation. According to Association of Mutual fund Industry (AMFI), presently there are **47 mutual funds (as on 31.3.2010)** including public, private and foreign funds (Joint ventures Indian and Foreign). **Product innovation is happening by way of new plans or schemes.** Thus from the monopoly of a single mutual fund like UTI, mutual fund industry moved to the public with a few public sector funds. And now with the entry of private and foreign funds, it has moved to a competitive environment at international level. Mutual funds presently offer a variety of options to investors such as income funds, balanced funds, liquid funds, gilt funds, index funds, exchange traded funds and **sectoral funds**. **(Report on Currency and Finance, RBI, 2006)**. This diversification of funds and schemes may be attributed to the increasing competition amongst the players.

Establishing a business base in the ***BRIC's*** economies has become a key business theme for the world's financial institution and this has increasingly shined a spotlight on the future growth potential of India's Mutual fund Industry. Stock and mutual fund only account for 4.9% of personal financial assets in India, suggesting that India's individual investors have a tendency to avoid risk assets. **This could also be interpreted, however, as an indication of the huge potential in India for growth in investments by individuals into mutual funds and other risk assets.** India has recently seen a rapid decline in the number of its

extremely poor, along with an increase in its wealthy and middle-income segments, with the latter referred to as the “new middle class." In India, the owners of mutual funds include not only the wealthy but also regular retail investors.

With the emergence of the capital market at the center stage of the Indian financial system, the financial services industry nationally and internationally is growing significantly to the health of global economy as well as that of individual investors. However most of the investors do not like risk; they have to assess risk and develop solutions to problems caused by risk. A significant institutional development in the form of a diversified structure of mutual funds and different investment avenues are available to investors. Mutual funds offer good opportunities to the investors. The investors should compare the risk and expected yields of various instruments while taking investment decisions. *The investors may seek advice from experts and consultants including agents*.

1.4 Wealth Report By Goldman Sachs

India by **2032** will become the third largest economy in the world, as **reported by Goldman Sachs in their Wealth Report**. India’s domestic savings as a percentage of its GDP is 28%, one of the highest in the world. A significant proportion of this savings is in the form of investment avenues like Gold, Fixed deposits, Insurance, *Mutual Funds* and Capital Market. Investments in equities have shown better result and have the potential to grow in the long run which can be an ideal approach to adjust inflation and provide an opportunity for capital appreciation, provided the investors are high on risk. The majority of Indian investors considerably have a low risk appetite, on an average.

The only option left for the investors is the Mutual Fund Industry which has dual advantage of investing in equity and getting good returns with optimum risk.

In the 2007 Budget speech for the Financial Year 2007-08, the Hon'ble Finance Minister while announcing the various measures for strengthening the capital market made the announcement of the need to promote the flow of investment to the Infrastructure sector by permitting domestic mutual funds to launch and operate dedicated Infrastructure funds. With a view to suggest a detailed action/plan for 'Operationalising' this, the Securities & Exchange Board of India (SEBI) set up a Committee, through its letter on "Formation of a Group regarding launch of dedicated Infrastructure Funds by Mutual Funds' dated 26th March, 2007 headed by Mr. U K Sinha, Chairman and Managing Director, UTI Asset Management Company Pvt. Ltd.

India is a country of savers. The household savings rate to GDP hovers around the 30% mark. Household savings have traditionally been channelized into Bank Deposits, Small Savings Schemes of the Government, Insurance etc. With the advent of mutual funds, it has been observed that these have increasingly become a significant channel for focused investment into the listed equity and debt market Similarly, Dedicated Infrastructure Funds **(DIFs)**, can potentially become an important source of capital for various infrastructure projects that are important for the country's economic development. Such funds can act as channeling agents of capital from Indian retail investors, pension funds, insurance companies as well as overseas institutional investors. **DIFs**, if they are

successful in attracting large retail-investor participation, can also reduce dependence upon foreign capital for investments in infrastructure assets. From an investor perspective, DIFs can also provide an alternative investment opportunity to retail investors and ensure broader public participation in the infrastructure creation in the country.

With this view an attempts has been made by the researcher through this research work focusing on Comparative Analysis of sectoral mutual fund schemes and performance of Dedicated infrastructure schemes (DIF's) with other Diversified equity mutual fund schemes floated by different Asset Management Companies (AMC's) and also the factors influencing the choice of sectoral mutual funds by investment consultant and investors in the state of Uttarakhand and the future scope of growth of sectoral mutual fund schemes.

In this chapter overview of mutual funds is discussed followed by the recommendation on "launch of dedicated infrastructure funds" by mutual funds and at last Glance on demographic factors and household saving behavior in Uttarakhand State.

1.5 Mutual Funds: An Overview

A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is invested by the fund manager in different types of securities depending upon the objective of the scheme. These could range from shares to debentures to money market instruments. The

income earned through these investments and the capital appreciations realized by the scheme are shared by its unit holders in proportion to the number of units owned by them on pro-rata basis. Thus a Mutual Fund is the most suitable investment for the common man as it offers an opportunity to invest in a diversified, professionally managed portfolio at a relatively low cost. Anybody with an investible surplus of as little as a few thousand rupees can invest in Mutual Funds. Each Mutual Fund scheme has a defined investment objective and strategy.

A mutual fund is the ideal investment vehicle for today's complex and modern financial scenario. Markets for equity shares, bonds and other fixed income instruments, real estate, derivatives and other assets have become mature and information driven. Price changes in these assets are driven by global events occurring in faraway places. A typical individual is unlikely to have the knowledge, skills, inclination and time to keep track of events, understand their implications and act speedily. An individual also finds it difficult to keep track of ownership of his assets, investments, brokerage dues and bank transactions etc.

A mutual fund is the answer to all these situations. It appoints professionally qualified and experienced staff that manages each of these functions on a full time basis. The large pool of money collected in the fund allows it to hire such staff at a very low cost to each investor. In effect, the mutual fund vehicle exploits economies of scale in all three areas - research, investments and transaction processing. While the concept of individuals coming together to invest money collectively is not new, the mutual fund in its present form is a 20^{th} century phenomenon. In fact, mutual funds gained popularity only after the

Second World War. Globally, there are thousands of firms offering Lakhs of mutual funds schemes with different investment objectives. Today, mutual funds collectively manage almost as much as or more money as compared to banks.

Figure 1.1 Mutual Fund Flow Chart

Source: Security & Exchange Board of India

1.5.1 Organization of A Mutual Fund

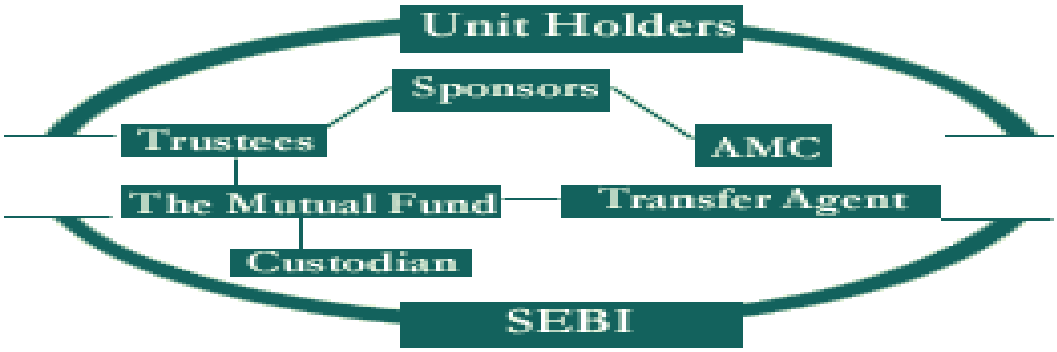
A draft offer document is to be prepared at the time of launching the fund. Typically, it pre specifies the investment objectives of the fund, the risk associated, the costs involved in the process and the broad rules for entry into and exit from the fund and other areas of operation.

In India, as in most countries, these sponsors need approval from a regulator, SEBI (Securities exchange Board of India) in our case. SEBI looks at track records of the sponsor and its financial strength in granting approval to the fund for commencing operations.

A sponsor then hires an asset management company to invest the funds according to the investment objective. It also hires another entity to be the custodian of the assets of the fund and perhaps a third one to handle registry work for the unit holders (subscribers) of the fund.

In the Indian context, the sponsors promote the Asset Management Company also, in which it holds a majority stake. In many cases a sponsor can hold a 100% stake in the Asset Management Company (AMC). E.g. Birla Global Finance is the sponsor of the Birla Sun Life Asset Management Company Ltd., which has floated different mutual funds schemes and also acts as an asset manager for the funds collected under the schemes.

Figure 1.2: Organization of Mutual Fund



Source: Security & Exchange Board of India

Sponsor: Sponsor is basically a promoter of the fund. For example Bank of Baroda, Punjab National Bank, State Bank of India and Life Insurance Corporation of India (LIC) are the sponsors of UTI Mutual Funds. Housing Development Finance Corporation Limited (HDFC) and Standard Life Investments Limited are the sponsors of HDFC mutual funds. The fund sponsor raises money from public, who become fund shareholders. The pooled money is invested in the securities. Sponsor appoints trustees.

Trustees: Two third of the trustees are independent professionals who own the fund and supervises the activities of the AMC. It has the authority to sack AMC employees for non-adherence to the rules of the regulator. It safeguards the interests of the investors. They are legally appointed i.e. approved by SEBI.

AMC: Asset Management Company (AMC) is a set of financial professionals who manage the fund. It takes decisions on when and where to invest the money. It doesn't own the money. AMC is only a fee-for-service provider.

The above 3 tier structure of Indian mutual funds is very strong and virtually no chance for fraud.

Custodian: A Custodian keeps safe custody of the investments (related documents of securities invested). A custodian should be a registered entity with SEBI. If the promoter holds 50% voting rights in the custodian company it can't be appointed as custodian for the fund. This is to avoid influence of the promoter on the custodian. It may also provide fund accounting services and transfer agent services. JP Morgan Chase is one of the leading custodians.

Transfer Agents: Transfer Agent Company interfaces with the customers, issue a fund's units, help investors while redeeming units. Provides balance statements and fund performance fact sheets to the investors. CAMS is a leading Transfer Agent in India.

1.6 Mutual Funds Function Within Strict Regulatory Framework

The Association of Mutual Funds in India (AMFI) reassures the investors in units of mutual funds that the mutual funds function within the strict regulatory framework.

The different entities such as the Mutual Fund, the Asset Management Company and the Custodian operate as per the provisions of the **SEBI Mutual Fund Regulation 1996** and the rules and guidelines issued by SEBI. Each of these entities has independent Boards of Directors and separate auditors.

SEBI keeps a close watch on the mutual funds through periodical reports and every three months, each mutual fund submits to SEBI a report conforming compliance with regulatory provisions and mutual funds are required to record their investment decisions. Any deficiency or non-compliance is dealt with suitably by SEBI.

Every year, each mutual fund is inspected by SEBI and such inspection is both a detailed scrutiny of operations and a rectification exercise. Thus, the mutual funds are strictly supervised and regulated entities and the regulatory provisions match with international standards.

AMFI also is engaged in upgrading professional standards and in promoting best industry practices in diverse areas such as valuation, disclosure, transparency etc.

1.6.1 A Brief History of Mutual Funds and their Regulation in India

At the start of the mutual fund industry in the early 1960's, there was one government owned firm, the Unit Trust of India (UTI). Along with several other sectors rest of the financial sector, this industry was liberalised in 1993, opening up to other asset management companies (AMC), resulting in a slew of choices in mutual fund products for the Indian investor. Today, the industry stands at 47 asset management companies that manage Rs. 7.1 trillion (USD 160 billion) of Assets under management (AUM) raised from around 470 million accounts.

Since the economic liberalisation of the early nineties, mutual funds have been regulated by the securities market regulator, Securities and Exchanges Board of India (SEBI), which was itself a very new regulator in the early nineties. At the time, like all the other parts of the financial sector, the industry was lightly regulated with low levels of transparency about the management of funds. It was only in 1998, after a spectacular episode of market misconduct by the CRB group of companies that there was a sea-change in the regulation and supervision of the mutual fund industry.

The regulator focused on the production end of the mutual fund industry. This resulted in very high disclosure and transparency of the assets under management and improving the

governance of the AMCs, setting it apart from the rest of the fund management industry in India. This path towards greater transparency became the industry norm when UTI, the only AMC that was exempt from full transparency on certain products, developed problems in fulfiling obligations to customers. As part of the government bailout package in 2001, the AMC was broken up into two funds. One had a fixed mandate of winding down upon completing the obligations of the original UTI schemes (primarily US-64) to existing customers. The other was a company where the government was one of other shareholders, that would follow all the regulation of the other mutual fund companies. With this, the mutual fund industry became the only fund management industry in India with a minimal presence of public sector ownership.

Since then, there have continued to be changes in the regulation of mutual funds, but largely driven by developments in the broader securities markets. The rules-driven regulatory framework in India has meant that innovation in the securities markets often drives changes in the rules on how mutual funds can access these innovation in offering new products to their customers. However, regulations governing the fund management process has been more or less stable, albeit conservative.

The recent changes in regulation that have been the cause of much controversy has been in the area of the distribution of these products, and how the cost of distribution is attributed to the customer. This has been one of the major aspects of regulatory focus on the mutual industry since 2005.

1.6.2 Regulations pertaining to Distribution and costs of Mutual Funds

There are various expenses incurred in a typical mutual fund product, some of which are listed below:

- Indirect costs - These costs are charged to the scheme and are accounted for in the computation of Net asset value (NAV).

  - Initial issue expense: These costs include sales and distribution fees. e.g. marketing, advertising, registration, printing, bank charges etc pertaining to the new fund offer (NFO).

  - Annual scheme recurring expenses: These are operating charges of the scheme. Includes management and advisory fees (charged by AMC), registrar and transfer agents' fee, marketing and selling costs etc.

- Direct costs - These costs are directly paid by the investors and are over and above NAV. These include:
  - Entry load
  - Exit load
  - Securities transaction tax
  - Income tax

SEBI regulations controls the expenses that can be charged to the customer in two ways:

a) Setting a list of the expenses that cannot be charged.
b) Setting limits on some other expenses. There have been various changes that SEBI has made the to the latter over the last decade. As expected, each of these regulatory changes has engendered a action in the behaviour of industry.

Based on the major regulatory changes that have taken place with regards to costs charged by the mutual fund industry, we list the following "regulatory regimes":

- *Pre-2006* : Both open and closed end funds were allowed to charge maximum of 6% as initial issue expense as well as entry and exit loads.

Recurring expense ratio had the maximum of 2.5% which remained unchanged until 2010. For many mutual funds it has remained a standard entry load of 2.25%. Industry practice was to charge a maximum load of 2.5% on equity funds whereas entry loads on debt funds were virtually non-existent.

2006-2008 : From April 2006 onwards till the start of 2008. The features of the change were as follows:

- Initial issue expenses was only permitted for closed-ended schemes, with a maximum limit at 6% subject to amortisation provisions. This required that any exiting investor should pay up the portion of load chargeable to him when exiting the fund so the existing investors do not bear a disproportionate part of the initial issue expense.

- Since open ended schemes were not permitted these expenses, they were stipulated to meet all expenses connected with sales and distribution of schemes from the entry load (maximum 6%).

- Since closed-ended schemes are allowed to charge initial issue expenses, they were not permitted to charge entry load.

2008 : In January 2008, initial issue expense (and related amortization) was no longer permitted. Mutual fund schemes had to adjust expenses connected with sales and distribution of schemes from the entry load.

2009, Phase I : August 2009, the entry load was removed from all types of mutual fund schemes and exit load was made uniform across all fund categories, subject to a maximum of 1%.

2009, Phase II : November 2009, all mutual funds were made tradeable - both for entry as well as exit - through the stock exchanges trading platform.

1.6.3 Regulation pertaining to Transparency of Mutual Fund Products

Since the 1993 liberalization and the entry of new AMCs there has been a spate of products innovation in the mutual fund product space. There has been a new age of retail focus through SIP

and ELSS, between April 2006 and Janurary 2010. Presently 47 AMCs offer more than 1000 schemes. This inevitably leads to fairly large overlaps between the features of the schemes offered even by the same AMC, and fairly subtle nuances differentiating one scheme from the other. This would also amplify the effect of "shrouding" that Anagol and Kim, 2010 refers to: given the complexity involved in the features of the mutual fund products, SEBI's regulation on Mutual Fund costs are not readily accessible enough to be useful indicators for investors. Despite this, there has been little by way of regulation the need for more clarity and transparency on product definition and differentiation

The two recent and significant regulatory changes, that have been the cause of much controversy, have been:

1. The removal of entry loads on all schemes, and an explicit disclosure of payment of commissions to distributors.
2. Facilitating the process for an investor to change between distributors by eliminating the no objection certificate in December2009.

Mutual fund products in India are today largely distributed by national and regional distributors, privatebanks, Independent Financial Advisors (IFAs), public sector banks to a smaller extent, and some distribution takes place directly by the AMCs themselves.

The distribution is as follows:

- Private distributors, both national and regional: 36%
- Private Banks: 25%

- IFAs: 29%
- Public sector banks 4%
- Own distribution: 6%

Until the recent changes, there has been little clarity on how much of the fees charged by The AMC has been paid for distribution. However, these regulatory changes both force the Investor awareness of the size of the distribution commission as well as facilitate the ease of Funds transfer from one product to another or one AMC to another.

1.7 Association of Mutual Funds in India (AMFI)

With the increase in mutual fund players in India, a need for mutual fund association in India was generated to function as a non-profit organization. Association of Mutual Funds in India (AMFI) was incorporated on 22nd August, 1995. AMFI is an apex body of all Asset Management Companies (AMC) which has been registered with SEBI. It functions under the supervision and guidelines of its Board of Directors.

Association of Mutual Funds India has brought down the Indian Mutual Fund Industry to a professional and healthy market with ethical lines enhancing and maintaining standards. It follows the principle of both protecting and promoting the interests of mutual funds as well as their unit holders

.

1.7.1 The objectives of Association of Mutual Funds in India are

The Association of Mutual Funds of India works with 30 registered AMCs of the country. It has certain defined objectives which juxtaposes the guidelines of its Board of Directors. The objectives are as follows:

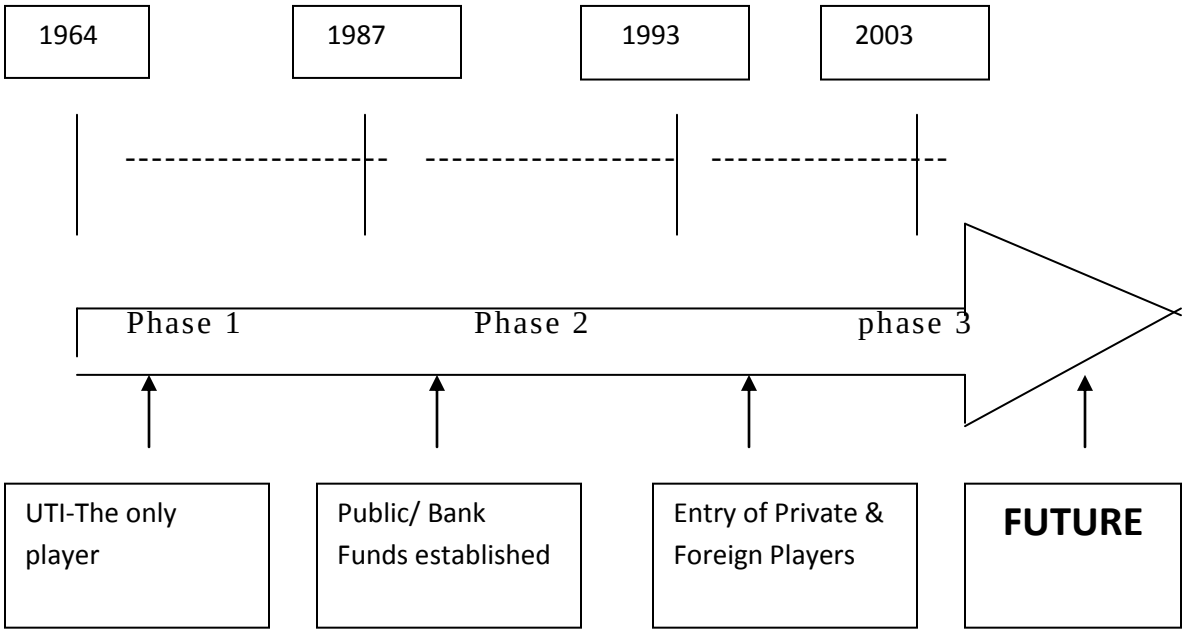
- This mutual fund association of India maintains a high professional and ethical standards in all areas of operation of the industry.
- It also recommends and promotes the top class business practices and code of conduct which is followed by members and related people engaged in the activities of mutual fund and asset management. The agencies who are by any means connected or involved in the field of capital markets and financial services also involved in this code of conduct of the association.
- AMFI interacts with SEBI and works according to SEBIs guidelines in the mutual fund industry.
- Association of Mutual Fund of India do represent the Government of India, the Reserve Bank of India and other related bodies on matters relating to the Mutual Fund Industry.
- It develops a team of well qualified and trained Agent distributors. It implements a programme of training and certification for all intermediaries and other engaged in the mutual fund industry.

- AMFI undertakes all India awareness programme for investors in order to promote proper understanding of the concept and working of mutual funds.
- At last but not the least association of mutual fund of India also disseminate informations on Mutual Fund Industry and undertakes studies and research either directly or in association with other bodies.

1.8 History of Mutual Fund in India

The mutual fund industry in India started in 1963 with the formation of Unit Trust of India, at the initiative of the Government of India and Reserve Bank of India. The history of mutual funds in India can be broadly divided into four distinct phases:

Figure 1.3: **Phases of Indian Mutual Fund Industry**



1.8.1 First Phase – 1964-87

Unit Trust of India (UTI) was established on 1963 by an Act of Parliament. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the Reserve Bank of India. In 1978 UTI was de-linked from the RBI and the Industrial Development Bank of India (IDBI) took over the regulatory and administrative control in place of RBI. The first scheme launched by UTI was Unit Scheme 1964. At the end of 1988 UTI had Rs.6,700 crores of assets under management.

1.8.2 Second Phase – 1987-1993 (Entry of Public Sector Funds)

1987 marked the entry of non- UTI, public sector mutual funds set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI Mutual Fund was the first non- UTI Mutual Fund established in June 1987 followed by Canbank Mutual Fund (Dec 87), Punjab National Bank Mutual Fund (Aug 89), Indian Bank Mutual Fund (Nov 89), Bank of India (Jun 90), Bank of Baroda Mutual Fund (Oct 92). LIC established its mutual fund in June 1989 while GIC had set up its mutual fund in December 1990.

1.8.3 Third Phase – 1993-2003 (Entry of Private Sector Funds)

With the entry of private sector funds in 1993, a new era started in the Indian mutual fund industry, giving the Indian investors a wider choice of fund families. Also, 1993 was the year in which the first Mutual Fund Regulations came into being, under which all mutual funds, except UTI were to be registered and governed. The erstwhile Kothari Pioneer (now merged with Franklin

Templeton) was the first private sector mutual fund registered in July 1993.

The 1993 SEBI (Mutual Fund) Regulations were substituted by a more comprehensive and revised Mutual Fund Regulations in 1996. The industry now functions under the SEBI (Mutual Fund) Regulations 1996.

The number of mutual fund houses went on increasing, with many foreign mutual funds setting up funds in India and also the industry has witnessed several mergers and acquisitions.

1.8.4 Fourth Phase – since February 2003

In February 2003, following the repeal of the Unit Trust of India Act 1963 UTI was bifurcated into two separate entities. One is the Specified Undertaking of the Unit Trust of India with assets under management of Rs.29,835 crores as at the end of January 2003, representing broadly, the assets of US 64 scheme, assured return and certain other schemes. The Specified Undertaking of Unit Trust of India, functioning under an administrator and under the rules framed by Government of India and does not come under the purview of the Mutual Fund Regulations.

The second is the UTI Mutual Fund Ltd, sponsored by SBI, PNB, BOB and LIC. It is registered with SEBI and functions under the Mutual Fund Regulations. With the bifurcation of the erstwhile UTI which had in March 2000 more than Rs.76,000 crores of assets under management and with the setting up of a UTI Mutual Fund, conforming to the SEBI Mutual Fund Regulations, and with recent mergers taking place among different private sector funds, the mutual fund industry has entered its current phase of consolidation and growth. As at the end of March, 2006, there were 29 funds

.

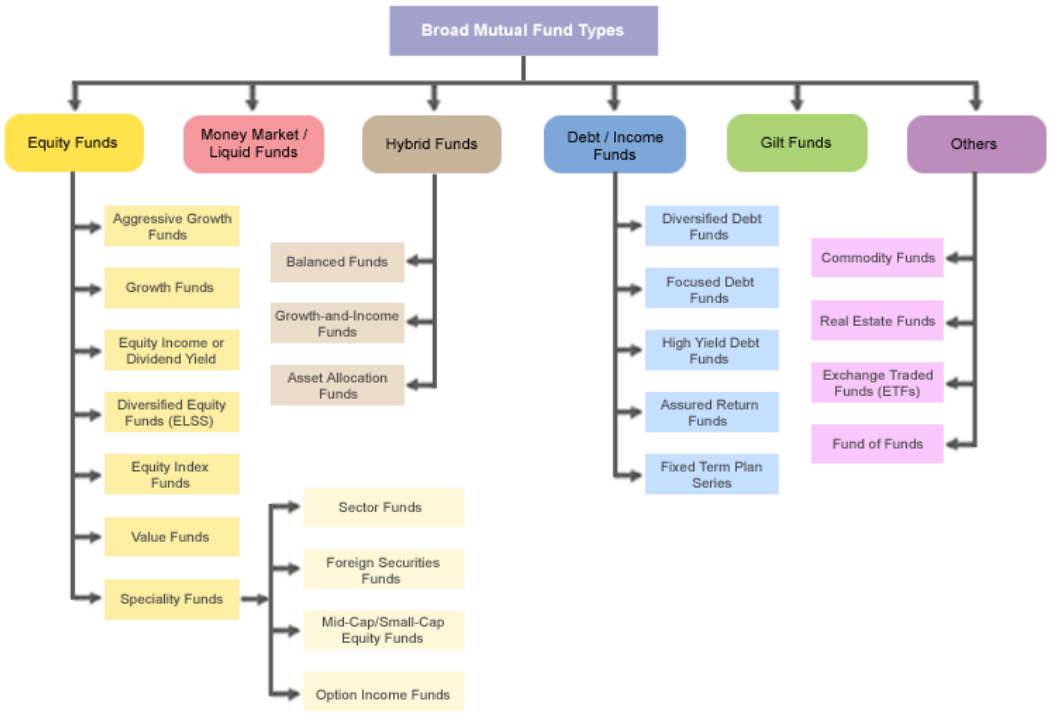
Erstwhile UTI was bifurcated into UTI Mutual Fund and the Specified Undertaking of the Unit Trust of India effective from February 2003. The Assets under management of the Specified Undertaking of the Unit Trust of India has therefore been excluded from the total assets of the industry as a whole from February 2003 onwards.

The graph indicates the growth of assets over the years.

1.9 Types of Mutual Funds

Mutual fund schemes may be classified into various categories.

Figure 1.4: Types of Mutual funds



Source: AMFI, 2010

1.9.1 By Structure:

Open-ended Funds

An open-end fund is one that is available for subscription all through the year. These do not have a fixed maturity. Investors can conveniently buy and sell units at Net Asset Value ("NAV") related prices. The key feature of open-end schemes is liquidity.

Closed-ended Funds

A closed-end fund has a stipulated maturity period which generally ranging from 3 to 15 years. The fund is open for subscription only during a specified period. Investors can invest in the scheme at the time of the initial public issue and thereafter they can buy or sell the units of the scheme on the stock exchanges where they are listed. In order to provide an exit route to the investors, some close-ended funds give an option of selling back the units to the Mutual Fund through periodic repurchase at NAV related prices. SEBI Regulations stipulate that at least one of the two exit routes is provided to the investor.

Interval Funds

Interval funds combine the features of open-ended and close-ended schemes. They are open for sale or redemption during pre-determined intervals at NAV related prices.

1.9.2 By Investment Objective

Growth Funds

The aim of growth funds is to provide capital appreciation over the medium to long- term. Such schemes normally invest a majority of their corpus in equities. It has been proven that returns from stocks, have outperformed most other kind of investments held over the long term. Growth schemes are ideal for investors having a long-term outlook seeking growth over a period of time.

Income Funds

The aim of income funds is to provide regular and steady income to investors. Such schemes generally invest in fixed income securities such as bonds, corporate debentures and Government securities. Income Funds are ideal for capital stability and regular income.

Balanced Funds

The aim of balanced funds is to provide both growth and regular income. Such schemes periodically distribute a part of their earning and invest both in equities and fixed income securities in the proportion indicated in their offer documents. In a rising stock market, the NAV of these schemes may not normally keep pace, or fall equally when the market falls. These are ideal for investors looking for a combination of income and moderate growth.

Money Market Funds

The aim of money market funds is to provide easy liquidity, preservation of capital and moderate income. These schemes generally invest in safer short-term instruments such as treasury bills, certificates of deposit, commercial paper and inter-bank call money. Returns on these schemes may fluctuate depending upon the interest rates prevailing in the market. These are ideal for Corporate and individual investors as a means to park their surplus funds for short periods.

1.9.3 Other Schemes

Tax Saving Schemes

These schemes offer tax rebates to the investors under specific provisions of the Indian Income Tax laws as the Government offers tax incentives for investment in specified avenues. Investments made in Equity Linked Savings Schemes (ELSS) and Pension Schemes are allowed as deduction u/s 88 of the Income Tax Act, 1961. The Act also provides opportunities to investors to save capital gains u/s 54EA and 54EB by investing in Mutual Funds, provided the capital asset has been sold prior to April 1, 2000 and the amount is invested before September 30, 2000.

Industry Specific Schemes

Industry Specific Schemes invest only in the industries specified in the offer document. The investment of these funds is limited to specific industries like InfoTech, FMCG, and Pharmaceuticals etc.

Index Schemes

Index Funds attempt to replicate the performance of a particular index such as the BSE Sensex or the NSE 50

Sectoral Schemes

Sectoral Funds are those, which invest exclusively in a specified industry or a group of industries or various segments such as 'A' Group shares or initial public offerings.

Commodities Funds

Commodities funds specialize in investing in different commodities directly or through commodities future contracts. Specialized funds may invest in a single commodity or a commodity group such as edible oil or rains, while diversified commodity funds will spread their assets over many commodities

1.10 Benefits of Mutual fund Investment

Professional Management:

Mutual Funds provide the services of experienced and skilled professionals, backed by a dedicated investment research team that analyses the performance and prospects of companies and selects suitable investments to achieve the objectives of the scheme.

Diversification

Mutual Funds invest in a number of companies across a broad cross-section of industries and sectors. This diversification reduces the risk because seldom do all stocks decline at the same time and in the same proportion.

Convenient Administration

Investing in a Mutual Fund reduces paperwork and helps you avoid many problems such as bad deliveries, delayed payments and follow up with brokers and companies. Mutual Funds save your time and make investing easy and convenient.

Return Potential

Over a medium to long-term, Mutual Funds have the potential to provide a higher return as they invest in a diversified basket of selected securities

Low Costs

Mutual Funds are a relatively less expensive way to invest compared to directly investing in the capital markets because the benefits of scale in brokerage, custodial and other fees translate into lower costs for investors.

Liquidity

In open-end schemes, the investor gets the money back promptly at net asset value related prices from the Mutual Fund. In closed-end schemes, the units can be sold on a stock exchange at the prevailing market price or the investor can avail of the facility of direct repurchase at NAV related prices by the Mutual Fund.

Transparency

Investors get regular information on the value of your investment in addition to disclosure on the specific investments made by the scheme, the proportion invested in each class of

assets and the fund manager's investment strategy and outlook.

Flexibility

Through features such as regular investment plans, regular withdrawal plans and dividend reinvestment plans, one can systematically invest or withdraw funds according to your needs and convenience.

Affordability

Investors individually may lack sufficient funds to invest in high-grade stocks. A mutual fund because of its large corpus allows even a small investor to take the benefit of its investment strategy.

Choice of Schemes

Mutual Fund offers a family of schemes to suit your varying needs over a lifetime. This offers investors to further diversify their investments.

Well Regulated

All Mutual Funds are registered with SEBI and they function within the provisions of strict regulations designed to protect the interests of investors. The operations of Mutual Funds are regularly monitored by SEBI.

1.11 Limitations of Mutual fund Investments

No Control Over Cost:

An Investor in mutual fund has no control over the overall costs of investing. He pays an investment management fee (which is a percentage of his investments) as long as he remains invested in fund, whether the fund value is rising or declining. He also has to pay fund distribution costs, which he would not incur in direct investing.

However this only means that there is a cost to obtain the benefits of mutual fund services. This cost is often less than the cost of direct investing.

No Tailor-Made Portfolios:

Investing through mutual funds means delegation of the decision of portfolio composition to the fund managers. The very high net worth individuals or large corporate investors may find this to be a constraint in achieving their objectives.

However, most mutual fund help investors overcome this constraint by offering large no. of schemes within the same fund.

Managing A Portfolio Of Funds

Availability of large number of funds can actually mean too much choice for the investors. He may again need advice on how to select a fund to achieve his objectives.

AMFI has taken initiative in this regard by starting a training and certification program for prospective Mutual Fund Advisors.

SEBI has made this certification compulsory for every mutual fund advisor interested in selling mutual fund.

Taxes

During a typical year, most actively managed mutual funds sell anywhere from 20 to 70 percent of the securities in their portfolios. If your fund makes a profit on its sales, you will pay taxes on the income you receive, even if you reinvest the money you made.

Cost of Churn

The portfolio of fund does not remain constant. The extent to which the portfolio changes is a function of the style of the individual fund manager i.e. whether he is a buy and hold type of manager or one who aggressively churns the fund. It is also dependent on the volatility of the fund size i.e. whether the fund constantly receives fresh subscriptions and redemptions. Such portfolio changes have associated costs of brokerage, custody fees etc. which lowers the portfolio return commensurately.

1.12 Mutual Fund Accounting

Mutual Fund is a Fund established in the form of a trust by a sponsor to raise money by the trustees through the sale of units to the public under one or more schemes for investing in securities in accordance with the regulations. Thus, a mutual fund collects money from the investors, issues certificates to them known as units and invests the money collected in securities so as to achieve mutual benefits in terms of capital appreciation in such securities.

It is a non-depository, non-banking financial intermediary, which acts as an important vehicle for bringing wealth holders and deficit units together indirectly. Mutual funds are distinct from portfolio management schemes and are essential vehicles for collective investment in stock market, risk diversification and expert management advice of the fund managers.

1.12.1 Performance Evaluation of Mutual Funds

Any meaningful evaluation of performance will necessarily have to measure total return per unit of risk or the ability to earn superior returns for a given risk class. There are various statistical techniques to measure this factor. One of the technique estimates the realized portfolio returns in excess of the risk free return, as a multiple of the factor of the portfolio. The factor of portfolio, in turn, measures the systematic or undiversifiable risk of the portfolio, the relation to the market index.

1.12.2 Presentation of accounts

Mutual funds, should prepare scheme wise balance sheet as per Annexure IA and IB of Eleventh Schedule of SEBI (Mutual Funds) Regulations 1996. As per regulation 54, every mutual fund or asset management company shall prepare in respect of each financial year an annual report and annual statement of accounts of the schemes and funds.

The Balance Sheet shall give scheme wise particulars of its assets and liabilities and shall contain particulars as per Eleventh Schedule. It should also disclose accounting policies relating to valuation of investments and other important items.

Under each type of investment, the aggregate carrying value and market value of non-performing investments shall be disclosed. It should also indicate the extent of provision made in revenue account for the depreciation /loss in the value of non -performing investments.

It shall also disclose per unit Net Asset Value (NAV) as at the end of accounting year. Previous year figures should also be given against each item.

It should also indicate the appropriation of surplus by way of transfer to reserves and dividend distributed. It should also contain -

- Provision for aggregate value of doubtful deposits, debts and outstanding and accrued income.
- Profit or loss in sale and redemption of investment may be shown on a net basis.
- Custodian and registrar fees.
- Total income and expenditure expressed as a percentage of average net assets, calculated on a weekly basis.

1.12.3 Accounting Policies

Accounting policies of mutual fund schemes are somewhat different from those of an industrial concern. Ninth schedule to SEBI (Mutual Fund) Regulations 1996 deal with accounting policies and standards to be adopted by a mutual fund.

1.12.4 Annual Report

According to Regulation 54 of SEBI regulations, every mutual fund of the asset management company shall prepare in respect of each financial year an annual report and annual statement of accounts for all schemes and fund as specified in Eleventh Schedule.

An annual report should contain the following:

- report of the board of trustees on the operations
- balance sheet
- revenue account
- auditor's report
- brief statement of board of trustees on liabilities and responsibilities of the trustees, objective of investments, basis and policy of investments and comments of the trustees on performance of scheme
- a statement to the effect that "the price and redemption value of the units, and income from them, can go up as well as down with the fluctuation in the market value of its underlying investments."
- Statement giving relevant perspective historical per unit statistics
- Statement to the effect that "on written request, present and prospective unitholder/investors can obtain copy of the trust deed, the annual report at a price and the text of relevant scheme."

As per Regulation (57), every mutual fund is responsible to forward a copy of annual report and other information containing details of investments and deposits held by the fund so that the entire schemewise portfolio of the fund is disclosed to SEBI within six months from the date of closure of the financial year. The reports required to be submitted to SEBI are as specified in Regulation (58) above Mutual Fund investors should go through the annual report, its contents and auditors report carefully. They should also keep a track of NAV and investment portfolio.

1.13 The Risk-Return Trade-off

The most important relationship to understand is the risk-return trade-off. Higher the risk greater the returns/loss and lower the risk lesser the returns/loss.

Hence it is up to investor, the investor to decide how much risk they are willing to take. Their are different types of risks involved with mutual fund investment.

1.13.1 Risk Associated with Mutual Funds

Figure 1.5: Risk associated with Mutual Funds

Source: Valuereserachonline.com,2011

Market Risk

Sometimes prices and yields of all securities rise and fall. Broad outside influences affecting the market in general lead to this. This is true, may it be big corporations or smaller mid-sized companies. This is known as Market Risk.

Credit Risk

The debt servicing ability (may it be interest payments or repayment of principal) of a company through its cashflows determines the Credit Risk faced by you. This credit risk is measured by independent rating agencies like CRISIL who rate companies and their paper. A 'AAA' rating is considered the safest whereas a 'D' rating is considered poor credit quality.

Inflation Risk

"Rs. 100 today is worth more than Rs. 100 tomorrow.""Remember the time when a bus ride costed 50 paise?" The root cause, Inflation. Inflation is the loss of purchasing power over time. A lot of times people make conservative investment decisions to protect their capital but end up with a sum of money that can buy less than what the principal could at the time of the investment. This happens when inflation grows faster than the return on your investment. A well-diversified portfolio with some investment in equities might help mitigate this risk.

Interest Rate Risk

In a free market economy interest rates are difficult if not impossible to predict. Changes in interest rates affect the prices of bonds as well as equities. If interest rates rise the prices of bonds

fall and vice versa. Equity might be negatively affected as well in a rising interest rate environment.

Political/Government Policy Risk

Changes in government policy and political decision can change the investment environment. They can create a favorable environment for investment or vice versa.

Systematic Risk

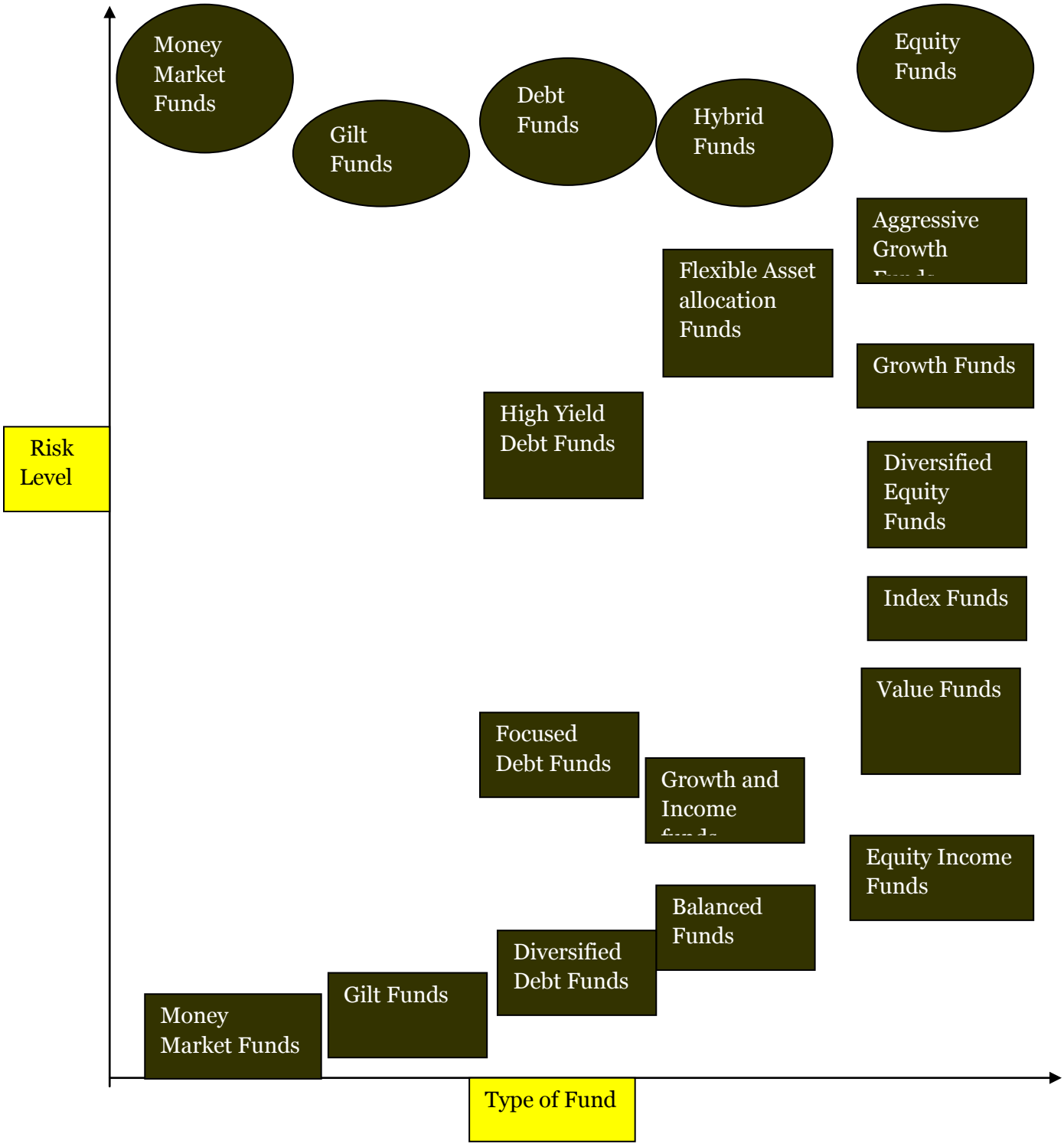
Systematic Risk is measured in terms of Beta, which represents fluctuations in the NAV of the fund vis-à-vis the market.

Beta is calculated by relating the returns on a mutual fund with the returns in the market.

The more responsive the NAV of a mutual fund is to the changes in the market, the higher will be its Beta. Diversification through investments in a number of instruments can limit unsystematic risk, but market risk, i.e., the influence of economy-related factors like fiscal policy, industrial policy, money supply, and inflation, cannot be eliminated.

Figure 1.6 in the next page demonstrate the risk hierarchy for mutual fund investment

Figure 1.6: Risk Hierarchy of Mutual funds



Source: Mutualfundindia.com,2010

1.14 Recent Trends in Mutual Fund Industry

The most important trend in the mutual fund industry is the aggressive expansion of the foreign owned mutual fund companies and the decline of the companies floated by nationalized banks and smaller private sector players.

Many nationalized banks got into the mutual fund business in the early nineties and got off to a good start due to the stock market boom prevailing then. These banks did not really understand the mutual fund business and they just viewed it as another kind of banking activity. Few hired specialized staff and generally chose to transfer staff from the parent organizations. The performance of most of the schemes floated by these funds was not good. Some schemes had offered guaranteed returns and their parent organizations had to bail out these AMCs by paying large amounts of money as the difference between the guaranteed and actual returns. The service levels were also very bad. Most of these AMCs have not been able to retain staff, float new schemes etc. and it is doubtful whether, barring a few exceptions, they have serious plans of continuing the activity in a major way.

The experience of some of the AMCs floated by private sector Indian companies was also very similar. They quickly realized that the AMC business is a business, which makes money in the long term and requires deep-pocketed support in the intermediate years. Some have sold out to foreign owned companies, some have merged with others and there is general restructuring going on. **(Capital Market Report, 2008)**

The foreign owned companies have deep pockets and have come in here with the expectation of a long haul. They can be credited with introducing many new practices such as new product innovation, sharp improvement in service standards and disclosure, usage of technology, broker education and support etc. In fact, they have forced the industry to upgrade itself and service levels of organizations like UTI have improved dramatically in the last few years in response to the competition provided by these.

1.15 Current Scenario of the Mutual Fund Indusrty

The Indian Mutual fund industry has witnessed considerable growth since its inception in 1963. The assets under management (AUM) have surged to Rs 4,173 bn in Mar-09 from just Rs 250 mn in Mar-65. In a span of 10 years (from 1999 to 2009), the industry has registered a CAGR of 22.3%, albeit encompassing some shortfalls in AUM due to business cycles.

The impressive growth in the Indian Mutual fund industry in recent years can largely be attributed to various factors such as rising household savings, comprehensive regulatory framework, favourable tax policies, introduction of several new products, investor education campaign and role of distributors.

Besides, SEBI has introduced various regulatory measures in order to protect the interest of small investors that augurs well for the long term growth of the industry. The tax benefits allowed on mutual fund schemes (for example investment made in Equity Linked Saving Scheme (ELSS) is qualified for tax deductions under

section 80C of the Income Tax Act) also have helped mutual funds to evolve as the preferred form of investment among the salaried income earners.

The Indian mutual fund industry has witnessed significant growth in the past few years driven by several favorable economic and demographic factors such as rising income level and the increasing reach of assets management companies and distributors. However, after several years of relentless growth, the industry witnessed a fall of 8% in the asset under management in the financial year 2009-10 that has impacted revenues and profitability.

Recent developments triggered by the global economic crisis have served to highlight the vulnerability of the Indian mutual fund industry to global turbulence and exposed our increased dependence on corporate customer and the retail distribution system. It is therefore an opportune time for the industry to dwell on the experience and develop a roadmap through a collaborative effort across all stakeholders, to achieve sustained profitable growth and strengthen investor's faith and confidence in the health of the industry. Innovative strategies of AMC's and distributors, enabling support from the regulator SEBI, and pro-active initiatives from the industry bodies CII and AMFI are likely to be the key components in defining the future shape of the industry.

Besides, the Indian Mutual fund industry that started with traditional products like equity fund, debt fund and balanced fund has significantly expanded its product portfolio. Today, the industry has introduced an array of products such as liquid/money market funds, sector-specific funds, index funds, gilt funds, capital protection oriented schemes, special category funds, insurance

linked funds, exchange traded funds, etc. It also has introduced Gold ETF fund in 2007 with an aim to allow mutual funds to invest in gold or gold related instruments. Further, the industry has launched special schemes to invest in foreign securities. The wide variety of schemes offered by the Indian Mutual fund industry provides multiple options of investment to common man.

1.16 Growth in Asset Under Management

1.16.1 Asset under Management Growth

The assets under management (AUM) have growth at a rapid pace over the past few years, at a CAGR of 35 percent for the five year period from 31 march 2005 to 31 march 2009.

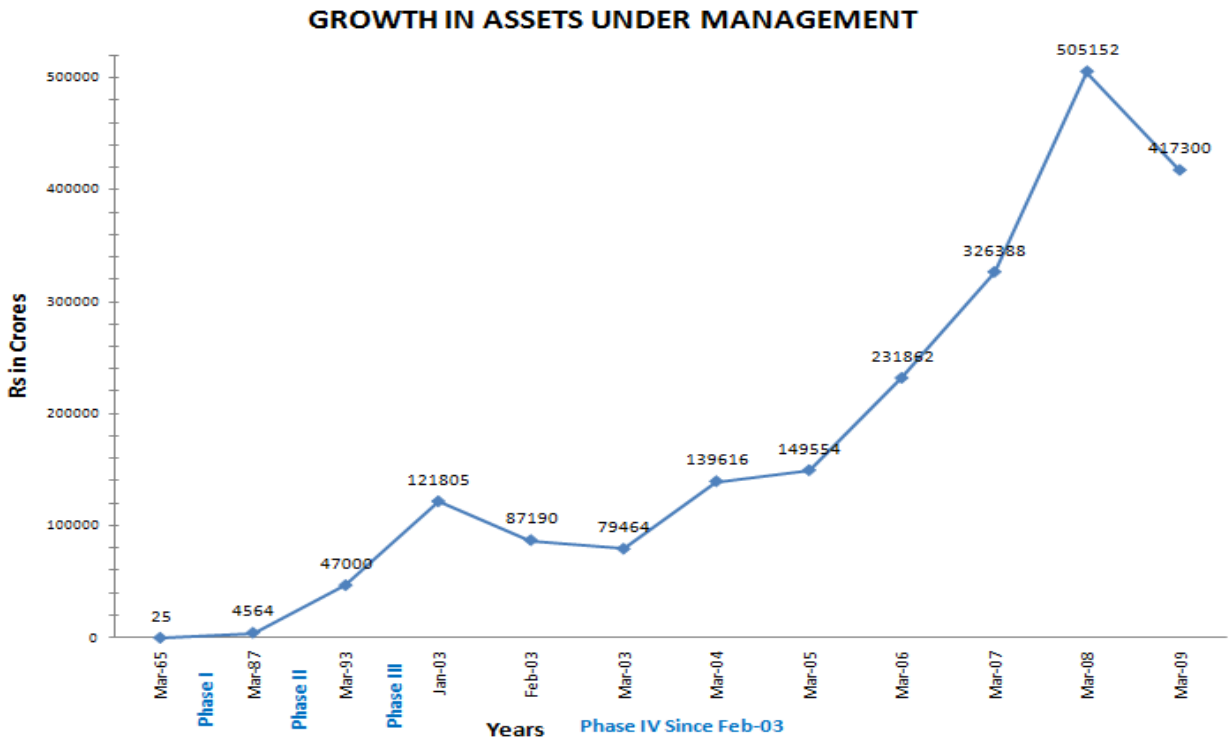
Over the 10 year period from 1999 to2009 encompassing varied economic cycles, the industry grew at 22 percent CAGR . this growth was despite two falls in the AMU the first being after the year 2001 due to the dotcom bubble burst and the second in2008 consequent to the global economic crisis (the first fall in AMU in march 2003 arising fro the UTI split).

1.16.2 AMU Base and Growth Relative to the Global Industry

India has been amongst the fastest growing markets for mutual fund since 2004; in the five year period from 2004 to 2008 (as of December) the Indian mutual fund industry grew at 29 percent CAGR as against the global average of 4 percent. Over this period, the mutual fund industry is mature markets like the US and France grew at 4 percent while some of the emerging markets viz. China and Brazil exceeded the growth witnessed in the Indian market.

However despite clocking growth rates that are amongst the highest in the world the Indian mutual fund industry continues to be a very small market. Comprising 0.32 percent share of the global AUM of USD 18.97 trillion as of December 2008

Figure 1.7: Growth in Asset under Management



Source: Association of Mutual Funds in India (AMFI),2010

1.16.3 AUM to GDP Ratio

The ratio of AUM to India GDP gradually increased from 6 percent in 2005 to 11 percent in 2009. Despite this however this

continues to be significantly lower than the ratio in developed countries where the AUM accounts for 20-70 percent of the GDP

1.17 Impact of the Global Financial Crisis

Deepening of the global financial crisis during September 2008, which resulted in liquidity crunch world-over, had dampening impact of the Indian Mutual fund industry. With the drying up of credit inflows from banks and external commercial borrowings route, mutual funds witnessed redemption pressure from corporates. Although the mutual funds promised immediate redemption, their assets were relatively illiquid. Besides, mutual funds faced problems such as maturity mismatches between assets & liabilities of mutual funds, shift from mutual funds to bank deposits in view of the comparatively higher interest rates being offered by banks and freezing up of money markets due to lack of buyers for assets like certificates of deposits of private sector banks.

During April-September2008, Net Mobilization of funds by mutual funds declined sharply by 97.7% to Rs 24.8 bn due to uncertain conditions prevailing in the domestic stock markets. The redemption pressures witnessed by mutual funds led to net outflows under both the income/debt-oriented schemes and growth/equity-oriented schemes. Further, the AUM of Mutual fund industry contracted by 20.7% from Rs 5,445.4 bn as on August 31, 2008 to Rs 4,319.0 bn as on October 31, 2008. During the same period, liquid and debt schemes which contribute more than 65% to the total AUM witnessed a decline of 19% in AUM.

In an endeavour to ease liquidity pressures in the system and restore stability in the domestic financial markets, the RBI announced a slew of measures. The key measures announced by the RBI include:

- The RBI decided to conduct a special 14 day repo at 9% per annum for a notified amount of Rs 200 bn from October 14, 2008 with a view to enable banks to meet the liquidity requirements of mutual funds.
- Scheduled Commercial Banks (SCBs) and All India term lending and refinancing institutions were allowed to lend against and buy back CDs held by mutual funds for a period of 15 days.
- As a temporary measure, banks were allowed to avail of additional liquidity support exclusively for the purpose of meeting the liquidity requirements of mutual funds to the extent of up to 0.5% of their net demand and time liabilities (NDTL). Accordingly on November 1, 2008, it was decided to extend this facility and allow banks to avail liquidity support under the LAF through relaxation in the maintenance of SLR to the extent of up to 1.5% of their NDTL. This relaxation in SLR was provided for the purpose of meeting the funding requirements of NBFCs and mutual funds.
- The borrowing limit prescribed in Regulation 44(2) of SEBI (Mutual Fund) Regulations, 1996 was enhanced from 20% of net asset of the scheme to 40% of net asset of the scheme to those mutual funds who approached SEBI. This enhanced borrowing limit was made available for a period of six months and could be utilised for the purpose of redemptions/ repurchase of units.

- In order to moderate the exit from close ended debt schemes and in the interest of those investors who choose to remain till maturity and with a view to ensure that the value of debt securities reflects the current market scenario in calculation of NAV, the discretion given to mutual funds to mark up/ mark down the benchmark yields for debt instruments of more than 182 days maturity was enhanced from 150 basis points to 650 basis points.

The significant reduction in CRR & SLR, net injection of Rs 9,279 bn through the repo window during Oct-08, the repurchase of MSS bonds worth Rs 200 bn along with the earlier mentioned liquidity augmentation measures helped to ease liquidity pressures for domestic mutual funds. The data reveals that about 18 mutual funds borrowed from banks. Further, the increase of borrowing limits enabled the mutual funds to meet redemption pressures without engaging in a large scale sale of assets which could have caused systemic instability. As on November 10, 2008, 15 mutual funds had been extended the enhanced borrowing limit as per their requests made to SEBI.

However, with some recovery in the Indian financial markets as well as improvement in the liquidity conditions, the RBI in it's Q2 FY10 review of monetary policy withdrew some liquidity boosting measures that were introduced as a part of monetary stimulus in FY09. The special term repo facility for SCBs, for funding to NBFCs, mutual funds, and housing finance companies was terminated.

1.18 Future Scenario

The asset base would continue to grow at an annual rate of about 30 to 35 % over the next few years as investor's shift their assets from banks and other traditional avenues. Some of the older public and private sector players will either close shop or be taken over.

Out of ten public sector players five will sell out, close down or merge with stronger players in three to four years. In the private sector this trend has already started with two mergers and one takeover. Here too some of them will down their shutters in the near future to come.

But this does not mean there is no room for other players. The market will witness a flurry of new players entering the arena. There will be a large number of offers from various asset management companies in the time to come. Some big names like Fidelity, Principal, Old Mutual etc. are looking at Indian market seriously. One important reason for it is that most major players already have presence here and hence these big names would hardly like to get left behind.

The mutual fund industry is awaiting the introduction of derivatives in India as this would enable it to hedge its risk and this in turn would be reflected in it's Net Asset Value (NAV).

SEBI is working out the norms for enabling the existing mutual fund schemes to trade in derivatives. Importantly, many market players have called on the Regulator to initiate the process immediately, so that the mutual funds can implement the changes that are required to trade in Derivatives.

1.19 Recommendation on "Launch of Dedicated Infrastructure Funds" by Mutual Fund Companies

In the 2007 budget speech for the Financial Year 2007-08, the Hon'ble Finance Minister while announcing the various measures for strengthening the capital market made the announcement of the need to promote the flow of investment to the Infrastructure Sector by permitting domestic Mutual Funds to launch and operate Dedicated Infrastructure Funds (DIF). With a view to suggest a detailed action/plan for 'Operationalising' this, the Securities & Exchange Board of India (SEBI) set up a Committee, through its letter on "Formation of a Group regarding Launch of dedicated infrastructure funds by Mutual Funds".

Following are the recommendation of the committee along with the background on India's Infrastructure investment needs and the current status on the available routes of funding.

- As per the approach paper to the 11th Five Year Plan (2007-12) Planning Commission stresses the need for infrastructure development in india.
- To fund this investment and to increase the growth rate from 7% to 10% will require the average investment rate to go up from 29.1% of GDP currently to 35.1%.
- Committee noted that a good amount of progress has been made on several fronts and the funding requirement for infrastructure creation is very large compared to India's past experience.
- Currently, in India, financial investors can invest in infrastructure through Mutual fund and private equity/ venture capital route.

- Mutual fund can invest through the listed equity route in infrastructure companies. At this point, there are around Ten (10) infrastructure focused mutual fund schemes launched by certain Mutual Fund Houses.
- The existing regulations regarding launching of mutual fund schemes can be made applicable to the proposed DIF's. this would require the formation of a separate schemes under the mutual fund trust with a specific investment mandate.
- The proposed investment by DIF's will largely be in unlisted projects and companies with gestation period of up to 7 years.
- The proposed DIF's will target the retail investors who might be averse to investing in close-ended funds with no liquidity options during the term of the scheme.
- The DIF's would need to build a pipeline of investments and the committee did look at the possibility of such DIF's raising capital in 2-3 tranches as investment opportunities are identified.
- The committee suggested that all SEBI registered Mutual Funds should be eligible to operate such DIF's.
- All the individual/ companies/ institutions and FI's should be eligible for making investment in such dedicated infrastructure mutual fund schemes.

As India is a country of savers, the household saving rate to GDP is approximately 30% mark and with the advent of mutual fund, it has been observed that these have increasingly become a significant channel for focused investment into the listed equity market and similarly investment in Dedicated Infrastructure Fund can be boom for the Indian economy and thereby helps investors to reap huge profits.

1.20 Uttarakhand at a Glance

1.20.1 Geography and Location

Carved out of Uttar Pradesh of which it was a part, though with its own geographical and cultural identity, Uttarakhand is the 18th largest state of India and occupies 1.69 percent the total area of India. Located at a height of 7816 metres at its maximum above sea, level and a minimum of 10 metres Uttaranchal is one of the 11 Himalayan states.The new state lies between 280 43' and 310 28' north to310 27 50" N. latitudes and between 77032' and 810 02' 22" east longitudes. It is surrounded by Himachal Pradesh in the west, Uttar Pradeshin the south, Nepal in the east and China in the north. It has a total area of 53,483 square kms, of which the forest area is 35,01,285 hectares. The forest area covers 194 forest villages.

As one of the smaller states of India, Uttaranchal has 13 districts, 49 tehsils and 95 blocs, with about 15651 inhabited villages and 955 villages not inhabited. While Dehradun is the state Capital, Nainital houses the High Court. The region is mainly has a subsistence agricultural economy. Except for some tourism industry in Rishikesh, Hardwar, Chamoli,Uttarkashi, Nainital and other districts, the population is dependent on the “money order” economy.

For the administrative purposes, the State has been divided into two sub-divisions, i.e., Kumaon and Garhwal divisions. Kumaon division includes six districts, namely, Almora, Bageshwar, Champawat, Nainital, Pithoragarh, and Udham Singh

Nagar; while Garhwal division consists of seven districts, viz., Dehradun, Haridwar, Pauri, Rudraprayag, Tehri and Uttarkashi. The State has 78 tehsils, 95 development blocks, 670 Nyaya Panchayats, 7227 Gram Panchayats and 15761 inhabited villages.

The decadal growth rate of the population of the State has declined from 24.23% during 1981-91 to 19.20% during 1991-2001. Literacy rate of population has shown a consistent upward trend since independence and the 2001 census has revealed that among those aged 7 and above, 72.3% were literate, 84.0% among males and 60.3% among females.

The State is characterized by a relatively high sex ratio of 964 females per 1000 males in the 2001 census recording a substantial increase in the rates from 936 in 1991.

According to Census **2001**, the State accounts for **8.48 million** population with 4.32 million males and 4.16 million females. The State recorded the decadal growth rate of 19.34 percent during 1991-2001. It has sex ratio of 962 and has a literacy rate of 71.6 percent with 83.3 percent literacy among males and 59.6 percent among females. Literacy rates among SC and ST are relatively lower at 63.4 percent and 63.2 percent respectively. Out of total 8.48 million population of the State, SC and ST constitute 1.51 million and 0.25 million respectively. As per the Census 2001, Hindus form the majority of the population (85%), followed by Muslims (10.5%).

The growth rate of Uttarakhand was at 2.9 per cent at the time of its inception, but now it is growing at **9.31%** & the state stands at the **third** place in country in terms of growth. The per capita income of the state has risen from **14,000 per person to 42,000 per person** (An article: Uttarakhand an Attractive destination), which is higher than the national average.

GENERAL-BIRD'S EYE VIEW OF UTTARAKHAND

Table1.1 Uttarakhand Geography

Date of Birth / Inauguration:	9 November 2000
Total area:	53,483 sq. km.
Hilly:	92.57% of total area
Forest area:	35,01,285 Hectare (63 % of total area)
No of Districts & their names:	13

S.No.	District Name	Area	Tehsil	Blocks	Villages	Towns
		sq. km.			(Inhabited)	
1.	Uttarkhasi	7951	4	6	677	3
2.	Tehri Garhwal	4085	5	10	179	16
3.	Pauri Garhwal	5438	6	15	3137	7
4.	Chamoli	7692	6	8	1144	6
5.	Rudraprayag	1896	2	3	660	2
6.	Dehradun	3088	4	6	746	17
7.	Bageshwar		2	3	865	1
8.	Pithoragarh	7110	8	8	1568	3
9.	Champavat	1781	1	4	651	4
10.	Nainital dt.	3853	4	8	1095	8
11.	Udham Sigh Nagar					
12.	Almora					
13.	Hardwar	2360	6	6	503	8
14.	Total	53483	49	95	15652	84

Other Details: Divison -2, Nyay Panchayats - 670

Source: Uttaranchal Year book 2003

Table1.2: Uttarakhand State at a Glance

S.No.	Particulars	1991	2001
1.	Total geographical area	-	53,484 sq km
2.	Total population	70,50,634	84,79,562
3.	Density of population	133 per sq km	159
4.	Total male population	36,40,904	43,16,401
5.	Total female population	34,09,739	41,63,161
6.	Sex ratio	936 per 1,000 male	964:1000
7.	Total rural population	54,16,550	63,09,317
8.	Total urban population	16,34,084	
9.	Rural male population	27,38,148	31,43,380
10.	Rural female population	26,78,402	31,65,937
11.	Urban male population	9,02,756	
12.	Urban female population	7,31,337	
13.	Total scheduled caste population	12,32,316	
14.	Percentage to total population	17.48%	
15.	Total scheduled tribe population	2,11,864	
16.	Percentage to total population	3.10%	
17.	(a)Literacy Rate		
	Total	48.4%	72.3%
	Male	60.9%	84%
	Female	35.7%	60.3%
17.	(b)Literacy Rate of 0-6 age group		
	Total		64.60
	Male		52.60
	Female		
18.	No of districts	8	13

19.	No. of tehsils	43(1998)	49 (2001)
20.	(a)No of urban centres	68	84 (2001)
20.	(b)No of villages (inhabited)		15651 (2001)
20.	(c)Not inhabited villages		955 (2001)
20.	(d)Total villages		16606 (2001)
21.	No of Universities		5 (2000)
22.	No of Colleges		52 (2000)
23.	Higher Secondary Schools		1461 (2000)
24.	Senior Basic School		2970 (2000)
25.	Junior Basic School		12791 (2000)
26.	Per capita Income	8121 (93-94)	
		12507 (97-98)	
		12791 (98-99)	
27.	India (per capita Income)	7698 (93-94)	14808 (99-00)
		12729 (97-98)	
		14682 (98-99)	
28.	Gram Panchayats	6804	7224 (2003)
29.	Nyay Panchayats	671	-
30.	Development blocs	-	95
31.	Mandal (Region)	2	2
32.	Death Rate	6.5/1000 (1999)	
33.	Birth Rate	19.6/1000 (1999)	
34.	PHC Centre	553 (99-2000)	

1.20.2 Recent Development in Uttarakhand State

Uttarakhand in recent years has grown in terms of new investment destination for the investors for future growth.
Projects like THDC, Hydel Projects, Eco Parks has given the state new dimensions for investment opportunity both for Investors & entrepreneurs. DehraDun has become the financial hub for all investment related businesses after becoming the capital.

1.21 Household Savings in Uttarakhand State

As per the RBI statistics (2009-10), the household financial savings (net) was 10.9% of GDP in 2010, lower than 11.5% in 2009. Household investment in shares and debentures (inclusive of Mutual funds) was 1.9% of GDP in 2009 which declined to 0.04% in 2010, reflecting a reduction in investors' confidence in these instruments.

Uttarakhand holds the third position amongst the states of India after Chhattisgarh and Gujarat (First & Second respectively) in terms of growth and development.

This can be depicted by household savings in Uttarakhand which were recorded at 36% of State Gross Domestic Product (SGDP) in 2009 as compared to the overall average of 19% of SGDP of other states. It depicts that the investment potential in the state of Uttarakhand is commendably high.

Investment Consultant plays a vital role in affecting the investment through investors in a variety of financial products of which Sectoral Mutual Fund Schemes are the most important one.

The Investment Consultant recommends Mutual Fund Schemes to the investors on certain parameters which affect the decisions of investors to invest in accordance with their recommendations.

In order to analyze whether the parameters which forms the basis of recommendation by investment consultant are taken up by the investors an attempt has been made by the researcher to analyze the correlation between the opinion of investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes investment in Uttarakhand state.

CHAPTER 1

INTRODUCTION

CHAPTER 2

REVIEW OF LITERATURE

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REVIEW OF LITERATURE

Introduction

Due to the great transparency and quality of financial reporting, the mutual fund industry has been subject to a large amount of research, which has over time considerably extended our knowledge of the main elements of the industry.

Abundance of research was done in the past to evaluate the performance of mutual funds in various countries using techniques of risk and return not much of research appears to have done in comparison of sectoral mutual fund schemes.

An attempt has been made by the researcher to analyze the sectoral mutual fund scheme performance and Dedicated Sectoral mutual fund scheme against the Bench mark index.

At this backdrop, the prime objective of this chapter is to address and prop the overall performance of mutual fund industry around the world and specially in India.

When we look at history of the performance measurement of mutual funds that has been carried out in the rest of the **world** it makes some interesting facts and led to present study.

2.1 Mutual Fund: A Global Perspective

- Friend, et al., (1962) made an extensive and systematic study of 152 mutual funds found that mutual fund schemes earned an average annual return of 12.4 percent, while their composite benchmark earned a return of 12.6 percent. Their alpha was negative with 20 basis points. Overall results did not suggest widespread inefficiency in the industry. Comparison of fund returns with turnover and expense categories did not reveal a strong relationship.
- Irwin, Brown, FE (1965) analyzed issues relating to investment policy, portfolio turnover rate, performance of mutual funds and its impact on the stock markets. The schoolwork identified that mutual funds had a significant impact on the price movement in the stock market. The cram concludes that, on an average, funds did not perform better than the composite markets and there was no persistent relationship between portfolio turnover and fund performance.
- Treynor (1965) used 'characteristic line' for relating expected rate of return of a fund to the rate of return of a suitable market average. He coined a fund performance measure taking investment risk into account. Further, to deal with a portfolio, 'portfolio-possibility line' was used to relate expected return to the portfolio owner's risk preference.
- The most prominent study by Sharpe,William F (1966) developed a composite measure of return and risk. He evaluated 34 open-end mutual funds for the period 1944-63. Reward to variability ratio for each scheme was significantly less than DJIA and ranged from 0.43 to 0.78. Expense ratio

was inversely related with the fund performance, as correlation coefficient was 0.0505. The results depicted that good performancewas associated with low expense ratio and not with the size. Sample schemes showed consistency in risk measure.

- Treynor and Mazuy (1966) evaluated the performance of 57 fund managers in terms of their market timing abilities and found that, fund managers had not successfully outguessed the market. The results suggested that, investors were completely dependent on fluctuations in the market. Improvement in the rates of return was due to the fund managers' ability to identify under-priced industries and companies. The study adopted Treynor's (1965) methodology for reviewing the performance of mutual funds.
- Jensen (1968) developed a composite portfolio evaluation technique concerning risk-adjusted returns. He evaluated the ability of 115 fund managers in selecting securities during the period 1945-66. Analysis of net returns indicated that, 39 funds had above average returns, while 76 funds yielded abnormally poor returns. Using gross returns, 48 funds showed above average results and 67 funds below average results.

  Jensen concluded that, there was very little evidence that funds were able to perform significantly better than expected as fund managers were not able to forecast securities price movements.

- Smith and Tito (1969) examined the inter-relationships between the three widely used composite measures of investment performance and suggested a fourth alternative,

identifying some aspects of differentiation in the process. While ranking the funds on the basis of ex-post performance, alternative measures produced little differences. However, conclusions differed widely when performance were compared with the market. In view of this, they suggested modified Jensen's measure based on estimating equation and slope coefficient.

- Friend, Blume and Crockett (1970) compared the performance of 86 funds with random portfolios. The study concluded that, mutual funds performed badly in terms of total risk. Funds with higher turnover outperformed the market. The size of the fund did not have any impact on their performance.
- Carlson (1970) examined mutual funds emphasizing the effect of market series (S&P 500, NYSE composite, DJIA) during the period 1948-67. All fund groups outperformed DJIA but for a few which had gross returns better than that of S&P 500 or NYSE composite. Though there was consistency in risk and return, there was no consistency between risk-adjusted performance measures over the time period. Carlson's analysis of performance exposed relationship between cash inflows into funds and not with the size or expense ratio.
- Arditti (1971) found that Sharpe's conclusion got altered when annual rate of return was introduced as a third dimension. He found that, contrary to Sharpe's findings the average fund performance could no longer be judged inferior to the performance of DJIA. Fund managers opted higher risk for better annual returns.
- Williamson (1972) compared ranks of 180 funds between 1961-65 and 1966-70. There was no correlation between the

rankings of the two periods. The investment abilities of most of the fund managers were identical. He highlighted the growing prominence of volatility in the measurement of investment risk.

- Fama (1972) developed methods to distinguish observed return due to the ability to pick up the best securities at a given level of risk from that of predictions of price movements in the market. He introduced a multi-period model allowing evaluation on a period-by-period and on a cumulative basis. He branded that, return on a portfolio constitutes of return for security selection and return for bearing risk. His contributions combined the concepts from modern theories of portfolio selection and capital market equilibrium with more traditional concepts of good portfolio management.
- Klemosky (1973) analysed investment performance of 40 funds based on quarterly returns during the period 1966-71. He acknowledged that, biases in Sharpe, Treynor, and Jensen's measures, could be removed by using mean absolute deviation and semi-standard deviation as risk surrogates compared to the composite measures derived from the CAPM.
- McDonaldand John (1974) examined 123 mutual funds and identified the existence of positive relationship between objectives and risk. The study identified the existence of positive relationship between return and risk. The relationship between objective and risk-adjusted performance indicated that, more aggressive funds experienced better results.
- Gupta (1974) evaluated the performance of mutual fund industry for the period 1962-71 using Sharpe, Treynor, and

Jensen models. All the funds covered under the study outperformed the market irrespective of the choice of market index. The results indicated that all the three models provided identical results. All the mutual fund subgroups outperformed the market using DJIA while income and balanced groups under performed S&P 500. Return per unit of risk varied with the level of volatility assumed and he concluded that, funds with higher volatility exhibited superior performance.

- Meyer's (1977) findings based on stochastic dominance model revalidated Sharpe's findings with the caution that it was relevant for mutual funds in the designated past rather than for the future period.
- Klemosky (1977) examined performance consistency of 158 fund managers for the period 1968-75. The ranking of performance showed better consistency between four-year periods and relatively lower consistency between adjacent two-year periods.
- Ippolito's (1989) results and conclusions were relevant and consistent with the theory of efficiency of informed investors. He estimated that risk-adjusted return for the mutual fund industry was greater than zero and attributed positive alpha before load charges and identified that fund performance was not related to expenses and turnover as predicted by efficiency arguments.
- Rich Fortinand Stuart Michelson (1995) studied 1,326 load funds and 1,161 no load funds and identified that, no-load funds had lower expense ratio and so was suitable for six years and load funds had higher expense ratio and so had fifteen years of average holding period. No-load funds

offered superior results in nineteen out of twenty-four schemes. He concluded that, a mutual fund investor had to remain invested in a particular fund for very long periods to recover the initial front-end charge and achieve investment results similar to that of no-load funds.

- Baur, Sundaram and Smith (1995) outlined the pricing fundamentals of open-end and close-end funds, and described the transaction cost of buying and selling funds. The U.S.A.'s experience of mutual funds described how these institutions could change a country's capital market and individual investment patterns. The study disclosed that the continuous redemption privilege of open-end funds had vulnerable consequences in the pricing of each type of fund, the assets held by each type of fund and the manner in which the transaction and management fees were collected.
- Malkiel,Burton G.(1995)has highlighted several studies suggest that the euity mutual fund managers achieve superior returns and the considerable persistence in performance exits and his syudy utilizes a unique data set including returns from all eqity mutual funds existing each year. These data (from 1971 to 1991) enable a more precise examination of performance and the extent of survivorship bias. Taken together, funds have underperformed benchmark portfolios both after management expenses and after even gross of expenses.
- Brown, Stephen J, Goetzmann,William N, (1995) explores the performance persistence in mutual funds using absolute and relative benchmarks. A probit analysis indicates that poor performance increases the probability of disappearance. A year –by-year decomposition of the persistence effect

demonstrates that the relative performance pattern depends upon the time period obsereved, and it is correlated across managers, consequently, it is due to a common strategy that is not captured by standard stylistic categories or risk adjustment procedures.

- Conrad S Ciccotello and C Terry Grant's (1996) study identified a negative correlation between asset size of the fund and the expense ratio. The results of the study brought out that, larger funds had lower expense ratios due to economies of scale. Equity funds had spent heavily to acquire information for trading decision and were consistent with the theory of information pricing. The high beta, high expenses and high turnover in the aggressive growth group than in long-term growth funds and income funds suggested higher costs being associated with obtaining and using corporate information in emerging and volatile market.
- Grubber (1996) attempted to study the puzzle relating to the fast growth of mutual funds inspite of inferior performance of actively managed portfolios. The study revealed that, mutual funds had negative performance compared to the market and provided evidence of persistence of under performance. Sophisticated clientele withdrew money from mutual funds during the period of poor performance, where as mutual funds found money from disadvantaged clientele leading to the faster growth of funds.
- Mark M Carhart.,(1997) demonstrated that common factors in stock returns and investment expenses almost completely explain persistence in quity mutual funds mean and risk adjusted –returns. The individual funds do not mean higher returns from following the momentum strategy in stocks. The

only significant persistence not explained is concentrated in strong underperformance by the worst-return mutual funds.

- Michael S Rozef(1998) has found that the mutual fund splits occur in high-priced funds after unusually high returns. Split factors are related to the deviation of funds's price from the mean of all fund prices. Post-split prices are below the mean of other fund's prices. Post-split numbers of shareholders and assets do not increses compared with funds having similar rates of asset growth. However, another study funds evidence that mutual fund split bring per account shareholders back up to normal levels it is argued that signaling, liquidity an tick size tere do not pply mutual fund splits.
- Dellva,Wilfred Land Olson,Gerard T (1998) studied 568 mutual funds without survivorship bias. The results indicate that, informational competency of funds increased the efficiency, reduced expenses and provided for higher risk-adjusted returns. Redemption fees had positive and significant impact on expenses. International funds had higher expense ratios.
- Khorana,Ajay and Nelling,Edward (1998) using multinomial probit model identified that, funds with higher ratings had higher risk adjusted performance, lower systematic risk, greater degree of diversification, larger asset base, lower portfolio turnover, managers with longer tenures, lower front load and expense ratios. Persistence in fund performance was statistically significant during short time horizons. Morningstar's mutual fund ratings were based on historic risk and reward. The ratings provided useful information while selecting mutual funds. Funds in the top 10 percent of risk-adjusted scores had five star rating; next 22.55 percent

received four star rating; middle 35 percent were assigned three stars, and the last two categories represented the next 22.5 percent and 10 percent. High rated funds performed substantially better than low rated funds after the issue of ratings.

- Lu Zheng,(1999) compars with a previous study and finds the evidence to support selection ability among active fund investors for euity funds listed in 1982. By using a large sample of euity funds, he found that funds that receive more money subsequently perform significantly better than those that lose money and this effect is short-lived and is largely but not completely explained by startegy of betting on winners. In the aggregate,there is no significanct evidnence that funds that receive more money subsequently beat the market. However, it is posssible to earn positive abnormal returns by using the cash flow information for small funds.
- Russ Wermers,(1999) found the ralationship that exists between mutual fund herding and its impact on stock prices. The trading activity of the mutual fund industry from 1975 through 1994 was analysed to determine whether funds “herd” when they trade stock and to investigate the impact of herding on stock prices. Although little herding was found by mutual funds in average stock , much higher levels were found in the trades of small stocks and in trading by growth-oriented funds. Stocks that herd buy outperform stocks that they sell by 4% during the following 6 months; this return difference is much more pernounced among small stocks.
- Fernando, Chitru S et., al. (1999) observed that splitting did not exhibit any superior performance nor any change in the

risk characteristics of funds but enhance the marketability of fund's shares due to positive response from small investors.

- Statman, Meir (2000) emphasizes that, socially responsible investing has to be taken as a tool by the corporations. He further identified that, socially responsible stocks out performed while socially responsible mutual funds under performed the S & P500 Index during
  1990-98.
- SP Kothari, Jerold B Warner(2001) study on standard mutual fund performance measures uses the simulated funds whose characteristics mimic actual funds. It was found that performance measures used in previous mutual fund research have little ability to detect economically large magnitudes of abnormal fund performnace,particularly if a fund's style characteristics differ from those of the value-weighted market portfolio. Power can be substantially improved ,however ,using event-study procedures that analyze a fund's stock trades. These procedures are feasible using time-series data on mutual fund portfolio holdings.
- Nicolas P B Bollen, Jeffrey A Busse,(2001) argues that theexisting studies of mutual fund marketin timing analyse monthly returns and find little evidence of timing ability. It is shown that daily tests are more powerful and that mutual funds exhibit significant timing ability more often in daily tests than in monthly tests. A set of synthetic fund returns is constructed in order to control for poor results. The daily timing coefficients of the majority of funds are significantly different from their synthetic counterparts. These result suggest that mutual funds may posses more timing ability than previously documented.

- Narayan Jayaraman, Ajay Khorana, Edward Nelling(2002) examined the determinants of mutual fund mergers and their subsequent wealth impact on shareholders of target nad acquiring funds. Results indicate significant improvements in post-merger performance and a reduction in expense ratios for target fund shareholders. In contrast,acquiring fund shareholders experience a significant deterioration in post-merger performance. The net asset flows continue to remain negative for the combined fund in the year following the merger. The likelihood of a fund merger is inversely related to fund mergers. However, poor past performance is a significant determinant for only within-family mergers.
- Maria Do Ceu Cortez and Florinda Silva (2002) analysed the implications of conditioning information variables on a sample of Portuguese stock funds. He identified that unconditional Jensen's alpha ensured superior performance till incorporation of public information variables. Alpha was not statistically different from zero while beta was related to public information variables.

- The Studies By Stephanos Papadamou, Costas Siriopoulos,(2004) empirically prove that the american no-load equity mutual funds that invest in european stocks and keep their managers for more than three years, in order to investigate the persistence of the short-term performance, and the related investment style. The results showed an underperformance compared to the eurostoxx index and a hot hands phenomenon does not persist, with some exceptions. Mutual funds that performed well in a five-month evaluation period continued to generate superior performance in the next

four months. According to style analysis a portfolio constructed by growth-large, growth-medium and vaue-large capitalization stocks outperformed any other investment style.however, well-diversified funds were the most mean-variance efficient,style-consistent funds.

- Michael J Cooper,Huseyin Gulen, P Raghavendra Rau(2005) has examined whether mutual funds change their names to take advantage of current hot investment styles, and what effects these name changes have on inflows to the funds, and to the fund's subsequent returns. They further find that the year after a fund changes its name to reflect a current hot style, the fund experiences an average cumulative abnormal flow of 28%,with no improvement in performance. The increase in flows is similar across funds whose holdings match the style implied by their new name and those whose holdings do not, suggesting that investors are irrationally influenced by comestic effects.

- Steven N Kaplan,Antoinette Schoar,(2005), investigated the performance and capital inflows of private equity partnerships. Average fund returns (net of fees) approximately equal the S&P 500 although substantial hetrogeneity across funds exists.returns persist strongly across subsequent funds of a partnership. Better performing partnerships are more likely to raise follow on funds and larger funds. This relationship is concave, so top performing partnerships grow proportionally less than average performers. At the industry level, market entry and funds are

less sensitive to cycles than new entrants several of these results differ markedly from those for mutual funds.

- The other stream of study by Jennifer Huang,Kelsey D Wei, Hong Yan.(2007) portrays that mutual funds with lower participation costs have a higher flow sensitivity to medium performance and a lower flow sensitivity to high performance than their higher cost peers. Using various fund characteristics as proxies for the reduction in participation costs, they provide empirical evidence supporting the model's implications for the asymmetric flow-performance relationship.

- Joshua M Pollet, Mungo Wilson,(2008) interesting study addresses the issues related to size of fund that affects the mutual fund behavior. They found that if actively managed mutual funds suffer from diminishing returns to scale, funds should alter investment behavior as assets under management increase. Although asset growth has little effect on the behavior of the typical fund, they find that large funds and small-cap funds diversify their portfolios in response to growth. Greater diversification, especially for small-cap funds is associated with better performance. Moreover, fund family growth is related to the introduction of new funds that hold different stocks from th eir existing siblings. Funds with many siblings diversify less rapidly as they grow, suggesting that the fund family may influence a fund's portfolio strategy.

- Paulo Armada Leite,Maria Ceu Cortez,(2009) estimated and compared the performance of portuguse-based mutual funds that invest in the domestic market and in the european market using unconditional and conditional models of performance evaluation. The results suggest that mutual fund managers are not able to outperform the market, presenting negative or neutral performance.

The studies of Aymen Karoui, Iwan Meier,(2009) on the performance and portfolio charactersistics of 828 newly launched US equity mutual funds over the period 1991-2005. These funds initially earn, on average, higher excess returns and higher abnormal returns. Their risk-adjusted performance is also superior to existing funds. Furthermore , they provide evidence for short-term persistence among top-performing fund starts however, a substantial frction of funds drop from the top to the bottom decile over two subsequent periods. Analyzing portfolio characteristics, further they found that returns of funds start exhibit higher ratios of unsystematic to total risk. Portfolios of new funds are typically also less diversified in terms of number of stocks and industry concentration and are invested in smaller and less liquid stocks.

An investigation on the conditional performance of a sample of german equity mutual funds over the period from 1994 to 2003 conducted by Wolgang Bessler, Wolfgang Drobetz, Heinz Zimmermann,(2009) found that the conditional performance evaluation raises the benchmark for active fund managers because it gives them no credit for exploiting

readily available information. Moreover, underperformance is more pronounced in the SDF framework than in beta-pricing models. The fund performance measures derived from alternative model specifications differ depending on the number of primitive assets taken to calibrate the SDF as well as the number of instrument variables used to scal assets and/or factors.

Richard T Bliss, Mark E Potter, Christopher Schwarz.(2008) provide an empirical examination of whether funds managed by individuals perform differently from funds managed by teams. Using a sample of about 3,000 equity mutual funds over a 12-year horizon , the authors find that although the number of funds managed by teams has grown at seven times the rate of funds managed by individuals, no significant differnence in risk adjusted performance is observed between team-managed and individually- managed funds. Funds managed by teams, howover, are significantly less risky and exhibit lower turnover. In addition, the total cost of owning a team managed mutual fund is, on average nearly 50 bps lower per year than the cost of owning an individually managed mutual fund. Finally, team managed funds attract significantly greater investor flows than individually managed funds.

The literature survey of foreign studies revealed that mutual fund managers were not able to offer higher returns due to their inability in stock selection and market timing. For short periods fund managers were able to offer superior returns.

2.2 Mutual Fund: The Indian Scenario

The following is a brief account of research articles published in books, financial dailies, magazines and research journals by academicians, professionals and journalists explaining the concepts of mutual funds, its importance, features, schemes, investment pattern, method of reading a mutual fund prospectus, how to choose a scheme and significance of IMFI in the economic development of India. Gupta L C, Peeush Ranjan Agarwal, Srivastava S K were a few academicians and professionals who have studied the need for radical changes in the Indian financial system, emergence of mutual fund operations in India, regulatory framework and the impact of taxation on mutual fund performance. Verma's book on mutual funds covers the conceptual and regulatory framework of the mutual funds in India with guidelines for mutual fund selection. A brief account of the research works of Indian academicians are as follows:

- Gupta Ramesh (1989) evaluated fund performance in India comparing the returns earned by schemes of similar risk and similar constraints. An explicit risk-return relationship was developed to make comparison across funds with different risk levels. His study decomposed total return into return from investors risk, return from managers' risk and target risk. Mutual fund return due to selectivity was decomposed into return due to selection of securities and timing of investment in a particular class of securities.
- Vidhyashankar S (1990) identified a shift from bank or company deposits to mutual funds due to its superiority by

way of ensuring a healthy and orderly development of capital market with adequate investor protection through SEBI interference. The study identified that mutual funds in the Indian capital market have a bright future as one of the predominant instruments of savings by the end of the century.

- Bansal L K (1991) identified that mutual fund like other financial institutions is a potential intermediary between the prospective investor and the capital market. Mutual fund, as an investment agency was preferred since 1985-86 due to the benefits of liquidity, safety and reasonable appreciation assured by the industry. The schemes with assured returns showed tremendous progress. Majority of the funds floated by commercial banks gave an impression that the responsibility of funds laid with the respective banks and their investment was secured.
- Sarkar A K (1991) critically examined mutual fund evaluation methodology and pointed out that Sharpe and Treynor performance measures ranked mutual funds alike in spite of their differences in terms of risk. The Sharpe and Treynor index could be used to rank performance of portfolios with different risk levels.
- Batra and Bhatia (1992) appreciated the performance of various funds in terms of return and funds mobilized. UTI, LIC and SBI Mutual Fund are in the capital market for many years declaring dividends ranging from 11 percent to 16percent. The performance of Canbank Mutual Fund, Indian Bank Mutual Fund and PNB Mutual Fund were highly commendable. The performance of many schemes was equally good compared to industrial securities.

- Gupta L C (1992) attempted a household survey of investors with the objective of identifying investors' preferences for mutual funds so as to help policy makers and mutual funds in designing mutual fund products and in shaping the mutual fund industry.
- Gangadhar V (1992) identified mutual funds as the prime vehicle for mobilization of household sectors' savings as it ensures the triple benefits of steady return, capital appreciation and low risk. He identified that open-end funds were very popular in India due to its size, economies of operations and for its liquidity. Investors opted for mutual funds with the expectation of higher return for a given risk, greater convenience and liquidity.
- Lal C and SharmaSeema (1992) identified that, the household sector's share in the Indian domestic savings increased from 73.6 percent in 1950-51 to 83.6 percent in 1988-89. The share of financial assets increased from 56 percent in 1970-71 to over 60 percent in 1989-90 bringing out a tremendous impact on all the constituents of the financial market.
- Sahu R K (1992) identified mutual funds as a suitable investment vehicle to strengthen capital market, as the total assets were around Rs.30,000 crores while the total resources in equity was less than 15 percent of market capitalization.
- Venugopalan S (1992) opined that India (15 million) ranks third in the World next to U.S.A. (50 million) and Japan (25 million) in terms of number of shareholders ensuring the spread of equity cult. However, many investors face hardships in the share market due to lack of professional advice, inability to minimize risk, limited resources and information.

- Anagol (1992) identified the urgent need for a comprehensive self-regulatory regime for mutual funds in India, in the context of divergence in its size, constitution, regulation among funds and sweeping deregulation and liberalization in the financial sector.
- Shashikant Uma (1993) critically examined the rationale and relevance of mutual fund operations in Indian Money Markets. She pointed out that money market mutual funds with low-risk and low return offered conservative investors a reliable investment avenue for short-term investment.
- Ansari (1993) stressed the need for mutual funds to bring in innovative schemes suitable to the varied needs of the small savers in order to become predominant financial service institution in the country.
- Sahu R K and Panda J (1993) identified that, the savings of the Indian public in mutual funds was 5 to 6 percent of total financial savings, 11 to 12 percent of bank deposits and less than 15 percent of equity market capitalization. The study suggested that, mutual funds should develop suitable strategies keeping in view the savings potentials, growth prospects of investment outlets, national policies and priorities.
- Saha Asish and Rama Murthy YSree (1993-94) identified that return, liquidity, safety and capital appreciation played a predominant role in the preference of the schemes by investors. The preference of the households towards shares and debentures was 7 percent by 1989-90. Mutual funds being an alternative way fordirect purchase of stocks should be managed effectively adopting investment analysis, valuation models, and portfolio management techniques. The

study suggested that, fund managers could adopt portfolio selection techniques to make more informed judgments rather than making investments on an intuition basis.

- Vaid, Seema's (1994) study revealed that the industry showed a continuous growth in savings mobilization and the number of unit holders during the period 1987 to 1992. 58.40 percent of resources mobilized by the industry were through income schemes. UTI accounted for 83.90 percent of industry mobilization. Pure growth schemes displayed a sound investment pattern with 81.80 percent of portfolios in equity scrips and had identified that semi-urban and rural areas were not adequately tapped by the mutual funds inspite of satisfactory returns. Offshore funds showed best performance during 1985-86.
- Shukla and Singh (1994) attempted to identify whether portfolio manager's professional education brought out superior performance. They found that equity mutual funds managed by professionally qualified managers were riskier but better diversified than the others. Though the performance differences were not statistically significant, the three professionally qualified fund managers reviewed outperformed others.
- The study by Shome (1994) based on growth schemes examined the performance of the mutual fund industry betweenApril 1993 to March 1994 with BSE SENSEX as market surrogate. The study revealed that, in the case of 10 schemes, the average rate of return on mutual funds were marginally lower than the market return while the standard deviation was higher than themarket. The analysis also

provided that, performance of a fund was not closely associated with its size.

- Shah Ajay and Thomas Susan (1994) studied the performance of 11 mutual fund schemes on the basis of market prices. Weekly returns computed for these schemes since their launch of the scheme to April 1994 were evaluated using Jensen and Sharpe measures. They concluded that, except UTI UGS 2000, none of the sample schemes earned superior returns than the market due to very high risk and inadequate diversification.
- Kale and Uma (1995) conducted a study on the performance of 77 schemes managed by 8 mutual funds. The study revealed that, growth schemes yielded 47 percent CAGR, tax-planning schemes 30 percent CAGR followed by balanced schemes with 28 percent CAGR and income schemes with 18 percent CAGR.
- The Delhi-based Value Research India Pvt. Ltd (1996) conducted a survey covering the bearish phase of Indian stock markets from 30th June 1994 to 31st December 1995. The survey examined 83 mutual fund schemes. The study revealed that, 15 schemes provided negative returns, of which, 13 were growth schemes. Returns from income schemes and income-cum-growth schemes were more than 20 percent. From the point of risk-adjusted monthly returns, of the 53 growth schemes, 28 (52.8 percent) could beat the index even in a bear phase.
- Tripathy, Nalini Prava(1996) identified that the Indian capital market expanded tremendously as a result of economic reforms, globalization and privatization. Household sector accounted for about 80 percent of country's savings and only

about one-third of such savings were available for the corporate sector. The study suggested that, mutual funds should build investors confidence through schemes meeting the diversified needs of investors, speedy disposal of information, improved transparency in operation, better customer service and assured benefits of professionalism.

- Yadav R A and Mishra, Biswadeep (1996) evaluated 14 close end schemes over the period of April 1992 to March 1995 with BSE NationalIndex as benchmark. Their analysis indicated that, 57 percent of sample schemes had a mean return higher than that of the market, higher Sharpe Index and lower Treynor index. Schemes performed well in terms of diversification and total variability of returns but failed to provide adequate risk-premium per unit of systematic risk. 57 percent had positive alpha signifying superior performance in terms of timing ability of fund managers. Fund managers of growth schemes adopted a conservative investment policy and maintained a low portfolio beta to restrict losses in a rapidly falling stock market.
- Jayadev M (1996) studied the performance of UTI Mastergain 1991 and SBI Magnum Express from 1992-94 with 13 percent return offered by Post Office Monthly Income Deposits as risk-free return. Mastergain earned an average return of 2.89 percent as against market earnings of 2.84 percent. Volatility of Magnum Express was high compared to Mastergain. Master gain had a superior performance over its benchmark (Economic Times Ordinary Share Price Index) by taking greater risk than the market. Mastergain indicated lesser degree of diversification of the portfolio with lower R^2 value and very high unique risk. Magnum Express portfolio was

well diversified with higher R^2 value along with lower unique risk and total risk. Both the funds did not earn superior returns because of lack of selectivity on the part of the fund managers indicating that, the funds did not offer the advantages of professionalism to the investors.

- Sahadevan Sand Thiripalraju M(1997) stated that, mutual funds provided opportunity for the middle and lower income groups to acquire shares. The savings of household sector constituted more than 75 percent of the GDS along with a shift in the preference from physical assets to financial assets and also identified that, savings pattern of households shifted from bank deposits to shares, debentures, and mutual funds.
- Krishna murthi S(1997) identified mutual funds as an ideal investment vehicle for small and medium investors with limited resources, to reap the benefits of investing in blue chip shares through firm allotment in primary market, avoid dud shares, access to price sensitive information and spread risk along with the benefits of professional fund management.
- Gupta and Sehgal (1998) evaluated performance of 80 mutual fund schemes over four years (1992-96). The study tested the proposition relating to fund diversification, consistency of performance, parameter of performance and risk-return relationship. The study noticed the existence of inadequate portfolio diversification and consistency in performance among the sample schemes.
- Rao, Mohana P (1998) opined that, UTI followed by LIC Mutual Fund dominated the market with 54 and 15 schemes respectively. His interview with 120 respondents showed that, 96 percent invested in UTI due to better service and return. 50 percent of shareholding and 25 percent of unit-

holding respondents were from metro cities. Investor's services, income–cum-growth option and capital appreciation were very important aspects while choosing a fund. He identified that the close-end schemes were very popular among investors and respondents in general expected private sector funds to improve the quality of services, investors' confidence besides reducing fraud and mis-management.

- Kumar V K (1999) analyzed the roles, products and the problems faced by the IMFI. He suggested the turnaround strategies of awareness programs, transparency of information, distinct marketing and distribution systems to rebuild confidence.
- IrissappaneAravazhi (2000) evaluated the investment pattern and performance of 34 close-end schemes from 1988-98 and elicited theviews of investors and managers belonging to Chennai, Mumbai, Pune and Delhi. The survey identified that the investors desired a return equivalent to market. 16 schemes reported greater risk than the market volatility. Majority of the schemes had a lower beta. Negative values in the case of Treynor and Sharpe index among many schemes indicated the mockery of the market. He further identified that the fund managers of 26 schemes had missed the chance of gaining from scheduling with response to changes in the market.
- Gupta Amitabh(2000) identified that the IMFI had come a long way since its inception in 1964. The transformation in the previous decade was the outcome of policy initiatives taken by the Government of India to break the monolithic structure of the industry in 1987 by permitting public sector banks and insurance sectors to enter the market.

- Agrawal, Ashok Motilal (2000) opined that mutual funds had made a remarkable progress during 1987-95. The cumulative investible funds of the mutual funds industry recorded a skyrocketing growth since 1987 and reached Rs.8,059 crores by December 31, 1995 from Rs.4,564 crores during 1986-87.
- Ramesh Chander (2000) examined 34 mutual fund schemes with reference to the three fund characteristics with91-days treasury bills rated as risk-free investment from January 1994 to December 1997. Returns based on NAV of many sample schemes were superior and highly volatile compared to BSE SENSEX. Open-end schemes outperformed close-end schemes in term of return. Income funds outsmarted growth and balanced funds. Banks and UTI sponsored schemes performed fairly well in relation to sponsorship. Average annual return of sample schemes was 7.34 percent due to diversification and 4.1 percent due to stock selectivity. The study revealed the poor market timing ability of mutual fund investment. The researcher also identified that, 12 factors explained majority of total variance in portfolio management practices.
- Gupta Amitabh (2001) evaluated the performance of 73 selected schemes with different investment objectives, both from the public and private sector using Market Index and NAV of both close-end and open-end schemes from April 1994 to March 1999 were tested. The sample schemes were not adequately diversified, risk and return of schemes were not in conformity with their objectives, and there was no evidence of market timing abilities of mutual fund industry in India.

- Narasimhan M S and Vijayalakshmi S (2001) analyzed the top holding of 76 mutual fund schemes from January 1998 to March 1999. The study showed that, 62 stocks were held in portfolio of several schemes, of which only 26 companies provided positive gains. The top holdings represented more than 90 percent of the total corpus in the case of 11 funds. The top holdings showed higher risk levels compared to the return. The correlation between portfolio stocks and diversification benefits was significant at one percent level for 30 pairs and at five percent level for 53 pairs.
- Roshni Jayam's (2002) study brought out that equity had a good chance of appreciation in future. The researcher was of the view that, investors should correctly judge their investment objective and risk appetite before picking schemes, diversified equity funds were typically safer than others and index funds were the best when market movements were not certain. The researcher suggested Systematic Withdrawal Plan (SWP) with growth option was more suitable for investors in need of regular cash inflows.
- BansalManish (2003) survey of 2,819 respondents revealed that, the percentage of investors holding only UTI schemes reduced. The unit holders' loyalty seemed to have become a myth as investors were looking for performance. Unit-holders spread their holdings over two or more funds with an urge to diversify increasing competitive mutual fund environment.
- Singh,Jaspaland Subhash Chander (2003) identified that past record and growth prospects influenced the choice of scheme. Investors in mutual funds expected repurchase facility, prompt service and adequate information. Return, portfolio

selection and NAV were important criteria's for mutual fund appraisal. The ANOVA results indicated that, occupational status; age had insignificant influence on the choice of scheme. Salaried and retired categories had priority for past record and safety in their mutual fund investment decisions.

- Saha, Tapas Rajan (2003) identified that Prudential ICICI Balanced Fund, Zurich(I) Equity Fund were the best among the equity funds while Pioneer ITI Treasury scheme was the best among debt schemes. He concluded that, the efficiency of the fund managers was the key in the success of mutual funds and so the AMCs had to ensure more professional outlook for better results.
- Satish D (2004) opined that investors from seven major cities in India had a preference for mutual funds compared to banking and insurance products. Investors expected moderate return and accepted moderate risk. 60 percent of investors preferred growth schemes. The image of AMC acted as a major factor in the choice of schemes. Investors had the same level of confidence towards shares and mutual funds.
- Sharath Jutur (2004) studied 58 schemes during the bear period (September 1998 to April 2002). He identified that the risk was low for 37 schemes, below average risk for 11 and of average risk for 10 schemes. Risk-return analysis revealed that, average mutual funds were found to be with low unsystematic and high total risk. The return was positive in the case of 46 schemes, with 30 schemes yielding above 5 percent. 32 schemes had positive Treynor ratio, 30 schemes had positive Sharpe ratio, 35 schemes had positive Jensen measure due to the bearish market with low CAPM returns.

- Elango's (2004) analytical results indicate that, private funds had a high positive association between the past and current year NAV compared to public sector. The private sector schemes outperformed public sector in terms of NAV range value, innovative products and in deployment of funds. Public sector funds showed low volatility as against greater variability for private sector indicating low consistency. Student 't' test indicated the existence of a high significant difference between the mean NAV of private sector funds and public sector with a high statistical significance of (-)5.95.
- Venkateshwarlu M (2004) had analysed investors from the twin cities of Hyderabad and Secunderabad. Investors preferred to invest in open-end schemes with growth objectives. Chi-squared value revealed that, the size of income class is independent of preference pattern, and dependent on the choice of fund floating institution. Reasonable returns and long-term strategy adopted bythe scheme were the criteria of scheme selection. Investors perceived that too many restrictions led to the average performance of mutual funds in India.
- Sondhi H J and Jain P K (2005) examined 17 public and 19 private sector mutual fund equity schemes. The mean and median returns for the aggregate period (1993-2002) were lower than the returns on 364 days treasury bills, and higher than the BSE 100 index. Alliance Equity fund was the top performer and Canbonus and LIC Dhanvikas(I) were the worst performers. They hypothesized that majority of the sample schemes earned returns better than the market. Private equity schemes had superior performance due to its popularity; fund management practices, well-researched stock selection and

timing skills. More than three-fourth of public sector schemes were unable to achieve better returns in spite of higher investor confidence associated with high safety. The funds did not show consistency in performance.

- Muthappan P K and Damodharan E (2006) evaluated 40 schemes for the period April 1995 to March 2000. The study identified that majority of the schemes earned returns higher than the market but lower than 91 days Treasury bill rate. The average risk of the schemes was higher than the market. 15 schemes had an above average monthly return. Growth schemes earned average monthly return. The risk and return of the schemes were not always in conformity with their stated investment objectives. The sample schemes were not adequately diversified, as the average unique risk was 7.45 percent with an average diversification of 35.01 percent. 23 schemes outperformed both in terms of total risk and systematic risk. 19 schemes with positive alpha values indicated superior performance. The study concludes that, the Indian Mutual Funds were not properly diversified

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- Sanjay Kant Khare(2007) opined that investors could purchase stocks or bonds with much lower trading costs through mutual funds and enjoy the advantages of diversification and lower risk. The researcher identified that, with a higher savings rate of 23 percent, channeling savings into mutual funds sector has been growing rapidly as retail investors were gradually keeping out of the primary and secondary market. Mutual funds have to penetrate into rural areas with diversified products, better corporate governance and through introduction of financial planners.

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The aforementioned studies indicate that the evaluation of mutual funds has been a matter of concern in India for the researchers, academicians, fund managers and financial analysts to a greater extent after 1985. **The reviews bring to light the importance of mutual funds in the Indian financial scenario; highlight the need for adequate investor protection, single regulatory authority, higher return for a given risk as per investors' expectation, greater convenience and liquidity, and the expectations that mutual funds should act as a catalytic agent of economic growth and foster investors' interest.**

The studies on mutual fund investment performances have long sought to draw the distinction between the ability to time the market and the ability to forecast the returns of individual assets. Thus superior performances are due to either timing or selection ability or some combination of the two. Indeed portfolio managers often characterize themselves as market timers or stock pickers.

The subject of mutual fund performance has received a great deal of attention in the literature of financial economics. The reviews of earlier studies have briefly looked at predictability of performance, persistence in performance and market timing ability. However, reviews on industry performance particularly under the regulated environment are scantly available. As the mutual fund industry has a significant role to play in the corporate governance and to strengthen capital mobilization of the country there is a great need to study the performance of mutual fund industry along with the performance of growth schemes, particularly after the industry has ensured uniformity in accounting policies to bridge the gap in the existing literature. Since all the earlier studies have made use of

Sharpe, Treynor and Jensen measures the present study makes use of the same well established traditional techniques along with Fama's Decomposition of Total Return which was not applied by many of the previous studies.

The review of literature also guide us in the methodologies to be used, estimation procedures and interpretation of results. This section, therefore, focuses on both theoretical and empirical literature to understand the need for regulation, the fonn of regulation, approaches to risk and perfonnance assessment for funds and also estimating cost functions. Mutual funds play a crucial role in reducing risk and transaction cost while investing in the stock markets. They offer a more efficient route of investing. In the process of encouraging more investments they help in realizing true prices of securities. This in tum helps attract investments through the initial public offer route and unleash the savings of Indian households.

This Section is divided into two broad sections. The first section reviews theories of regulation, risk and performance measurement. The second section is divided into five subsections. The first subsection reviews altemate risk measure studies. The second subsection examines the various approaches to fund perfonnance measurement. In the third, we deal with studies relating to economics of scale in mutual fund expenses. The fourth subsection reviews papers on the impact of size of assets on mutual fund perfonnance. Given the importance of fund investment style in determining fund returns, in the fifth subsection we review empirical literature on fund

style. In the last subsection, we focus on a few important studies covering the Indian mutual funds.

2.3 Theories of Mutual fund

2.3.1 Theories of Regulation

We move from a controlled economy in India to one that is regulated. The line between control and regulation has to be distinct and, therefore, the basis, extent and mode of regulation has to be made clear. Regulation essentially seeks to control price, sale and production decisions of firms such that private interests align with the larger 'public interest'.

The public interest approach to regulation can be dated back to Arthur Pigou. Pigou 15 dealt with externalities as a source of market failure. The costs of negative externalities such as pollution is not internalized reflect true costs. Markets prove inefficient and hence regulatory control is justified. The purpose of regulation is to improve public welfare (public interest) by correcting market failures: Government intervention improves welfare.

Posner (1969) discusses exhaustively the regulating monopolies, although dealing with the issue of regulating 'natural monopolies' Dr more specifically 'utilities' reforms questions the traditional basis and of regulating monopolies. The traditional ‘dead weight loss' of monopoly profit maximizing price is questioned. He maintains that price need not be to maximize short tenn profits. He points out other managerial objectives which may lead to lower price. Preventing potential entrants from entering

developing good reputation are two such reasons. Besides he questions the rationale for comparing monopoly pricing with competitive price when the general industrial tendency is oligopolistic whose prices themselves are uncertain. He points out that supra competitive profits are themselves an incentive for the monopolist to contain costs and innovate. Taxing monopoly profits is a far better anernative to direct regulatory controls for Posner. He dismisses other effects of monopoly such unresponsive behaviour and inferior quality as likely to cause loss of profit and lower costs which attracts entry. He emphasis on the distorlionary effects of rate of returns regulation which lead to inferior services besides, the problems of regulatory lags. He calls for a regulatory system based on a cost benefit analysis that includes both direct and indirect costs of regulations.

Stigler (1971) feels that the demand for regulation is not often for 'public benefit' but rather for the benefit of the industry in question. The states coercive power allows it to tax, control entry, effect make policies which affect complements or substitutes or even fix prices. Such powen; can be 'bought' by 'industries in' return for campaign funds to restrict competition or ensure profrts. Stigler points out that such regulations are actually welfare-reducing as the benefits ineffICient policies are possible only because in a democracy voting on each policy is costly and hence not done and also because not all voters who vote might have an 'interest' in the issue.

Tullock (1975) downplays the need for regulation and believes that the costs of government failures or regulatory failures are larger than the cost of market failures.

The other important reason for market failure and ground for regulation is that of information asymmetry and bounded rationality. Akerlof (1970) pioneered Ihe study on information asymmetry and showed how imperfect information would 31 lead to adverse selection and the ultimate collapse of the martlet through low quality sellers crowding out good quality sellers.

Schwartz and Wilde (1979) deal with the necessity for government intervention in markets with imperfect information. Governments intervene in markets when the percent of uninformed consumers in the market is sufficient to do so. But this is expensive and besides one does not know what level of information is considered adequate for a consumer, besides the focus should be on the martlet and not the individual. If there exist sufficient number of informed consumers the firm has every incentive to behave competitively. The guiding variable, they point out, is whether non-competitive behaviour has occurred in the market. Even then they suggest providing information is a better method than price control.

A mutual fund investor may be operating with imperfect informational. She is incapable of observing the fund manager and the effort levels to produce best retums. It could induce post contractual opportunistic behaviour which opens the investor to greater risks and lower retums. There is also the possibility of the investor not comprehending the information related to the mutual fund. Both of these are grounds for regulatory intervention.

Frank and Mayer (1989) point out that information asymmetries can lead to organizational failures which include fraud by

employees, misutilization of funds, reckless investments and excessive chuming of portfolio.

Regulation of mutual funds normally cover mandatory disclosure of relevant information, fixing management fees and expense limits, guidelines for valuing the 32 portfolio and conducting shareholder transactions, control of false and misleading information, investment norms and corporate governance structure.

2.3.2 Theories of Risk Measurement

The purpose of this section is to identify the alternate approaches to risk. In the tradnional portfolio models an investor is assumed to maximize expected utility of the portfolio. This is proposnion of securities such as to minimize risk while holding the mean return constant at a level. Markowitz (1952) was the first to propose the mean-variance analysis of portfolio decisions. He discussed the concept of efficiently diversified portfolios which maximized expected returns for a given amount of risk measured by variance. In 1959, Markowitz elaborated further and provided means for calculating efficient portfolios when the means, variances and covariances of retum of the securities were available.

Tobin (1956) was more interested in the implications for the macro economy ~nlike Markowitz who focused on the rational investor. Tobin used the mean-iariance approach to study the choice between safe liquid assets and risk assets.

Tobin points out that the fundamental basis of the M-V approach was that ;ecurities were imperfect substitutes for one another'. In the same article Tobin ;howed that the optimal portfolio for any investor is a combination of the optimal

JOrtfolio of risky assets and a portfolio of risk free securities. This speaks of nvestors' ability to separate the decision about investment proportions among risky Issets separate from the decision with respect to investment proportion between 'iskyand risk-free assets. This property is termed as monetary-separation.

Markowitz (1959) himself, proposed the 'semi-variance' rather than variance as a measure of risk as it captured only adverse deviations. Semi variance can also be described as below-mean target semi variance or in other words returns below the mean return is taken for measuring risk.

Hogan and Warren (1974) developed a CAPM using a below target semi variance risk measure also termed as the ES-CAPM. This corrects for the symmetric distribution approach of the traditional CAPM.

Bawa (1975) generalizes the semi-variance measure of risk to reflect a less restrictive class of decreasing absolute risk averse utility function know as the Lower Partial Movement (LPM). The M-V approach was restrictive as it ensured an optimal portfolio only if the utility function was quadratic.

Bawa and Lindenberg (1977) proved that 'separation' holds for the LPM risk measure when the target was the risk-free rate (for fixed target). Where variance measures the expected squared deviation around the mean, LPM's measures the expected value of the alto power of the deviation below a target (when a > 1). When a=2, the LPM is also termed as target semi variance (TSV).

Fishbum (1977) introduced the general LPM risk measure setting a=2 to give the TSV. Since the TSV only punishes

returns below the target it fit investor 34 preferences. The induced efficient set of his model was found to satisfy the stochastic dominance criteria (which consider the whole probability distribution of returns and not just the M-V a measure). Stochastic dominance is better tor judging the performance of portfolios, because it does not make any assumptions about the probability distribution of security returns and is based on a general utility function.

The above literature points to the development in measurement of portfolio. The LPM with a target return based on a more general utility function appears better in representing investors' preference on a risk return space.

2.4 Empirical Review

2.4.1 Review of Studies on Mutual Funds performance

This section aims to review literature on mutual fund performance - more specifically on equity funds. The performance of mutual funds has centered around the appropriate choice of benchmaril for comparing fund performance and the appropriate model to be used. Most studies focus on whether fund's have managed to outperform the benchmaril. But studies have also covered diverse areas such as persistence in fund performance, marilet timing. and bull and bear marilet performance. Initial studies on performance such as those by Sharpe. Treynor and Jensen use the CAPM model with a single benchmaril tor assessing performance.

Mc Donald (1974) studied the performance of 123 funds using monthly data for the period 1960-69. His study was based on a CAPM model four measures-monthly mean excess return;

reward-ta-volatility Ratio, Jensen's alpha and reward to variability ratio were calculated. He concluded that the average fund performance was not SignifICantly different from the market and given fees and expenses they were slightly better.

Mains (1977) carried out Jensen's study for 70 of the funds over the same period. He carried out the study with annual and monthly returns. While annual 38 data gave an average alpha of minus 62 basis points the monthly data gave a pos~ive nine basis points. Mains argued that monthly data was more efficient.

These studies show that fund managers do out perform a passive benchmark index portfolio while several studies also devote to the market timing ability of funds but these are excluded as they are not the objective in their study. Importantly these studies also show that performance assessment is dependant upon the time period, the type of funds studied and more importantly the index for comparison. Increasingly the single factor CAPM came under criticism.

The single risk factor of the CAPM has led to substantial research and propos~ions that a muHifactor model would serve us better.

Roll and Ross (1979) proposed the Arbrrrage Price Theory'· as an aHemative to the single factor CAPM. They found that, between 1962 and 1972,there were at least four other factors which could explain risk. But their test, they themselves admitted was a weak one as no economic justifICation could be given for these factors.

Fama and French (1992, 93) argued that the risks of a portfolio cannot be captured by a single beta. Portfolio risks are muHi-dimensional for them. When they studied the US stock returns, for the period 1963-90, they found that the CAPM beta could not explain the entire return variance. They proposed a three factor model to better capture the risk. Apart from the market risk they included the Small cap stock returns - Minus-Big cap stock returns (SMB) factor to capture the 'size risk' and, also the High-Minus-Low (HML) factor to capture the 'value risk'. They find that historically small cap stocks have delivered better average returns (in the US market) and hence, can be an important explanatory factor for determining the sources of performance of a fund. The value risk is captured by taking the difference between the returns of the high book-ta-market (B/M) stocks minus Low book-to-market stocks. Here they find that value stocks deliver better returns when the market corrects for ij's over reaction.

Their model proposed increased the R- square or the explanation for fund performance compared the single factor CAPM models. This was done by essentially accounting for the portfolio differences between funds or the style of funds. The posijive alpha probably due to the style and not necessarily due to POrtfolio selectivity and hence, for a truer measure of alpha we need these addijional factors according to them.

Several tests were carried for the Fama-French model. Kothari et al (1995) find that there is no 'value' effect but certainly a size effect.

We take these factors into account when discussing the impact of size of fund on retums. But we do not consider the

multifactor model proposed by them rather we use the single factor CAPM but separate the funds on the basis of the portfolio and use a dummy to capture the differential effects of fund style on fund alpha.

2.4.2 *Review of Empirical Studies on Mutual Fund Costs and Fees*

There have been several studies on the existence of economies of scale and scope In the financial sector in general and mutual fund industry in specific.

Murray and White (1983), find evidence of both economies of scale and scope in the British Columbia credit unions and point out that regulation limiting the growth and diversification of these unions could lead to higher operating costs.

Baumol et al (1989) ,using translog cost functions, find economies of scale present for mutual fund complexes in the U.S .They however find such economies weakened when assets per account (with the assumption that the number of accounts grow in the same proportion as assets) are taken as hedonic variables. Further they also find significant economies of scope within the fund complexes implying that buying into funds which are a part of a large complex should give more net returns other things remaining the same. Their findings clearly shows that not all funds can be treated alike regarding the assumption of persistence of economies of scale as hedonic variables can cause differences.

A study of US funds by Rea, Brian and Reid (1999), for the year 1998 shows, again, strong inverse relationship between operating expense ratios and asset size of similar funds. Further,

funds with asset increases over time have also shown decreases in expense ratios depending on the extent of increase.

While the presence of economies of scale seems to be the general norm, Latzko (1998), tries to go beyond this and establish the source of economies of scale. It could be due to management fee reduction or due to 'other administrative expenses'H. Economies of scale are found to originate substantially from 'other administrative expenses'.

The study of fund's economies becomes all the more important in the light of the fact that fund size could have a negative importance on performance. Chen et al (2005) show that organizational diseconomies (due to hierarchy costs) " are particularly pronounced for funds that play small cap stocks.

Regarding price competition amongst funds there exist divergent views. Elton, Gruber and Busse (2004), find no substantial importance given to even expenses by investors when choosing S&P index funds. This could be possible in a time when most funds are performing well thereby causing investors to neglect the expenses. In a survey conducted by Capon, Fitzsimons, and Prince (1996) only one fourths of investors give importance to management fees. On the other hand, Christofferson (2001) shows that money market fund managers have been willing to be flexible with respect to management fees given the convex relation between fund inflows and lagged performance. A similar convex relation has been presented by Chevalier and Ellison (1997) in equity funds.

Brian Reid (2005) points out that small fund's in the U.S, in order to compete with larger funds which have lower operational

average costs, have tended to voluntarily waive of a portion of their fees. He finds that over 90 percent of new cash flows went to funds with expenses below the median funds expenses

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2.4.3 Empirical Studies on Fund Size and Returns

While there have been a few im portant contributions in the area of size and performance they are not specifIC to India.

Grinblatt and Sheridan Titman (1989) find no clear trends of decreasing returns for larger funds in the US between 1974 and 1984.

Perold and Solomon (1991), on the other hand, found diseconomies of scale arising out of increased price impact of large transactions. Such impact costs are found to be larger for larger trades by Gallagher and Looi (2003) as well for a sample of institutions in the Australian markets.

Chen et al (2003), after accounting for various benchmarks find that return declined lined with lagged fund size for the period 1962 to 1999 in the US. The main reasons for this are found to be investments in small illiquid stocks and also organizational diseconomies.

On the contrary, Gallagher and Martin (2005) find no statistically significant :lifferenee in the returns of large and small funds in Australia.

The opinion among Indian fund managers on the issue of size is diverse. Some feel that there are ample opportunities for

investment while others feel that investment choices are drying up.

2.4.4 Fund Style and Fund Returns

Investment styles of mutual funds have an important role to play in determining fund returns. some equity funds could choose to invest predominantly in growth 43 stocks. These are stocks that have a high price-to-earning (PIE) ratio and do not generally pay dividends. Such styles of investment can increase volatility. On the other hand there is the value style of investment. Funds having the value style tend to have more exposure to cheap stocks. Such stocks tend to have low PIE ratio .and yield high dividends. Such stocks are less volatile. AHernatively there is the large cap, small cap investment style. Fama and French (1992) had pointed out the tendency of small cap stocks giving better returns than large cap stocks. But small-cap stocks are also riskier as their prices are more volatile.

Sharpe (1992) explains how a substantial part of the return variability of a portfolio depends on the distribution of the portfolio across a number of asset classes. He uses 12 asset classes represented by an appropriate index, to study the influence of 'Style' on the performance of 395 funds for the period 1985-89. He employs the quadratic programming methodology to determine funds exposure to different asset classes. He finds that growth equity finds tend to predominantly focus on growth stocks.

Grinblatt, Titman and Wermers (1995) analyzed the quarterly holding of 155 mutual funds for the period 1975-1984. Using muHiple cross-sectional regressions of fund performance on fund

characteristics they found that 77 percent of mutual funds tended to be momentum investors. This meant that funds tended to buy past winners and sell past losers. Momentum investing gave funds better returns than contrarian investors and the index.

Bogle (1998) uses the mine box mutual fund rating system. He explains that US fund style evolved from a homogenous form in the 1970s to amore heterogeneous form during the 1990s. He very significantly finds that expenses are the prime differentiator between actively managed equity fund returns. Further he finds that index funds delivered better average risk weighted returns compared to actively managed equity funds.

The importance of fund style in explaining fund returns cannot be denied. Indian mutual funds although not as diverse, in terms of style have, in the recent times, adopted GrowthNalue and Large/Mid or small cap oriented styles. We, therefore, factor this in our study its impact on mutual fund size and performance.

2.5 Empirical studies on Indian Mutual Funds

While empirical studies of mutual funds in India are not comparable to sheer volume of studies conducted in the US it is picking up with the growth of the industry and more importantly with the availability of more frequent data.

Sahadevan and Thiripalraju (1997) attempted to compare the performance of funds using total return, consistency and volatility. They did not attempt to use any CAPM single or multifactor models. Their study covered private and public sector mutual funds for the period 1995-96. The benchmark used was the SSE National Index terms of absolute returns.

Out of 32 public sector funds, 11 outperformed the index. In the case of private sector mutual funds time out of the ten studied outperformed the index. The study of course did not intend to go into deeper risk return analysis and compared a host of different types of funds to a Single index.

Panigrahi (1996) in his study of Indian Mutual funds selected a sample of four growth funds for the time period October 93 to December 95 and divided them into two periods to capture their performance in boom and bear phases separately.

The general conclusion reached was that funds had lesser risk than the market index, BSE 200 or the RBI ordinary share price index and they delivered near market returns under normal condijions. He uses a log-log model regressing the log of (monthly average) of NAV on the log of the market index (monthly tune rates of growth) to arrive at the R^2 or diversification and risk compared to the market. The study of course, has a very limited objective, sample and time period.

Roy and Deb (2003), use the conditional performance evaluation technique to study fund timing and performance. They pointed out that the tradition models of Treynor-Mazuy had shortcomings as they based their assessment on historical average returns without considering the role of new information and the time varying element of returns. Taking a sample of 89 funds (consisting of equity diversified and balanced funds) they test for alpha over the time period January, 1999 to July, 2003. Using lagged information variables they find that the alpha deteriorates. But their study is weak with poor statistical significance.

Indian empirical studies tend to focus on the application of evolving methods to the study of mutual fund performance. However, to the best of our knowledge, there have been no studies that tried to deal with the interplay between regulations and fund behaviour. Issue such as the influence of regulations on performance and its ability to act as a genuine constraint on expenses are left untouched.

Here, again, a brief outline of the empirical literature surveyed is presented. The aim is to show the developments in methodology and the gaps in studies concerning India.

Empirical studies pertaining to mutual fund performance can be grouped into single factor CAPM which uses a single benchmark and multiple factor CAPM.Some of the predominant single factor CAPM studies were those of Sharpe (1966), Treynor and Mazuy (1966), Jensen.M (1968). But, Ross (1976) argued that systematic risk need not be explained by a single factor and that there could be 'K' factors. Hence the basis for multi factor models for assessing performance.

Several factors such as retum of small cap stocks, large cap stocks, midcap stocks, growth stocks, value stocks and momentum are included in various studies. For instance, Fama and French (1993) used multifactor model with the market return, the return of small less big stocks (SMB) and the return of high book/market and HML as three important factors. Using multiple factors eliminates the error that arises out of the assumption of homogeneity of assets held by different portfolios or funds. The multiple factor models re calculate the Jansen alpha which measured superior performance.

Apart from these two broad approaches to performance, empirical work on other special factors influencing performance analysis is reviewed. Studies on the influence of size on performance such as Grinblatt and Titman (1989), Indro et al (1999) and Chen at al (2003) are some who examine the role of size and diseconomies of scale/all in the U.S context). The results are however mixed with no clear consensus on diseconomies of scale. With respect to India there has been no attempt to study the possibilities of size affecting returns. Another factor which has been found important is the style of a fund. Sharpe (1992), Grinblatt et al (1995), and Bogle.J (1998), discuss the role of style. Style describes the asset class of the portfolio of a fund. This explains a large part of the funds return variability. Studies evolved from the holdings based style analysis (HBSA) method (categorization of funds on the basis of average marXet capitalization and average price-to-eamings of the fund portfolio) to the returns based style analysis (BSA) classification (compares fund returns to returns of a number of selected indexes)

While taking samples of funds for assessing their performance the survivor bias has to be considered. Funds tend to close or merge with others, at times this covers up for poor performance. So choosing funds which survive might tend to bias performance analysis. Several funds in India had been terminated or merged and hence this factor has to be considered while assessing performance.

Since the overwhelming emphasis of regulations in India is on direct controls on fees and expenses that are charged to fund, investors' empirical studies relating to this issue have been

reviewed. In the relationship between fund expenses and performance Sharpe (1966) and Ippolito (1989) throw up different conclusions.

On the relationship between fund size and expenses or economies of scale and scope Baumol et al (1989), Rea (1999), Latzko (1998) establish economics of scale and Baumol also finds economics of scope. The Indian context with regulatory caps on fund manager fees and expenses and its impact on constraining fund expenses has not been dealt with so far.

Studies on Indian mutual fund performance by Sahadevan and Thiropol Raju (1997) and Sadhak (1997) focus on general trends in the mutual fund performance, regulation and expenses from 1990-91 to 1996. Their focus was not on the evolved risk return analysis. Madhu S Panigrahi (1996) and Bijan Roy et al (2003) have attempted risk-return analysis and using traditional CAPM and conditional performance evaluation techniques respectively.

Brian J. Glenn **(2004)** examined the performance of open-ended and close ended Mutual funds, the difference between the two. Their impact upon the performance i.e. NAV and its volatility was also examined.

Athanasious G. Noulas, John A. Papanastasiou and John Lazaridis **(2005)** evaluated the performance of 23 equity funds during the year 1997-2000 in Greece. The performance evaluation was based on measuring risk and return using Treynor, Sharpe and Jensen techniques. The study proves that the investor needs to know the long term behavior of Mutual funds in order to make the right

decisions. The study showed that equity funds neither have the same risk nor the same returns.

Chen, Joseph; Hong, Harrison; Huang, Mink and Kubik, Jeffrey D. **(2004)** investigated the effect of scale on performance of Mutual fund and found that Fund size erodes the performance. This association was most pronounced among funds that has that has to invest in small and illiquid stock, suggesting that the size of the family that it belongs to, indicating that the scale need not be bad for performance depending on how the fund is organized.

Treynor **(1965)** devised a concept of fund performance which takes investment risk into account. He used a concept of 'characteristic line' for relating expected rate of return of a fund to the rate of return of a suitable market average so as to obtain satisfactory performance measure. Risk in a diversified fund is sum of responses to (a) general market fluctuations and (b) fluctuations peculiar to particular securities held by the fund. If a fund is properly diversified, the latter risk tends to average out. In a sample of 54 American mutual funds, it was found that four out of five demonstrate fairly clear-cut characteristic line patterns with correlation coefficient equal to or exceeding 90%. Further, to deal with a portfolio containing a certain fund, instead of individual fund, a line called 'portfolio-possibility line' is used with a purpose to relate expected return of a portfolio, containing the fund to the portfolio owner's risk preference (slope of line).

Sharpe **(1966)** attempted to evaluate performance of mutual funds through the capital-market model that deals with future predictions regarding performance by substituting actual return and actual standard deviation values i.e. Ai and Vi

respectively instead of expected return and predicted deviation values. The performance analysis of 34 open-ended mutual funds during the period 1954-63 showed that funds with large average returns typically exhibit greater variability than those with small average returns.

Jensen **(1968)** conducted a study to evaluate performance of portfolios of risky investments from a distinct dimension of portfolio manager's predictive ability—that is his ability to earn returns through successful prediction of security prices which are higher than those which we could expect given the level of riskiness of his portfolio.

Furthermore, estimation equation used was: Rjt - Rft =α j +β j(Rmt-Rft)+ujt. The sample consists of returns on the portfolios of 115 open-end mutual funds for which net asset and dividend information was available for 10-year period 1955-64 and as many as additional observations as possible were collected for these funds in the period 1945-54. Results obtained indicated that value of β was .840. On average these funds tend to hold portfolios, which were less risky than the market portfolio. The average value of alpha (α) calculated net of expenses was -.011 that indicated that on an average the funds earned about 1.1% less per year than as against the level of systematic risk. The evidence on mutual fund performance indicated that not only these 115 funds were on an average not able to predict security prices well enough to outperform 'buy-the-market-and-hold policy' but also individual funds were not able to do significantly better than that which we expected from mere random chance. These conclusions hold even when fund returns were measured gross of management expenses. Thus, on an average, the funds apparently were not quite

successful enough in their trading activities to recoup even their brokerage expenses.

Treynor and Mazuy **(1966)** conducted a study whether mutual fund managers can outguess the market i.e., can they anticipate successfully the major changes in the stock market? In this context, the study examines whether there is any evidence that the volatility of the fund was higher in years when the market did well than in years when the market did badly. The analysis of a sample of 57 open-ended funds over a time period from 1953 to 1962 showed that none of the investment managers of these 57 funds has successfully outguessed the market. It is not to be mentioned that a fund manager cannot provide the investor with a rate of return that is higher in rising or falling markets and also better than the averages, instead it provides that the fund manager's ability to identify underpriced industries and companies will lead to improvement in rate of return rather than due to any ability to outguess the moves in the market as a whole. The study concludes that the best assumption for the investor could be that the fund managers have no ability to outguess the market and, thus, they should not be held responsible for failure to foresee changes in market climate.

The market position of the Gupta and Sehgal **(1997)** conducted a study to evaluate investment performance of mutual funds in the light of following propositions: a) fund diversification b) consistency of performance c) parameter stationarity d) consistency between risk measures and fund objectives and e) risk-return relationship in general. Results showed that out of sample of 80 schemes, income-growth schemes were the best performers. As regards diversification, very low coefficient $(R)^2$ highlights lack of

diversification. Regarding consistency of fund performance, Pearson's product moment correlation coefficient indicates no consistent performance from year to year. However, income-growth scheme of few funds showed consistent performance outperforming the market index. As regards stationarity of risk parameters, results showed that all correlations between betas for different periods were not significantly positive at 5% level. Hence systematic risk characteristics of the fund are not stable over time, which is discouraging for the investors because it implies that they cannot be sure of the risk attitude of fund management. Regarding consistency between measures and fund objectives, the relationship between fund objectives and systematic risk (betas) is inconsistent with expectations. The low and even negative values show that the fund managers are not managing their fund portfolios well as per the desired risk levels. Lastly for risk-return relationship, the results support the relationship for the Indian market with standard deviation as measure of risk. This result is, however, inconsistent with the CAPM framework which envisages a relationship between systematic risk and investment performance.

Murthi, Choi and Desai **(1997)** proposed a new index to measure portfolio performance named as Data Envelopment Portfolio Efficiency Index **(DPEI)** an extension of operations research technique of data envelopment analysis identified as a relative measure of performance that does not require the specification of a benchmark and also incorporates transaction cost. For the purpose, 731 mutual funds were put into seven categories as: Aggressive growth, asset allocation, equity-income, growth, growth-income, balanced and income fund. Findings

showed that managers in aggressive growth, asset allocation, and income and equity-income funds are relatively more efficient in utilizing resources while growth, balanced and growth-income funds show a lower efficiency index. As regards the relationship between performance and transaction costs, the findings were that mean efficiency scores were not related to mean expense ratios, mean loads or mean turnover implying thereby that higher transaction costs are not correlated with better efficiency scores (DPEI). Lastly, regarding effect of size of fund on performance, the correlation between the mean DPEI for each category and mean Net Asset Value (NAV) suggested that efficiency is not related to the size of the fund. However, out of 33, positive correlation was found only for 10 categories.

Madhusoodanan **(1996)** conducted a study to find out the relationship between the expected return and risk by using portfolio method rather than the individual security approach. For the purpose, portfolios were formed to test their performance in the consequent period. Results indicated that the risk and expected return in the Indian market are not necessarily positively related. In Indian market, the investor rationality and risk aversion do not appear to be important. It is found that higher risk is not priced and investing in higher risky securities with the expectation of high returns in future may not produce good results. In case of yearly test periods, as against quarterly ones, the securities, which had produced high returns in the past, did not perform well in the next period. Hence, the policy of selling prior winners and purchasing prior losers could produce excellent results over one year investment

horizon.

Sehgal **(1997)** empirically tested three-parameter Capital Asset Pricing Model in Indian capital market by taking monthly rates of return (adjusted for bonus, stock splits and right issues) for 80 securities included in BSE National index. The evidence indicated that CAPM is not a suitable descriptor of asset pricing on the Indian capital market for the period of the study. Slope was found negative but insignificant for the total period, implying absence of any significant relationship between β and average return.

Sethu **(1999)** conducted a study to establish whether 1) the fund portfolios are adequately diversified, 2) do they give excess returns after adjusting for systematic risk; and 3) do the portfolios show market timing. On examining 18 open-ended growth schemes for the period March 1985-July 1999 the percentage of beta risk (73.38 to 44.43) and percentage diversifiable risk (55.57 to 26.62) indicated poor diversification. The excess return earned by the funds is statistically insignificant. Majority of the funds showed negative returns. However, some funds showed excess positive returns. No fund exhibited any ability to time the market. Hence, these findings negate the claims by mutual fund managers that they can sight and exploit investment opportunities better than a naïve investor. An investor who invests in a basket of risk-free securities and an equity index can match the fund's return performance and can beat the fund's diversification performance.

Singla and Singh **(2000)** evaluated performance of mutual funds using risk-return relationship models given by Sharpe, Treynor and Jenson. The analysis of 12 growth oriented mutual fund schemes showed that during the period the mutual fund schemes provided less average monthly return than the market index. Sharpe's ratio shows that mutual funds have performed poorly with regard to return on investment as compared to market. Treynor Index (TI) calculated showed investors did not recover adequate returns per unit of systematic risk undertaken. Also, Jensen measure calculated indicated that on an average fund earned about 0.2% less per month given their level of systematic risk. Preponderance of negative alpha values of majority schemes showed that funds were not able to forecast future security prices enough to recover their research expenses, management fees and commission expenses.

Gupta **(2000)** carried out an empirical research to study mutual fund manager's market timing abilities. He tested two hypotheses: 1. Managers of growth schemes exhibiting better market timing ability in comparison to those of other schemes and 2. Managers of close-ended schemes are more successful in timing the market than those of open-ended schemes. The results reported indicate that in terms of both the models only three schemes out of 73 exhibited market-timing abilities. As regards market timing to be an attribute of growth schemes for results indicated that only one scheme out of 43 growth schemes reflected some market timing ability. Lastly, regarding market timing to be relatively easier for fund managers of close-ended schemes as compared to open-ended schemes, results showed that of the 49

close-ended schemes, managers of just one scheme were found to be market timers for the both the models. However, in terms of wrong timers, the number of managers of both types of schemes is more or less the same. Thus, there is no evidence that fund managers of close-ended schemes are more successful in timing the market than those of open-ended schemes.

Risk adjusted performance evaluation is also made by SEC study **(1971)** and concluded that some of the funds had outperformed the benchmarks but there was no consistency in performance.

John McDonald **(1974)** examined the relationship between the stated fund objectives and their risks and return attributes. The study concludes that, on an average, the fund managers appeared to keep their portfolios within the stated risk. Some funds in the lower risk group possessed higher risk than funds in the most risky group.

James RF Guy **(1978)** evaluated the risk adjusted performance of UK investment trusts through the application of Sharpe and Jensen measures. The study concludes that no trust had exhibited superior performance compared to the London Stock Exchange Index.

Kon and Jen **(1979)** explored the possibility of market related risk over a period of time for mutual funds. The authors separated the data sample based on the risk regimes and applied OLS (Ordinary Least Square) method on each sample. The findings showed different betas for 37 out of 49 funds which indicates active managers timing activities for maximizing the fund's

returns.

According to Panda T **(2001)** there is a substantial growth in the mutual fund market due to a high level of precision in the design and marketing of variety of mutual fund products by banks and other financial institution providing growth, liquidity and return. Most of the vast literature on mutual funds focuses on microeconomic issues, such as the investment performance of mutual funds and their ability to beat or equal the market, the level of expenses and fees and the role of distribution networks, the existence of economies of scale and scope and their impact on competition and contestability.

As per James Et al. **(1999)** actively managed equity funds charge higher fees than index tracking funds or bond and money market funds, reflecting the higher costs of employing investment management staff to achieve diversification and strategy .

Fund governance has been found to play a role in fee-setting policies since funds tend to charge lower fees when they have smaller boards and a larger proportion of independent directors (Tufano and Sevick 1997).

Larger and more mature funds as well as no-load funds have lower expense ratios **(Malhotra and McLeod 1997)**, while there is positive interaction between high performance and marketing effort and thus between performance and fees **(Sirri and Tufano 1997.)** Fund fees are also related to asset allocation strategies. Aggressive growth funds tend to charge higher entry and exit fees to discourage redemptions because they hold more of the smaller, less liquid

stocks **(Chordia 1996)**. Mutual funds and especially fund complexes benefit from scale and scope economies, emanating from activities that have large overheads, such as record keeping, communication and marketing, although adverse price impact and managerial diseconomies of scale place a limit on the efficient size of funds **(Baumol Et al. 1990, Sirri and Tufano 1993, Collins and Mack 1997, James Et al. 1999)**.

Gupta **(1994)** made a household investor survey with the objective to provide data on the investor preferences on MFs and other financial assets. The findings of the study were more appropriate, at that time, to the policy makers of mutual funds to design the financial products for the future.

Kulshreshta **(1994)** offers certain guidelines to the investors in selecting the mutual fund schemes. Shankar (1996) points out that the Indian investors do view Mutual Funds as commodity products and AMCs, to capture the market should follow the consumer product distribution model.

The review of earlier studies concludes that bulk of the empirical studies undertaken finds a positive association between increase in savings behavior, financial services industry and demand for mutual fund schemes.

In McKinsey & Co. Report **(2008)** it has found out that India's has huge potential of Growth through Infrastructure development and huge amount of investment is required for channelize this growth and development.

As per Singh B.**(2008)** Finds in his doctoral thesis that Indian Mutual funds Managers in general could not earn return in excess of the benchmarks.

Crisil Report **(2009-2010)** researched that the Indian government is increasing its focus on infrastructure sector as mutual fund industry has seen good investment opportunity in the sector with many AMC's introducing Infrastructure based thematic schemes.

The next chapter deals with the research methodology part which deals which how the researcher has analyzed the sectoral mutual fund schemes performances.

CHAPTER 3

RESEARCH METHODOLOGY

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

This chapter is concerned with the research methodology adopted for achievement of the objective(s) of the study undertaken. This explains the rationale of the study followed by the statement of the research problem, objectives of the study, scope of the study, further explaining the research design and sampling process and selection.

It further explains procedure of data collection and development of questionnaire and then concludes with explanation of the procedure of analysis and presentation and discussing the limitation of the study with scope for further research.

3.1 Rationale of the Study

Mutual Fund is one of the secure investment avenue in recent years.From the mutual fund perspective, the union budget's thrust on infrastructure funding is expected to result in an increasing appetite for infrastructure oriented mutual funds. The foundation of Sector Analysis rests upon a simple method that focuses on how a fund's movement is explained through average movements in each of the different sectors.

Sector Analysis decomposes a fund into sector buckets and compares the portfolio's holdings to the benchmark with respect to sector concentration and corresponding risk.

It is worth noting that the objective of Sector Analysis is not to duplicate the actual sector weights but rather to capture the relative impact of each sector in terms of risk and return on the fund. This study also tries to find out whether Sectoral mutual funds outperform in rewarding higher returns to investors.

3.2 Statement of the Problem

The Indian mutual fund industry has significantly high ownership from the institutional investors. Retail investors comprising 96.86% in number terms held approximately 37% of the total industry AUM as at End of March,08 significantly lower than the retail participation in the U.S. at 82% of AUM as at Dec.08.

In India, only 1.6% of the population invests in Mutual Fund. In India there are 47 Asset Management Companies (AMC), having more than 1000 schemes as on 31.3.2010.

The present study explores whether Sectoral Schemes have huge potential in rewarding higher returns to investors in comparison to the Benchmark index or not. The present study explores the performance of Sectoral fund in comparison to Benchmark index and the factors affecting Investment Consultants and Investors in choice of sectoral mutual fund schemes in Uttarakhand State.

The statement is as follows: "Comparative Analysis of Sectoral Mutual Funds Schemes with reference to Uttarakhand"

It also analyses the performance of Dedicated Infrastructure Funds in rewarding huge returns to the investors as the Indian government increasing its focus on the infrastructure sector over the years and mutual fund industry has seen good investment opportunity in this sector with many AMC's introducing Infrastructure based thematic schemes.

3.3 Objectives of the Study:

The complied objectives of the study are:

1. To find out Key Investment performance measures for sectoral mutual funds schemes.
2. To make a comparative analysis of the risk and returns relationship of the selected sectoral mutual fund schemes against the benchmark index.
3. To analyze the relationship using correlation between the opinion of investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes in Uttarakhand state.
4. To identify the factors that influence investors in selection of sectoral schemes with factor analysis.
5. To compare the returns generated by "Dedicated Infrastructure funds" vis-a-vis other diversified equity funds over bull and bear phases.
6. To study the scope of growth of Sectoral Mutual Funds schemes in future.

3.4 Scope of the Study

The main focus of the study is to analyse of sectoral mutual fund schemes performance against benchmark with respect to four sectors namely infrastructure, power, banking and auto.

The relationship between risk– return determines the performance of a mutual fund. As risk is commensurate with return, therefore providing maximum return on the investment made within the acceptable associated risk level helps in demarcating the better performer from the laggards. With the plethora of schemes available, attempt has been made to evaluate the sectoral mutual schemes performance and the role of infrastructure mutual fund schemes in rewarding high positive returns to investors.

For achieving the **First objective** the researcher has identified various parameters for evaluating the mutual fund schemes performances such as Treynor, Sharpe, Jensen, Fama Decomposition and CAPM model with a single benchmark for assessing performance.

For meeting the **Second objective**, alternate risk approaches to mutual fund scheme performance with Benchmark Index, the time period taken is March 2007 to August 2010. The sample consist of 15 mutual fund schemes from 4 different sectors namely Infrastructure, power, banking and auto. Data on the NAV and the benchmark index Bombay Stock Exchange (BSE) has been sourced

from www.smconline.com. The 91-day t-bill is taken as the risk free rate of return uniformly throughout the study.

For obtaining the **Third objective** correlation analysis has been used to reveal the opinion of Investment Consultants and Investors with regard to the factors affecting the choice of mutual fund schemes in Uttarakhand State from primary data with the help of questionnaire. The questionnaire were filled by 150 investors and 38 investment consultant spread around Uttarakhand state.

For the **Fourth objective** factor analysis has been used to identify the factors that influence investors in selection of Sectoral Mutual Fund Schemes.

The **Fifth objective** is formulated to analyses the comparative study between dedicated infrastructure fund schemes with other diversified equity funds schemes over bull and bear phase.

Sixth objective predicts the future scope of growth in the light of above objectives.

3.5 Research Design

3.5.1 Data collection

Both Primary and Secondary Data have been used to conduct the Study. Secondary data on the NAV and BSE indices were collected from the records of AMFI, journals, newspapers web sites of respective mutual funds and WWW.BSE- india.com. Researcher has also used in-house library facility and external libraries for collecting the required data.

The primary data required for the study was collected using a questionnaire from Investment Consultants/ Brokers and Investors respectively. A structured questionnaire was prepared and tested through a pilot study among investors. The questionnaire was finalized and administered to elicit the factors affecting the choice of investment consultant and Investors in sectoral mutual fund Investment. Investors and brokers were contacted in person for the sake of collection of primary data required for the study to enhace the accuracy of the results.

3.6 Sampling Frame

3.6.1 Secondary Data Collection

The researcher has used non probabilistic judgmental sampling. To study the risk-return relationship, the sampling frame includes 5 Mutual fund Schemes from Infrastructure sector, 4 Mutual fund Schemes from power sector, 5 Mutual Fund Scheme from banking sector and 1 Mutual Fund Scheme from auto sector.

All these 15 sectoral schemes are shortlisted from CRISIL rating of top schemes in their respective sectors.

The schemes so selected are in existence for at least 3 years. The period has been considered from March 2007 or since launch of the scheme, whichever is later. A detailed in-depth study of all the 15 Sectoral Mutual Fund Schemes was done for arriving at the conclusion.

Thus, the sampling frame for the purpose of the study constitutes the following sectoral schemes:

	INFRASTRUCTURE SECTOR
1	Tata Infrastructure Fund
2	Principal Services Industries Fund
3	Taurus Infrastructure Fund
4	ICICI Prudential Infrastructure Fund - Institutional Option - I
5	Birla Sun Life Infrastructure Fund - Plan B
	POWER SECTOR
1	Reliance Diversified Power Sector Fund
2	Reliance Diversified Power Sector Fund - Institutional
3	Escorts Power and Energy Fund
4	Sahara Power And Natural Resources Fund
	BANKING SECTOR
1	Reliance Banking Fund - Growth
2	UTI Banking Sector Fund - Growth
3	Sahara Banking and Financial Services Fund - Growth
4	Religare Banking Fund - Regular - Growth
5	ICICI Prudential Banking and Financial Services Fund - Retail - Growth
	AUTO SECTOR
1	UTI Transportation and Logistics Fund - Growth

3.6.2 Primary Data Collection

For the primary data collection out of **50** respondents broker/ investment consultant 12 were inactive. The remaining 38 brokers were contacted i.e., 20 from Dehardun, 8 from Roorkee, 5 from Haridwar and 5 from Haldwani using questionnaire to collect the opinion of brokers on selection of sectoral Mutual Fund Schemes to investors. Hence effective sample size is 38.

To elicit information from 200 investors, all the investors were contacted between june 2010 and November 2010. 80 investors responded in dehradun, 40 in Haridwar, 20 in Roorkee in 10 investors responded in Haldwani. The response rate was 75% percent. Thus, the primary sampling frame for the present study consists of **38 brokers/ Investment consultant and 150 investors**.

3.7 Data Analyses and Interpretation

3.7.1 Tools of secondary data analysis

For analyzing risk and return attributes of the sectoral mutual fund schemes following ratios have been used as tools for analysis:

1 Treynor

2 Sharpe

3 Jensen Models.

4. Fama decomposition model

In analyzing the risk-return relationship the CAPM is used widely. The CAPM uses the concept of beta to link risk with return. Beta as a measure of systematic risk shows how the NAV of a sectoral scheme responds to changes in market performance. Using the beta concept the CAPM helps to define the required return on a security. The equation for calculating the expected return based on CAPM is as follows:

$Ri = Rf + (Rm-Rf)$

Ri = Expected return

Rf = Risk-free return

β= Measure of systematic risk

Rm = Market return

Carlson Robert S(1970), Fama Eugene(1972), Sarkar A K(1991), Shashikant Uma(1993), Yadav R A(1996), Jayadev M(1996), Wilfred L Dellava(1998), Gupta Amitabh(2000) and Sondhi H J(2005),have also applied similar tools over the time for analyzing risk and return relationship.

Quarterly **NAV** values of the selected sectoral sample schemes along with the Quarterly BSE Indices for the period of March 2007 to August 2010 were used as per the data available.

Portfolio Return refers to the yield from the selected sectoral schemes. **Portfolio returns (Rp)** are calculated on the basis of changes in the NAV on a quarterly basis. Average of such quarterly returns (ARp) is calculated for the entire period of study as follows:

$$Rp = \frac{NAVt - NAVt\text{-}1}{NAVt\text{-}1} * 100$$

Rp is the return of the portfolio on Quarterly basis

't' is the time period

Market Return is calculated on the basis of the changes in the BSE Index on a Quarterly basis (Rm) and the averages of such Quarterly returns (ARm) are arrived at for every year and for the total period of study. BSE index was used as a benchmark as it is widely considered as a market proxy or benchmark for the purpose of academics, research and practicing fund managers. BSE index is used as a benchmark as it is a broad based index, consisting of 30 actively traded equity shares.

The market return is calculated as follows:

$$Rm = \frac{Market\ Indext - Market\ Indext\text{-}1}{Market\ Indext\text{-}1} * 100$$

Risk-free return (Rf)is the return available from zero risk investment avenues like treasury bills and bank deposits. The

current rate for 91 days T-bill is 6.77 % is assumed as the risk-free rate of return as it has been constant for many years and is related with the most commonly preferred investment avenue namely bank deposits.

Return alone should not be considered as the basis of measurement of the performance of a mutual fund scheme, it should also include the risk taken by the fund manager because different funds will have different levels of risk attached to them.

For evaluating the performance of selected Sectoral Mutual Fund schemes risk-return relation models have been used like:

- Treynor Measure
- Sharpe Measure
- Jenson Model
- Fama Model

The Treynor Measure

Jack Treynor, in year 1965 developed a measure which evaluates the performance of fund using returns generated by it over and above risk free rate of return during a given period and systematic risk (Beta) associated with it. He named this measure as “Treynoe Measure”. Risk free rate of return is generally the return on security backed by government as there is no credit risk is associated with it. Symbolically, it can be represented as:

Treynor's Index (Ti) = (Ri - Rf) / β

Where, Ri represents return on fund

Rf is risk free rate of return and

β is beta of the fund.

While a high and positive Treynor's Index shows a superior risk-adjusted performance of a fund, a low and negative Treynor's Index is an indication of unfavorable performance. Therefore all risk-averse investors would like to maximize this value.

The Sharpe Measure

In this model, performance of a fund is evaluated on the basis of Sharpe measure which was developed in 1966, that depicts the ratio of returns generated by the fund over and above risk free rate of return and the total risk associated with it. According to Sharpe, it is the total risk of the fund that the investors are concerned about. So, the model evaluates funds on the basis of reward per unit of total risk. Symbolically, it can be written as:

Sharpe Index (Si) = (Ri - Rf)/ σ

Where:

Ri represents return on fund

Rf is risk free rate of return and

σ is standard deviation of the fund.

While a high and positive Sharpe Ratio shows a superior risk-adjusted performance of a fund, a low and negative Sharpe Ratio is an indication of unfavorable performance.

Sharpe and Treynor measures are similar in a way, since they both divide the risk premium by a numerical risk measure. The total risk

is appropriate when we are evaluating the risk return relationship for well-diversified portfolios. On the other hand, the systematic risk is the relevant measure of risk when we are evaluating less than fully diversified portfolios or individual stocks. For a well-diversified portfolio the total risk is equal to systematic risk. Rankings based on total risk (Sharpe measure) and systematic risk (Treynor measure) should be identical for a well-diversified portfolio, as the total risk is reduced to systematic risk. Therefore, a poorly diversified fund that ranks higher on Treynor measure, compared with another fund that is highly diversified, will rank lower on Sharpe Measure.

Jenson Model

Jenson's model proposes another risk adjusted performance measure. This measure was developed by Michael Jenson in year 1968 and is also referred to as the Differential Return Method. This measure involves evaluation of the returns that the fund has generated versus the returns actually expected out of the fund given the at the given level of its systematic risk. The surplus between the two returns is called Alpha, which measures the performance of a fund compared with the actual returns over the period.

$$\alpha = Ri - \{Rf + \beta (Rm - Rf)\}$$

Where:

Ri= Portfolio return

Rf is risk free rate of return

β is beta of the fund.

Rm is the return of the market

Rf is risk free rate of return and

Higher alpha represents superior performance of the fund and vice versa. Limitation of this model is that it considers only systematic risk not the entire risk associated with the fund and an ordinary investor cannot mitigate unsystematic risk, as his knowledge of market is primitive.

Fama Model

The Eugene Fama model is an extension of Jenson model. This model compares the performance, measured in terms of returns, of a fund with the required return commensurate with the total risk associated with it. The difference between these two is taken as a measure of the performance of the fund and is called net selectivity. The net selectivity represents the stock selection skill of the fund manager, as it is the excess return over and above the return required to compensate for the total risk taken by the fund manager. Higher value of which indicates that fund manager has earned returns well above the return commensurate with the level of risk taken by him.

Net Selectivity can be calculated as:-

Net Selectivity =Ri –{ Rf + σi/σm*(Rm - Rf) }

Where:

Rf is risk free rate of return

σi is the standard deviation of the fund

σm is the standard deviation of the market

Rm is the return of the market and

Rf is risk free rate of return

Among the above performance measures, two models namely, Treynor measure and Jenson model use systematic risk based on the premise that the unsystematic risk is diversifiable. These models are suitable for large investors like institutional investors with high risk taking capacities as they do not face paucity of funds and can invest in a number of options to dilute some risks. For them, a portfolio can be spread across a number of stocks and sectors.

However, Sharpe measure and Fama model that consider the entire risk associated with fund are suitable for small investors, as the ordinary investor lacks the necessary skill and resources to diversify. Moreover, the selection of the fund on the basis of superior stock selection ability of the fund manager will also help in safeguarding the money invested to a great extent. The investment in funds that have generated big returns at higher levels of risks leaves the money all the more prone to risks of all kinds that may exceed the individual investors' risk appetite.

BETA

Beta measures a stock's volatility, the degree to which its price fluctuates in relation to the overall market. In other words, it gives a sense of the stock's market risk compared to the greater market. Beta is used also to compare a stock's market risk to that of other

stocks. It is represented by using the Greek letter 'ß' to represent beta.

This measure is calculated using regression analysis. A beta of 1 indicates that the security's price tends to move with the market. A beta greater than 1 indicates that the security's price tends to be more volatile than the market, and a beta less than 1 means it tends to be less volatile than the market.

$$\beta = (r_{im} * \sigma_i * \sigma_m) / \sigma^2 m$$

Where:

r_{im} is correlation coefficient between market returns and fund returns.

σ_i is standard deviation of fund returns.(Si)

σ_m is standard deviation of market returns.(Sm)

$\sigma^2 m$ is market variance.

Coefficient of Correlation (r) measures the nature and the extent of relationship between stock market index return and the scheme's return for a particular period. The co-movement of schemes Performance with that of market index is studied with the help of a simple linear regression analysis using the following formula:

$$r = (\sum x\, y) / (\quad\quad)$$

Coefficient of Determination r^2 measure of reliability of Beta

Beta depends on the index used to calculate it. It can happen that the index bears no correlation with the movements in the fund. Due to this reason, it is essential to take a look at statistical value called Coefficient of Determination along with Beta. It shows how reliable the beta number is. It varies between zero and one.

Value of **1** indicates perfect correlation with the index. Thus, $\mathbf{r^2}$=0.64 it implies that 64% of the variation in the portfolio returns is due to variations in the market returns. Mathematically it is the square of correlation coefficient(R).

$$r = \frac{n\sum\{(x-x_{mean})\times(y-y_{mean})\}}{\sqrt{\sum(x-x_{mean})^2\times\sum(y-y_{mean})^2}}$$

Where X and Y are returns on the portfolio and returns on the market respectively.

Beta and (R^2) should thus be used together when examining a fund's risk profile.

Standard Deviation- a measure of Total Risk

Standard Deviation is the most common statistical measure of judging a fund's volatility and risk. It measures a fund's total risk i.e. sum of systematic risk and unsystematic risk.

$$SD= \sqrt{\frac{1}{n}\sum (x_i - x_{mean})^2}$$

Where:

$\sum (x_i - x_{mean})^2$ gives the square of the sum of differences of each value in the sample from the mean of the sample of 'n' element.

3.7.2 Tools for primary data analysis

The very success or failure of the investment decision basically lies on the selection of the mutual fund organization followed by the selection of the scheme suitable to the investor. A right choice assures good returns and a wrong choice leads to loss of funds invested. Hence, there is a need to identify the factors affecting the choice of mutual fund schemes offered by various Asset Management Companies. Choice differs from individual to individual and from that of brokers to brokers. Hence, it is of utmost relevance to identify the attributes of differences which leads to variation in choice of mutual fund schemes amongs the investors and brokers.

In order to analyse such differences, the researcher has used the following statistical tools:

Spersman Rank of Correlation: It is used when information is sufficient to rank the data. The rank correlation coefficient is a measure of correlation that exists between two sets of ranks. It is a measure of association that is based on the ranks of the observations and not on the numerical values of the data as calculated using the following formula:

$$R_s = 1 - \left\{\frac{6 \sum D^2}{N (N^2-1)}\right\}$$

R_s denotes coefficient of rank correlation. D refers to the difference of rank between the paired items in two series.

Factor Analysis using Principal Component Analysis

"Often among the many variables one measures, a few are more related to each other, than they are to others. Factor Analysis allows us to look at these groups of variables that tend to relate to each other and estimate what underlying reasons might cause these variables to be more highly correlated with each other", Jeff Miller, Vice President, consulting and analytical, Burke Inc. (Source: Markeing Research Naresh K Malhotra)

This tool of SPSS was extensively used to classify a large number of variables into smaller number of Factors. Factor analysis was used to determine whether there was any common constructs that represented investors concerns. 18 variables were analyzed using Varimax Algorithum of Orthogonal Rotation, the most commonly used method. Evaluation of the resulting constructs and naming of the factors is largely subjective. Hence, to identify investor's schemes selection criteria, so as to group

them into specific factors, factor analysis was done using Principal Component Analysis.

3.8 Formulation of Hypotheses

- **Secondary Data**

The following Null Hypotheses was formulated:

$H_0$1: There is no significant difference between investment performance measures**(risk and return)** of sectoral mutual fund schemes and the benchmark portfolio.

H_a1: There is a significant difference between investment performance measures of sectoral mutual fund schemes and the benchmark portfolio.

- **Primary Data**

The following Null Hypotheses was formulated:

H_o2: There is no significant difference in the opinion of Investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes.

H_A2: There is a significant difference in the opinion of Investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes.

For Analysis of comparison between Dedicated Infrastructure funds (DIF's) with other diversified funds.

H_o3: There is no significant difference between the performance **(returns)** of Dedicated Infrastructure funds and Diversified **equity** funds.

H_A3: There is a significant difference between the performance of **Dedicated** Infrastructure funds and Diversified equity funds.

3.9 Limitations of the Study

1. The secondary data analysis is based on historical data of 3.5 years only and thus indicates the past performance which may not always be indicative of the future performance.
2. Quartely NAVs have been considered for the study. Daily NAVs would have given more precise result for the study.
3. Sharpe ratio (in its simplest forms) that the relationship between risk and return is linear and remain linear throughout its entire range. Various research works conducted in this regard show that the relationship is not as simple as Capital Market theory would suggest. This is an inherent weakness of capital Asset Pricing Model.
4. For analyzing the factors influencing investors in selection of sectoral mutual fund schemes only few cities are covered in Uttarakhand State hence may not be generalized for the entire country.
5. Only four (4) sectors have been covered for the study.

CHAPTER 4

ANALYSIS OF DATA & DATA INTERPRETATION

CHAPTER 4

ANALYSIS OF DATA & DATA INTERPRETATION

This section is divided into two parts, Part A & Part B. Part A analysis the secondary data and Part B is concerned with Primary data analysis.

Part A- Secondary Data Analysis

Introduction

The performance of a portfolio can be measured by observing the combined effect of both return generated and risk associated thereby. The differential return earned by a portfolio may be due to the variance in the risk exposure from the stock exchange. In this context, the risk premium is nothing but the excess of returns generated by the mutual funds over and above the risk free rate.

The study is based on various tools like Beta, Sharpe Index, Treynor Index, Jenson model and Fama decomposition model. For this study the researcher has considered 15 Sectoral Mutual Fund Schemes from March 2007 to September 2010 by using the NAV and BSE Index from various authentic sources which have been duly acknowledged.

For analyzing the Risk-Return analysis of sectoral mutual fund schemes in comparison to the Benchmark Index following null hypothesis was formulated:

$H_0$1: There is no significant difference between investment performance measures **(risk and return)** of sectoral mutual fund schemes and the benchmark portfolio.

H_a1: There is significant difference between investment performance measures (risk & return) of sectoral mutual fund schemes and the benchmark portfolio.

4.1 Risk and Return Analysis

Table 4.1 presents the risk and return statistics for the selected sectoral mutual fund schemes and the market portfolio. Out of 15 sectoral schemes, all schemes have delivered greater return than the market return.

- 6 (40%) schemes have given greater return than risk free return and 9 (60%) schemes performed poorer i.e. not able to give at least risk free return.
- Banking & Power sector schemes performed better in terms of Average return and risk-free returns; whereas Infrastructure and Auto sector schemes were underperformers.
- Birla Sunlife from Infrastructure sector, Reliance diversified power and Escort power from Power sector and Sahara Banking & Financial Services, Religare Banking & ICICI Prudential Banking and Financial series from Banking were Outperformer both in comparison of Risk free and Market return.

On the other hand, a sectoral scheme assumes to take more risk in giving higher return to the investors. In this light all sectoral schemes have taken higher risk than the market.

- In Infrastructure sector except Birla Sun life other schemes are not able to provide excess return on taking huge risk for getting extra return.
- In power sector only Escort power/Energy fund was the outperformer in taking less risk as compared to market risk and providing high return to investors.
- In Banking and Financial services sector Reliance Banking & Financial Services and UTI Banking sector schemes were underperformer in delivering high return to the investors even after taking more risk than the market. In this sector Sahara Banking & Financial Services Schemes delivered extra-ordinary return of 17.49% against any other sectoral schemes even after having high exposure to risk.
- In auto sector the UTI Transportation scheme was also underperformer in delivering high return after assuming same level of risk.
- It appears that sectoral mutual fund schemes are not properly concentrating on investing into sector scripts rather diversifying their portfolio as it is reflected by the Co-efficient of Determination (R^2). All the schemes have almost 0.90 R^2 value but Sahara Banking & Financial Services have 0.78 R^2 values which means that in comparison amongst other sectoral schemes this scheme has again outperform in banking category.

Table 4.1: Risk and Return of Sample Mutual Fund Schemes

Name of Scheme	Risk Free Return	Scheme Return	Market Return	Market Risk	Scheme Risk	Beta	Co-Efficient. of Correlation	R^2
Tata Infrastructure fund (Growth)	6.77	6.08	4.04	19.76	23.84	1.15	0.96	0.91
Tauras Infrastructure fund (Growth)	6.77	6.52	4.04	19.76	32.18	1.57	0.96	0.93
Principal service industries fund (Growth)	6.77	4.07	4.04	19.76	21.63	1.07	0.98	0.95
ICICI Pru Infra. Institutional Fund	6.77	4.69	4.04	19.76	18.89	0.88	0.92	0.85
Birla sun life infra. Plan A (Growth)	6.77	7.51	4.04	19.76	31.46	1.49	0.94	0.88
Relaince Diversified power sector (Growth) inst	6.77	9.46	4.04	19.76	24.52	1.17	0.94	0.88
Escort Power/Energy Fund (Growth)	6.77	9.21	9.74	14.49	13.55	0.86	0.91	0.84
Relaince Diversified Power Sector (Growth) Retail	6.77	4.04	2.82	25.47	25.52	0.99	0.99	0.98
Sahara Power & Natural Resources (Growth)	6.77	6.41	5.25	21.34	25.96	1.19	0.98	0.95
Relaince Banking & Financial Services (Growth)	6.77	5.1	0.57	18.29	18.47	0.9	0.90	0.8
UTI Banking sector (Growth)	6.77	5.99	3.11	20.48	25.51	1.15	0.92	0.85
Sahara Banking & Financial Services fund Growth	6.77	17.49	6.63	22.66	28.41	1.11	0.88	0.78
Religare Banking Regular Growth Fund	6.77	8.1	5.25	21.34	17.74	0.67	0.81	0.66
ICICI Pru. Banking & Financial Services Retail- G	6.77	10.15	5.77	27.98	27.98	0.99	0.99	0.98
UTI Transportaion & Logistic Fund(G)	6.77	5	4.04	19.76	19.76	0.89	0.89	0.79

4.2 Results of Sharpe and Treynor Ratio

Table 4.2 in the next page gives Sharpe and Treynor result for the selected sectoral mutual fund schemes.

- Out of 15 sectoral schemes 6(40%) schemes have outperformed in terms of both systematic risk and total risk resulted in positive values whereas remaining failed to deliver in Sharpe and Treynor performance evaluation criteria.
- 3 mutual fund schemes from Banking sector and 2 from Power sector are amongst the top 5 schemes. All sectoral mutual fund schemes have high Treynor ratio which signifies high level of systematic risk
- Birla Sunlife Infrastructure Plan from Infrastructure sector, Reliance diversified power sector, Escort Power/ Energy from power sector; Sahara Banking & Financial Services Fund Growth, ICICI Prudential Banking & Financial Services Retail- Growth, Religare Banking Regular Growth Fund from banking sector were outperformers both from the point of view of Sharpe and Treynor ratio.

Table 4.2 Sharpe and Treynor Ratio Ranking

Name of Scheme	Sharpe Ratio	Ranking	Treynor Ratio	Ranking
Tata Infrastructure fund (Growth)	-0.03	9	-0.59	9
Tauras Infrastructure fund (Growth)	-0.01	7	-0.16	7
Principal service industries fund (Growth)	-0.12	15	-2.53	14
ICICI Pru Infra. Institutional Fund	-0.11	14	-2.36	13
Birla sun life infra. Plan A (Growth)	0.02	6	0.49	6
Relaince Diversified power sector (Growth) inst	0.11	4	2.3	4
Escort Power/Energy Fund (Growth)	0.18	2	2.85	3
Relaince Diversified power sector (Growth) retail	-0.107	13	-2.75	15
Sahara Power & Natural Resources (Growth)	-0.01	8	-0.3	8
Relaince Banking & Financial Services (Growth)	-0.09	11	-1.86	11
UTI Banking sector (Growth)	-0.03	10	-0.68	10
Sahara Banking & Financial Services fund Growth	0.38	1	9.67	1
Religare Banking Regular Growth Fund	0.07	5	1.97	5
ICICI Pru. Banking & Financial Services Retail- G	0.12	3	3.41	2
UTI Transportaion & Logistic Fund(G)	-0.09	12	-2	12

4.3 Result of Jensen Alpha Model

Result of Jensen Alpha is given in Table 4.3. Except one scheme all schemes have positive Alpha's which indicates Superior performance. Hence these funds have generated returns in excess of equilibrium returns. The equilibrium return of a scheme is the return that is expected to earn with the given level of systematic risk. However from Infrastructure sector, two schemes namely Tauras Infrastructure Fund and Birla Sun life Infrastructure Plan have shown a significant performance. Amongst power and banking sector Reliance Diversified Power Sector and Sahara Banking & Financial Services respectively outperformed with an Alpha value of 5.87 and 10.88.

Table 4.3 Jensen Alpha

Name of Scheme	**Jenson Alpha Model**
Tata Infrastructure fund (Growth)	2.46
Tauras Infrastructure fund (Growth)	4.03
Principal service industries fund (Growth)	0.21
ICICI Pru Infra. Institutional Fund	0.32
Birla sun life infra. Plan A (Growth)	4.81
Relaince Diversified power sector (Growth) inst	5.87
Escort Power/Energy Fund (Growth)	-0.1
Relaince Diversified power sector (Growth) retail	1.19
Sahara Power & Natural Resources (Growth)	1.45
Relaince Banking & Financial Services (Growth)	3.89
UTI Banking sector (Growth)	3.44
Sahara Banking & Financial Services fund Growth	10.88
Religare Banking Regular Growth Fund	2.35
ICICI Pru. Banking & Financial Services Retail- G	4.38
UTI Transportaion & Logistic Fund(G)	0.65

4.4 Fama's Component of Investment Performance

The overall performance is broken down into various components such as risk-free return, risk premium, diversification and selectivity.

4.4.1 Performance on Risk

The performance on risk assess the returns generated by fund managers on the basis of decision taken by them in selection of fund. They assume risk in the hope of generating extra returns on their portfolio. Table 4 shows that all the selected sectoral mutual funds schemes suffered negative performance on account of risk bearing activity of their fund manager except for Escort power/ energy fund from Power sector. Reliance banking and UTI Banking fund from banking sector suffered the highest negative performance in this respect.

4.4.2 Performance on Diversification

Performance on Diversification measures additional return that compensates the portfolio manager for bearing diversifiable risk. Here too, except Escort Power/ Energy Fund, the other entire scheme have suffered on diversification. This signifies that there has been a negligible diversification which is a good characteristic of fund being sectoral. **Performance on Net Selectivity**

After accounting for diversification, the residual performance on selectivity is attributed to Net selectivity. A positive net

selectivity indicates superior performance. However, in case net selectivity is negative, then it means that fund manager have taken diversifiable risk, which has not been compensated by the extra returns.

From Infrastructure sector it can be seen that Birla Sunlife Infra Plan have high positive selectivity measure whereas in power sector Reliance diversified power sector is amongst the top and from banking sector Sahara Banking & Financial Services lead with the highest selectivity of 10.90 reflecting superior sectoral stock selection ability on the part of fund manager.

Table 4.4 Fama's Component of Investment Performance

Name of Scheme	Risk free Return	Compensation for Systematic Risk or Risk premium	Compensation for Diversification	Net superior return due to selectivity	Scheme Return
Tata Infrastructure fund (Growth)	6.77	-3.15	-0.15	2.61	6.08
Tauras Infrastructure fund (Growth)	6.77	-4.29	-0.16	4.19	6.51
Principal service industries fund (Growth)	6.77	-2.91	-0.07	0.28	4.07
ICICI Pru Infra. Institutional Fund	6.77	-2.41	-0.20	0.53	4.69
Birla sun life infra. Plan A (Growth)	6.77	-4.08	-0.27	5.08	7.50
Relaince Diversified power sector (Growth) inst	6.77	-3.19	-0.20	6.07	9.46
Escort Power/Energy Fund (Growth)	6.77	2.54	0.24	-0.34	9.21
Relaince Diversified power sector (Growth) retail	6.77	-3.92	-0.03	1.22	4.03
Sahara Power & Natural Resources (Growth)	6.77	-1.81	-0.05	1.50	6.41
Relaince Banking & Financial Services (Growth)	6.77	-5.56	-0.70	4.59	5.10
UTI Banking sector (Growth)	6.77	-4.22	-0.33	3.77	5.99
Sahara Banking & Financial Services fund Growth	6.77	-0.15	-0.02	10.90	17.49
Religare Banking Regular Growth Fund	6.77	-1.03	-0.24	2.59	8.10
ICICI Pru. Banking & Financial Services Retail-G	6.77	-1.00	-0.01	4.38	10.15
UTI Transportaion & Logistic Fund(G)	6.77	-2.41	-0.31	0.95	5.00

Conclusion:

The researcher has made an attempt to evaluate the performance of mutual funds using NAV and BSE indices as base for selected sample of 15 sectoral schemes. in this context four major ratios viz Shaper ratio, Treynor ratio, Jensen Alpha Model and Fama decomposition model have been calculated to judge the performance. The study has indicated that 60% of sectoral mutual fund schemes have not earned even equivalent to risk free return.

Banking Mutual fund schemes are amongst the top in comparison to other sectors. In terms of **total risk** again the Banking schemes are able to deliver superior return in comparison to other sectors.

In terms of **Sharpe and Treynor ratio** s 6 (40%)Sectoral Mutual Fund Schemes have outperformed in terms of both systematic risk and total risk as depicted by there positive values .

In terms of **Jensen Alpha**, a positive and significant alpha indicates superior performance. Almost all fund have positive alpha value which signifes ability of fund manager to give superior return to investors. Again banking sector performs exceptionally in this regard.

In terms of **Fama's Component** of Investment performance, all the schemes have suffered negative performance on account of risk bearing activity of their fund managers. Only one fund earned a positive return on diversification which is a positive sign from sectoral point of view that fund managers have not diversifed their portfolio in other sectors. For **Net Selectivity** almost all funds showed positive returns on net selectivity skills by fund manager.

When seen in **conjunction with Jensen's Alpha measure**, it appears that sectoral mutual funds managers possess sectoral stock selection skills.

On the basis of overall analysis in can be inferred here that the additional return on sampled schemes and the market over risk free return was **significantly low** during the study period. This indicates that the majority of schemes have shown underperformance in comparison with risk free return. In most of the cases risk free return was higher than the fund return during the study period. It implies that the mutual funds were not able to compensate the investors for the additional risk that they have taken. The fund managers failed to generate positive return even after exposing their portfolios to a higher risk level.

The study also found the fund managers have failed to compensate the investors' expected risk by their portfolio investment. The overall analysis indicates that though the fund managers were successful in performing better than the market expected risk, yet the expected return on their portfolio was much lower than the risk free return.

It can be inferred here that the overall market has influenced quite significantly in the performance of portfolio of the funds, hence the Null hypothesis is rejected. It shows that there is a significant difference between investment performance measures

(risk and return) of sectoral mutual fund schemes and the benchmark portfolio.

The analysis of the study also indicates that the diversification process undertaken by the fund managers has not provided any additional return which compensates investors for the diversifiable risk.

It is evident from the above analysis that the influence of market factor was more severe during negative performance of the funds while the impact selectivity skills of fund managers was more than the other factors in the fund performance in times of generating positive return by the funds. It can also be observed from the study, that selectivity, expected market risk and market return factors have shown closer correlation with the fund return.

Part B – Primary Data Analysis

Analysis of Data Collected through Questionnaire

4.5 Sample Profile of Investors

The profile of investors has been described with the following parameters:

- Gender
- Age
- Annual income
- Annual savings
- Investment in Mutual fund as a % of Savings
- Education level
- Name of the mutual fund scheme
- Month of investment

Each of these parameters with respect to the investors has been shown in a tabular form in the following part of the Chapter.

4.5.1 Gender of Investors

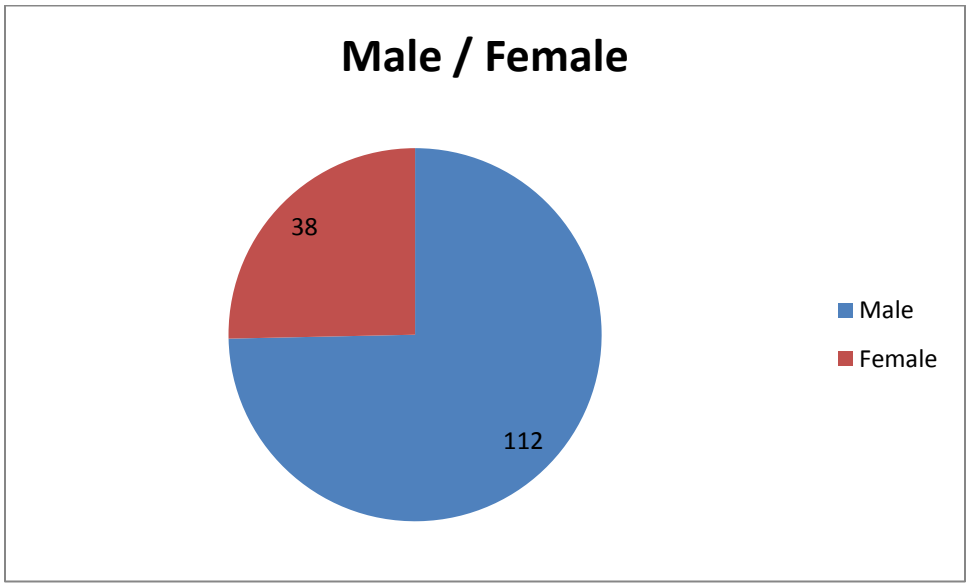
The gender of investors was asked in the questionnaire. The frequency distribution of which is given in table 4.5 below:

Table 4.5: Gender of investors

S.No.	Gender	No. of Investors	Percentage
1	Male	112	75%
2	Female	38	25%
	Total	150	100%

From the above table it can be seen that mostly Male invest in mutual fund schemes as compared to female as the sex ratio in Uttarakhand is 96.2%.

Figure 4.1: Gender of investors



4.5.2 Age of Investors

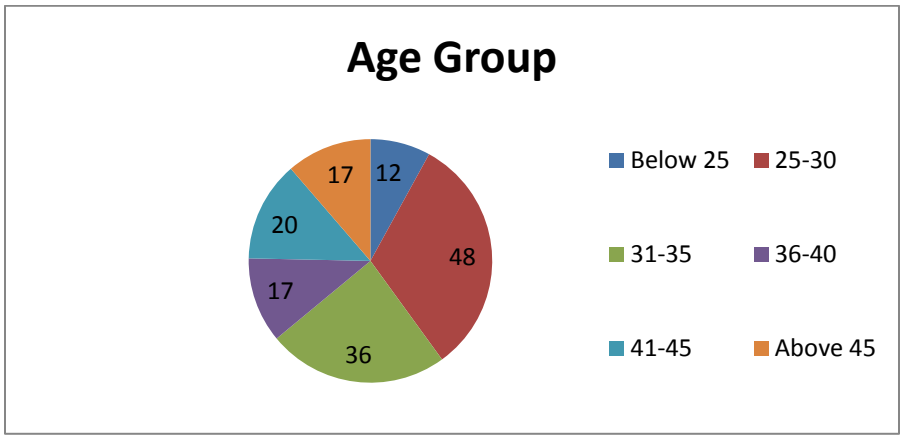
The age of the investors was obtained in the form of class interval. The age wise frequency distribution of the investors is given in table 4.6 below:

Table 4.6: Age of Investors

S.No.	Age	No. of Investors	Percentage
1	Below 25	12	8
2	25-30	48	**32**
3	31-35	36	**24**
4	36-40	17	11
5	41-45	20	14
6	Above 45	17	11
7	Total	150	100

From the above table it can be seen that the majority of investors investing in mutual fund scheme are in the age group of 25 to 30 which amount to 32% of the sample size. It signifies that people in Uttarakhand starts investing at young age.

Figure 4.2:Age of Investors



4.5.3 Annual Income

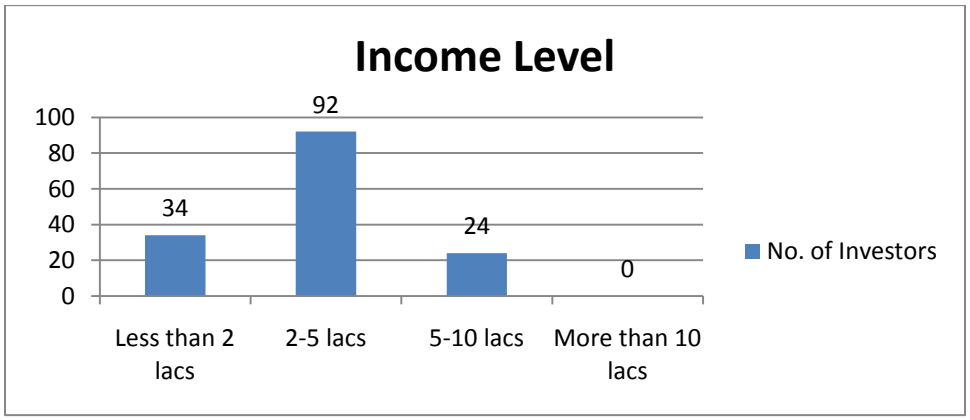
The investors were asked about their income and the same has been categorized in classes. The following table 4.7 shows the frequency distribution of the investors according to their incomes:

Table 4.7: Annual Income

S.No	Income	No. of Investors	Percentage
1	Less than 2 lacs	34	23
2	2-5 lacs	92	61
3	5-10 lacs	24	16
4	More than 10 lacs	0	0
5	Total		100

From the above table it can be seen that there are 61% of the investors who are having income between 2 lacs to 5 lacs. Respondent who are having less income below 2 lacs also invest in mutual fund.

Figure 4.3: Annual Income



4.5.4 Annual savings

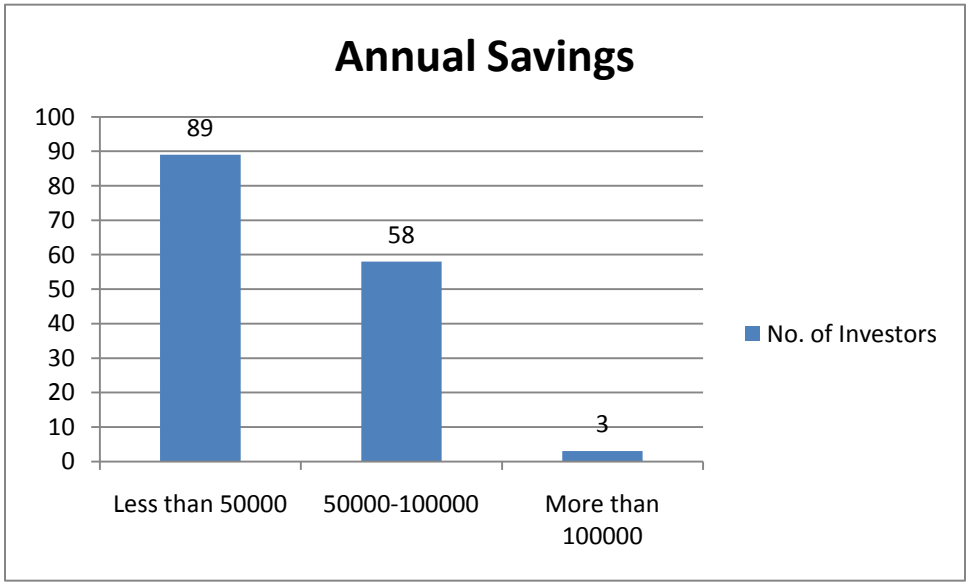
The investors were also asked about their annual savings. The following table 4.8 shows the annual savings of the investors in the form of frequency distribution:

Table 4.8: Annual Savings

S.No	Annual savings	No. of Investors	Percentage
1	Less than 50000	89	59
2	50000-100000	58	39
3	More than 100000	3	2
4	Total		100

From the above table it can be interpreted that 89 (59%) of the investors save less than 50000 and almost 39% of the investors save between 50000 to 100000.

Figure 4.4: Annual Savings



4.5.5 Investment in Mutual fund as a % of Savings

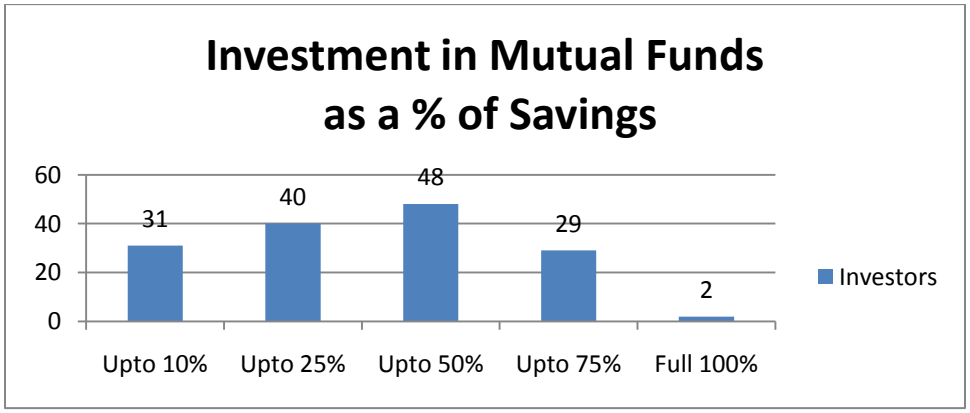
The investors were also asked likely their investment in mutual fund as a percentage of their savings. The following table 4.9 depicts the proportion of savings into mutual funds:

Table 4.9: Investment in Mutual funds as a % of savings

S.No	Investment in mutual fund as a % of savings	Investors	Percentage
1	Upto 10%	31	21
2	Upto 25%	40	**27**
3	Upto 50%	48	**32**
4	Upto 75%	29	19
5	Full 100%	2	1
	Total	150	100

It can be seen that 32% of the investors invest their 50% of savings in mutual fund which shows high confidence among the investors in Uttarakhand state about mutual fund investment.

Figure 4.5: Investment in Mutual funds as a % of savings



4.5.6 Education Level

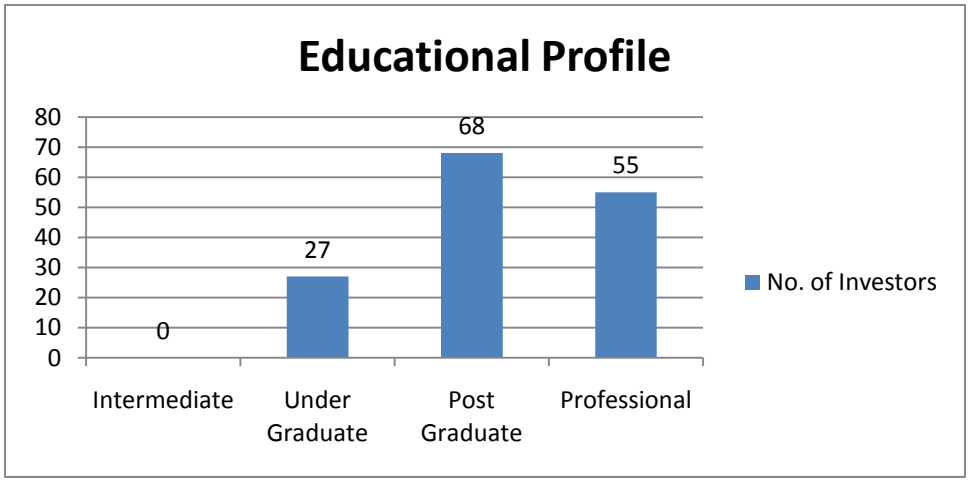
The investors were also asked their educational qualification and the same has been categorized in classes. The following table 4.10 shows the frequency distribution of the investors according to their qualification:

Table 4.10: Educational Profile

S.No	Educational Qualification	No. of Investors	Percentage
1	Intermediate	0	0
2	Under Graduate	27	18
3	Post Graduate	68	**45**
4	Professional	55	**37**
	Total	150	100

The above table shows that 68 (45%) of the investors are Post-graduate and 37% are Professional who invest in mutual funds.

Figure 4.6: Educational Profile



4.5.7 Name of the Mutual Fund Scheme

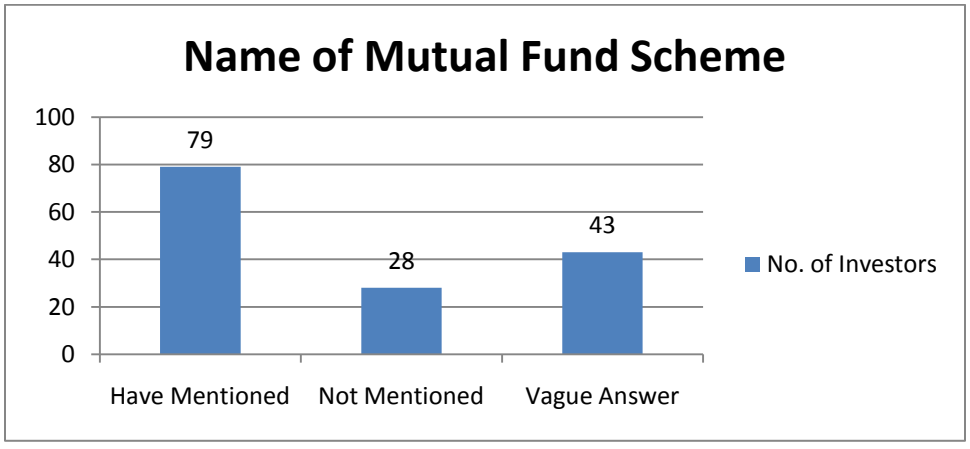
The researcher also enquired about the awareness about the name of the scheme in which they invest. Following table 4.11 illustrates the responses:

Table 4.11: Name of Mutual fund Scheme

S.No	Status Mentioned	No. of Investors	Percentage
1	Have Mentioned	79	**53**
2	Not Mentioned	28	18
3	Vague Answer	43	29
	Total	150	100

From the above table it can be seen that that 53% of the investors have mentioned the name of the fund/ schemes which the researcher has cross-checked with the AMFI (Association of Mutual fund India) website that these schemes/ fund are in existence which shows the awareness of the people in investment in mutual funds, whereas 29% of the investors have given vague answer.

Figure 4.7: Name of Mutual fund Scheme



4.5.8 **Month of investment**

Investors were also asked the Month at which they usually invest in order to understand the sectoral affect or seasonal affect in the market from our study point of view.

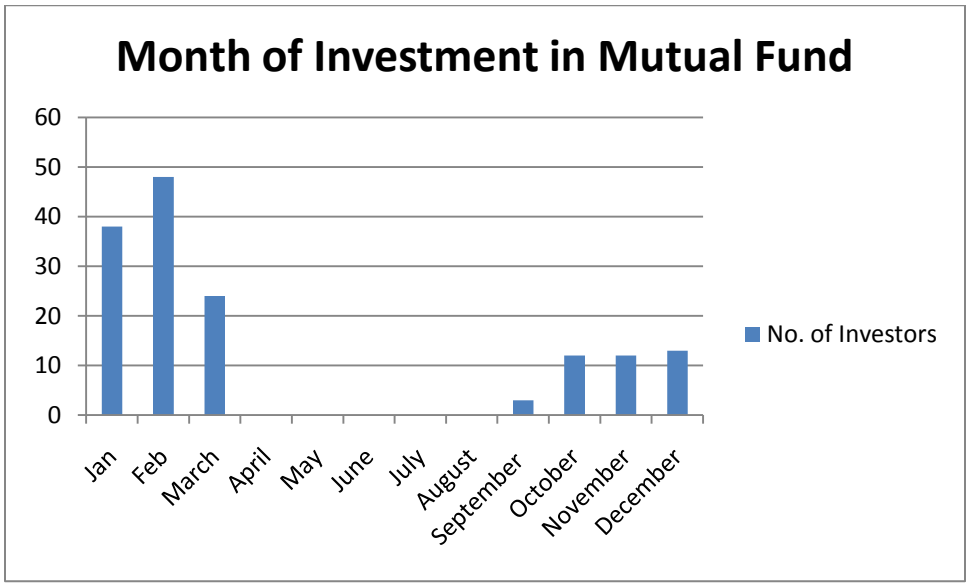
Following table 4.12 depicts the observation found from the responses:

Table 4.12: Month of Investment in Mutual fund

S.No	Period	No. of Investors	Percentage
1	Jan	38	**25**
2	Feb	48	**32**
3	March	24	**16**
4	April	0	0
5	May	0	0
6	June	0	0
7	July	0	0
8	August	0	0
9	September	3	2
10	October	12	**8**
11	November	12	**8**
12	December	13	**9**
	Total	150	100

Form the above table it is clear that investor invest between October to March period as usually this period is seen for investment into financial instrument for Tax saving purpose and from the above data it is evident that investors in Uttarakhand invest mostly in Equity linked savings schemes (ELSS) for tax saving advantage but are having less exposure to sectoral mutual fund schemes.

Figure 4.8: Month of Investment in Mutual fund



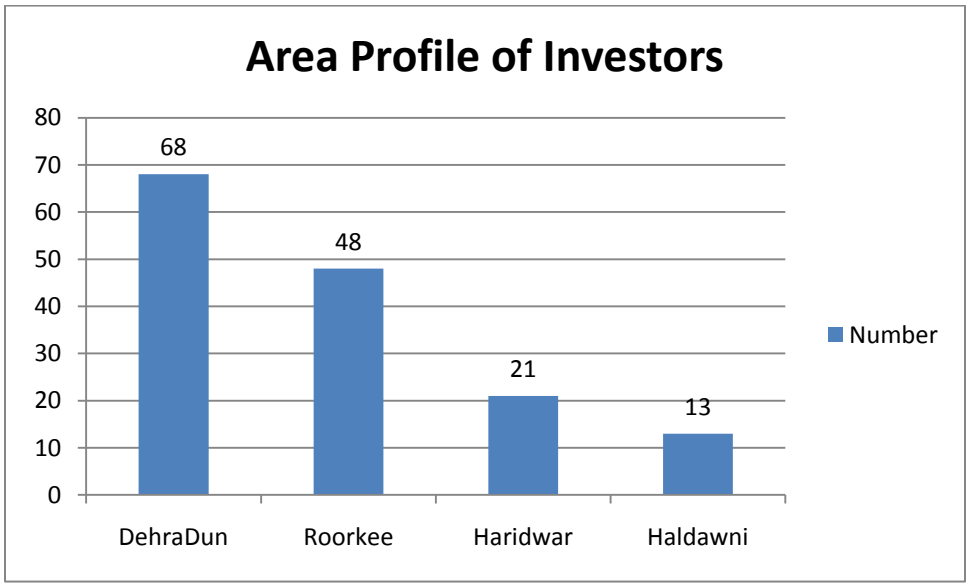
4.5.9 Area profile of Investors

Survey was conducted in Uttarakhand region. Following table 4.13 depicts the percentage of investors from the Uttarakhand region.

Table 4.13: Area profile of Investors

S.No	Place	Number	Percentage
1	DehraDun	68	**45**
2	Roorkee	48	32
3	Haridwar	21	14
4	Haldawni	13	09
	Total	150	100

Figure 4.9: Area profile of Investors



4.6 Study of Investment consultant recommendations

The Investment Consultant recommends Mutual Fund Schemes to the investors on certain parameters which affect the decisions of investors to invest in accordance with their recommendations. For analyzing the correlation between the opinion of investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes in Uttarakhand state following Null hypothesis was formulated:

H_o2: There is no significant difference in the opinion of Investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes.

H_A2: There is significant difference in the opinion of Investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes.

Firstly the responses from Investment Consultant and Investors were collected on five point Likert scale and ranking was done to compute the Weightage Average Score **(WAS)**.

Then on the basis of the ranks so obtained, Spearman's Rank coefficient of correlation between Investment Consultant and Investors.

4.6.1 Spearman's Coefficient of Correlation

Table 4.14 Weighted Average Score and Ranking of Aspect in Selection of Sectoral Mutual Funds Schemes of INVESTORS

S.No	Particulars	SDA 1*	*DA 2**	*Nl 3**	*A 4**	*SA 5**	*Total*	*weighted sum@*	*WAS $*	*RANK*
		1	*2*	*3*	*4*	*5*				
1	Large Size of Fund	4	5	45	83	13	150	546	3.64	6
2	High Risk Factor	12	19	7	95	17	150	536	3.57	7
3	Entry & Exit Load.	14	20	24	67	25	150	519	3.46	10
4	Existence of Scheme	4	33	8	101	4	150	518	3.45	11
5	NFO's	21	25	19	72	13	150	481	3.21	15
6	Past Performance Record	23	29	14	67	17	150	476	3.17	16
7	Market Timing Factor	4	9	12	115	10	150	568	3.79	2
8	Advertising	12	10	50	58	20	150	514	3.43	12
9	Reputation of Portfolio Manager	33	33	1	33	50	150	484	3.23	14
10	Rating By Credit Agency	1	23	35	45	46	150	562	3.75	3
11	Sectoral Mutual Fund Schemes with Tax Benefit	78	50	8	8	6	150	264	1.76	18
12	Disclosure of NAV	22	35	8	18	67	150	523	3.49	9
13	Fringe Benefit	10	30	24	45	41	150	527	3.51	8
14	Recommendation of their Friends/ Relatives	9	53	29	23	36	150	474	3.16	17
15	After Sale Service	19	18	16	89	8	150	499	3.33	13
16	Fund Manager's Expertise	0	14	34	69	33	150	571	3.81	1
17	Brand Name	12	9	18	92	19	150	547	3.65	5
18	Capital Appreciation	9	13	2	111	15	150	560	3.73	4

Table 4.15 Weighted Average Score and Ranking of Aspect in Selection of Sectoral Mutual Fund Schemes to Investors by Brokers

S.No	Particulars	SDA 1*	DA 2*	Nl 3*	A 4*	SA 5*	Total	weighted sum@	WAS $	RANK
		1	2	3	4	5				
1	Large Size of Fund	2	4	0	17	15	38	153	1.02	7
2	High Risk Factor	5	3	0	20	10	38	141	0.94	13
3	Entry & Exit Load.	1	2	2	22	11	38	154	1.03	6
4	Existence of Scheme	0	0	3	27	8	38	157	1.05	4
5	NFO's	0	0	5	30	3	38	150	1.00	9
6	Past Performance Record	7	2	3	11	15	38	139	0.93	14
7	Market Timing Factor	1	2	5	14	16	38	156	1.04	5
8	Advertising	0	0	3	25	10	38	159	1.06	3
9	Reputation of Portfolio Manager	1	3	5	22	7	38	145	0.97	11
10	Rating By Credit Agency	4	7	0	16	11	38	137	0.91	15
11	Sectoral Mutual Fund Schemes with Tax Benefit	28	2	1	2	5	38	68	0.45	16
12	Disclosure of NAV	0	0	10	8	20	38	162	1.08	1
13	Fringe Benefit	30	8	0	0	0	38	46	0.31	17
14	Recommendation of Their Friends/ Relatives	0	0	4	22	12	38	160	1.07	2
15	After Sale Service	31	7	0	0	0	38	45	0.30	18
16	Fund Manager's Expertise	2	3	4	13	16	38	152	1.01	8
17	Brand Name	3	3	7	13	12	38	142	0.95	12
18	Capital Appreciation	2	2	4	20	10	38	148	0.99	10

Table 4.16 Calculation of Spearman Coefficient of Correlation:

S.No	**Particulars**	***RANK by Investors***	***RANK by Broker***		
		R1	***R2***	D (R1-R2)	D^2
1	The **large size of fund** influences the investors to invest in sectoral mutual fund schemes.	**6**	**7**	-1	1
2	Investors are aware of **high risk factor** involved in sectoral mutual fund scheme investment.	**7**	**13**	-6	36
3	Investors restrain in paying **entry & exit Load** on sectoral mutual fund schemes.	**10**	**6**	4	16
4	**Existence of scheme** in the past period influences investors to invest in sectoral mutual fund scheme.	**11**	**4**	7	49
5	Huge commissions and promotions induce you to sell **NFO's** for sectoral mutual fund schemes	**15**	**9**	6	36
6	**Past performance record** of Sectoral mutual fund scheme is an indicator for future performance.	**16**	**14**	2	4
7	**Market timing factor** affects investment in sectoral mutual fund schemes.	**2**	**5**	-3	9
8	**Advertising** affects sales of sectoral mutual funds schemes.	**12**	**3**	9	81
9	**Reputation of portfolio manager** affects investment in sectoral mutual funds schemes.	**14**	**11**	3	9
10	Rating by **credit agency** induces investor to invest in sectoral mutual fund schemes.	**3**	**15**	-12	144
11	Sectoral mutual fund schemes with **tax benefit** are favorites amongst investors	**18**	**16**	2	4
12	In your opinion, do investors look for **disclosure of NAV** of sectoral mutual fund schemes on every trading day while investing	**9**	**1**	8	64
13	**Fringe benefit** like free Insurance, free credit cards etc., affects investment in sectoral mutual fund schemes.	**8**	**17**	-9	81
14	In your opinion do investors get affected by **recommendation of their friends/ relatives** for investment in sectoral mutual fund schemes.	**17**	**2**	15	225
15	**After sale service** offered by brokers/Investment Consultant affects investment in sectoral mutual fund schemes.	**13**	**18**	-5	25
16	**Fund manager's expertise** in money management of sectoral mutual fund schemes affects investment decisions of investors.	**1**	**8**	-7	49
17	**Brand name** affects investment decision in sectoral mutual fund schemes for investors.	**5**	**12**	-7	49
18	**Capital appreciation** is one of the motive behind investment in in sectoral mutual fund schemes.	**4**	**10**	-6	36
					918
				r	**0.05**

The null hypothesis $H_0$2 that there is no significant difference in the opinion of Investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes is **rejected** as the **Spearman's coefficient of correlation value is 0.05.**

To test the significance of the value of co-efficient of correlation the researcher has applied **T-test** with the help of following formula:

$$t = r \sqrt{\frac{\quad}{\quad}}$$

The computed value of **t is 0.20**

H_0 is accepted as t is less than 1.812 at 0.05 significance level, so there exists no correlation between Investment consultant and Investors with regard to the factors affecting the choice of sectoral mutual fund schemes.

4.6.2 Determination of underlying factors affecting the choice of investors in investing into sectoral mutual fund schemes

To identify the investors preference in selection of sectoral mutual fund schemes so as to group them into specific market segment Factor Analysis was done using Principal Component Analysis.

Bartlett's test of sphericity and Kaiser-Meyer Olkin (KMO) measures of sampling adequacy were used to examine the appropriateness of Factor Analysis. The KMO Statistic is (0.508) which is (>0.5), hence factor analysis is considered as an appropriate technique for further analysis.

Table 4.17: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.508
Bartlett's Test of Sphericity	Approx. Chi-Square	669.238
	df	153
	Sig.	.000

*SPSS Result

Table 4.18: Communalities

	Initial	Extraction
VAR00001	1.000	.687
VAR00002	1.000	.550
VAR00003	1.000	.620
VAR00004	1.000	.532
VAR00005	1.000	.919
VAR00006	1.000	.551
VAR00007	1.000	.648
VAR00008	1.000	.760
VAR00009	1.000	.925
VAR00010	1.000	.667
VAR00011	1.000	.643
VAR00012	1.000	.643
VAR00013	1.000	.655
VAR00014	1.000	.636
VAR00015	1.000	.532
VAR00016	1.000	.591
VAR00017	1.000	.658
VAR00018	1.000	.854

Extraction Method: Principal Component Analysis.

Table 4.19: Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
VAR00001	.033	-.012	.032	-.811	.084	.112	-.079
VAR00002	-.079	.028	-.179	.084	**.700**	-.116	-.027
VAR00003	.146	-.165	.202	**.649**	.149	-.027	-.293
VAR00004	-.021	.223	-.072	**.500**	-.192	.383	.206
VAR00005	**.946**	-.023	-.015	-.041	-.130	.070	.003
VAR00006	-.184	.201	**.602**	.058	.200	-.267	.005
VAR00007	-.045	.145	.016	-.056	.187	**.765**	.040
VAR00008	.053	**.820**	.187	-.026	-.090	.199	.027
VAR00009	**.945**	-.018	-.021	-.041	-.140	.105	-.005
VAR00010	.061	-.060	**.705**	.186	.198	.227	.192
VAR00011	-.023	**.782**	.121	-.025	.098	.081	-.023
VAR00012	.040	-.170	**.737**	-.026	-.191	-.028	-.178
VAR00013	-.064	.251	**.746**	-.086	-.149	.016	.035
VAR00014	**.693**	.183	-.062	.187	.259	-.104	.074
VAR00015	-.276	.174	.025	.022	.324	-.543	.160
VAR00016	-.024	.059	-.150	.177	-.708	-.172	-.054
VAR00017	.075	**.754**	-.179	.043	-.025	-.201	-.100
VAR00018	.058	-.103	.025	-.004	.039	-.014	**.915**

Table 4.19: Rotated Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
VAR00001	.033	-.012	.032	-.811	.084	.112	-.079
VAR00002	-.079	.028	-.179	.084	**.700**	-.116	-.027
VAR00003	.146	-.165	.202	**.649**	.149	-.027	-.293
VAR00004	-.021	.223	-.072	**.500**	-.192	.383	.206
VAR00005	**.946**	-.023	-.015	-.041	-.130	.070	.003
VAR00006	-.184	.201	**.602**	.058	.200	-.267	.005
VAR00007	-.045	.145	.016	-.056	.187	**.765**	.040
VAR00008	.053	**.820**	.187	-.026	-.090	.199	.027
VAR00009	**.945**	-.018	-.021	-.041	-.140	.105	-.005
VAR00010	.061	-.060	**.705**	.186	.198	.227	.192
VAR00011	-.023	**.782**	.121	-.025	.098	.081	-.023
VAR00012	.040	-.170	**.737**	-.026	-.191	-.028	-.178
VAR00013	-.064	.251	**.746**	-.086	-.149	.016	.035
VAR00014	**.693**	.183	-.062	.187	.259	-.104	.074
VAR00015	-.276	.174	.025	.022	.324	-.543	.160
VAR00016	-.024	.059	-.150	.177	-.708	-.172	-.054
VAR00017	.075	**.754**	-.179	.043	-.025	-.201	-.100
VAR00018	.058	-.103	.025	-.004	.039	-.014	**.915**

Table 4.20: Identified Factors

Table 4.20: IDENTIFIED FACTORS

Factor	1	2	3	4	5	6	7
Factor Name	Brand Image	Fringe Benefit	Intrinsic Qualities of Product	Existence of Scheme	High Risk	Timing Factor	Capital Appreciation

Therefore, it can be seen that out of 18 variables are reduced to 7 factors. On the basis of Rotated Component Matrix as shown in **table 4.19** factor Interpretation table is shown in **table 4.20** was constructed which finally shows major factors affecting the choice in investing into sectoral mutual fund schemes. The factors are arranged in the order of their importance, placing the most important factor as 1 and least important as 7.

Conclusion

Running a successful Mutual fund scheme requires complete understanding of the peculiarities of the Indian Stock Market and also the mindset of the retail investors.

From primary data analysis attempt has been made to understand the underlying factors affecting the choice of sectoral mutual fund schemes by investment consultant and investors. It has been observed there exist significantly negligible positive correlation of 0.05(Spearman Coefficient of Correlation). The survey reveals that the investors are basically influenced by the intrinsic qualities of the product followed by brand name and fringe benefits. Investors are aware of the capital appreciation and high risk factor involved

in investment in sectoral mutual fund schemes. Hence, it is suggested that AMC's should design products consciously to meet the investor's needs and should be alert to capture the changing market moods and be innovative.

Bird Eye view on Sectoral Mutual Fund Scheme Performances

Annexure III

Name of Scheme	risk free return	Scheme return	Market Return	Market Risk	Scheme Risk	Beta	Co-effic. of Correl.	R-Square	Sharpe Ratio	Treynor Ratio	Jenson Alpha Model	Fama Model	Compen. for sys. Risk or Risk premium	compensation for diversification	Net superior return due to selectivity
Tata Infrastructure fund (Growth)	6.77	6.08	4.04	19.76	23.84	1.15	0.96	0.91	-0.03	-0.59	2.46	3.48	-3.14551	-0.146196	2.6060424
Tauras Infrastructure fund (Growth)	6.77	6.52	4.04	19.76	32.18	1.57	0.96	0.93	-0.01	-0.16	4.03	2.33	-4.28826	-0.15567	4.188406
Principal service industries fund (Growth)	6.77	4.07	4.04	19.76	21.63	1.07	0.98	0.95	-0.12	-2.53	0.21	3.78	-2.91267	-0.07428	0.283298
ICICI Pru Infra. Institutional Fund	6.77	4.69	4.04	19.76	18.89	0.88	0.92	0.85	-0.11	-2.36	0.32	4.16	-2.40579	-0.20302	0.526705
Birla sun life infra. Plan A (Growth)	6.77	7.51	4.04	19.76	31.46	1.49	0.94	0.88	0.02	0.49	4.81	2.43	-4.07764	-0.26612	5.078731
AVERAGE	**6.77**	**5.77**	**4.04**	**19.76**	**25.60**	**1.23**	**0.95**	**0.90**	**-0.05**	**-1.03**	**2.37**	**3.24**	**-3.37**	**-0.17**	**2.54**
Relaince Diversified power sector (Growth) inst	6.77	9.46	4.04	19.76	24.52	1.17	0.94	0.88	0.11	2.3	5.87	3.38	-3.1851	-0.20081	6.072837
Escort Power/Energy Fund (Growth)	6.77	9.21	9.74	14.49	13.55	0.86	0.91	0.84	0.18	2.85	-0.1	9.54	2.5375	0.236	-0.33563
Relaince Diversified power sector (Growth) retail	6.77	4.04	2.82	25.47	25.52	0.99	0.99	0.98	-0.107	-2.75	1.19	2.82	-3.92341	-0.03131	1.21925
Sahara Power & Natural Resources (Growth)	6.77	6.41	5.25	21.34	25.96	1.19	0.98	0.95	-0.01	-0.3	1.45	4.92	-1.80958	-0.04594	1.498089
AVERAGE	**6.77**	**7.28**	**5.46**	**20.27**	**22.39**	**1.05**	**0.96**	**0.91**	**0.04**	**0.53**	**2.10**	**5.17**	**-1.60**	**-0.01**	**2.11**
Relaince Banking & Financial Services (Growth)	6.77	5.1	0.57	18.29	18.47	0.9	0.90	0.8	-0.09	-1.86	3.89	0.51	-5.557	-0.703	4.59061
UTI Banking sector (Growth)	6.77	5.99	3.11	20.48	25.51	1.15	0.92	0.85	-0.03	-0.68	3.44	2.22	-4.2224	-0.3311	3.7698
Sahara Banking & Financial Services fund Growth	6.77	17.49	6.63	22.66	28.41	1.11	0.88	0.78	0.38	9.67	10.88	6.6	-0.1533	-0.02	10.895
Religare Banking Regular Growth Fund	6.77	8.1	5.25	21.34	17.74	0.67	0.81	0.66	0.07	1.97	2.35	5.5	-1.027	-0.24072	2.594122
ICICI Pru. Banking & Fin. Services Retail- G	6.77	10.15	5.77	27.98	27.98	0.99	0.99	0.98	0.12	3.41	4.38	5.77	-0.9952	-0.009	4.38
AVERAGE	**6.77**	**10.43**	**5.19**	**23.12**	**24.91**	**0.98**	**0.90**	**0.82**	**0.14**	**3.59**	**5.26**	**5.02**	**-1.60**	**-0.15**	**5.41**
UTI Transportaion & Logistic Fund(G)	6.77	5	4.04	19.76	19.76	0.89	0.89	0.79	-0.09	-2	0.65	4.04	-2.41	-0.31	0.95
AVERAGE	**6.77**	**5.00**	**4.04**	**19.76**	**19.76**	**0.89**	**0.89**	**0.79**	**-0.09**	**-2.00**	**0.65**	**4.04**	**-2.41**	**-0.31**	**0.95**

CHAPTER 5

PERFORMANCE OF DEDICATED INFRASTRUCTURE FUNDS

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PERFORMANCE OF DEDICATED INFRASTRUCTURE FUNDS

Introduction

In year 2007, the government set a target of increasing the total investment in infrastructure from around 5 percent of GDP to 8.4 percent by 2012. This translates to over USD 500 billion in five years. But three years on, and despite plenty of outward signs of activity, the country faces a financing shortfall of at least USD 150 billion. (INR 1 lakh 25 thousand crore).

Going forward the infrastructure sector requires an estimated USD 1,024 billion investment over the 12th five year plan (2012-17). Out of the USD 1 trillion investment required to be made in the infrastructure over the next five years, power sector alone is likely to need 32 percent given the huge demand-supply gap in the power availability, while 15 percent will have to be pumped into the road sector. Irrigation development and warehousing in rural areas would need nearly 21 percent of the planned investment.

These three heads represent the biggest deficiency in physical infrastructure and any slip in investment planned for these will directly hit India's growth.

There is a clear link between infrastructure development and economic growth. Spending on economic infrastructure in India and China has produced a multiplier effect on GDP between 1.25 and

1.5 times - a 6 percent expenditure of GDP on infrastructure in India, for instance, has sustained a GDP growth rate of 8 %.

5.1 Infrastructure Financing

The Indian mutual fund industry is aggressively looking at increasing their exposure in the booming infrastructure sector.

India Growth Story which investors across the globe believe in is directly linked to infrastructure growth. Infrastructure funds in contrast to other sectoral or thematic funds are more diversified in nature with ample of ancillary sectors providing more investible universe of stock for these funds to invest in. Investment opportunity in infrastructure funds seems favorable both in the short term as well as in the long run. Investors should allocate at least 10-20% of their portfolio towards infrastructure funds.

5.2 Visible growth prospects

Government focus on developing infrastructure looks more focused with will and political stability in place than ever before. Even considering a conservative estimate of sustainable GDP growth rate of 8% and moderate increase in the share of infrastructure spending in the XIIth Five Year Plan, there is going to be massive investment to the tune of US$716 billion in XIIth Five Year Plan.

This provides the visibility for many of the companies operating in infra related space like roads, airports, power, construction, housing, and supporting industry like banking and financial services

5.3 Policy Reforms to provide huge business potential

The focus on Public Private Partnership for infrastructure development from government seems to be higher than ever before, providing greater business opportunity for many private players. Government is also making efforts towards policy reforms to make infra related projects more attractive for private players to ensure more participation. Additional income tax benefit of Rs 20,000 for infrastructure bonds announced in the budget of 2011 may help providing long term funding requirement of many of the companies

5.4 Infrastructure spending to remain strong in XIIth Five Year Plan

In order to accelerate the GDP growth rate, the government has laid emphasis on investment in infrastructure. While the government is targeting the share of infrastructure spending of 9.3% in Fiscal Year 2012, it is likely to get delayed by two or three years. In this regard, considering the overall slowdown in the economy in the last one year and slippages based on past experience, investment in infrastructure spending is likely to be to the tune of US$407.5 billion against the government target of US$500 billion. Nonetheless, based on the estimates, the investment in infrastructure spending is likely to be 1.7x of infrastructure spending in the Xth Plan.

Areas such as power, roads and water & irrigation are likely to be major thrust areas for the government in the XIth and XIIth Five Year Plans even considering a conservative estimate of sustainable GDP growth rate of 8% and moderate increase in the share of infrastructure spending in the XIIth Five Year Plan, there is going to be massive investment to the tune of US$716.5 billion. This clearly indicates that construction companies are expected to sustain their growth even at the end of the XIIth Five Year Plan.

5.5 Improving liquidity conditions

Global credit crises in the year 2009 resulted in financial crunch for many of the companies operating in the infrastructure space. Being capital intensive in nature, long term funds through both equity and debt is required by most of the companies. With improved global and domestic economic conditions, many of the companies are able to raise both equity and debt funding from both domestic as well as international markets which augurs well for the sector.

5.6 Infrastructure funds: More than a sectoral fund

Infrastructure fund is more than just a sectoral or thematic fund because of its inter linkages to other sectors, the investible universe becomes more diversified. The sectors covered under infrastructure funds include construction, cement, financial services etc., Therefore it offers more comfort to the fund managers as they may take exposure to the most favorable company among infrastructure segment.

5.7 Infrastructure Companies: Underperformed in the early global economic recovery

Most of the infrastructure companies have underperformed in the recent upturn in the equity market after global credit crisis because money flowed into consumption related stocks which was the first segment to recover from global economic downturn. Going forward with signs of stable recovery visible, investment related segment is expected to perform on increased public expenditure, more order inflows, easing of financing availability, improvising business visibility and huge business opportunity. All these will lead to more portfolio allocation to infrastructure stocks

5.8 Key Points for Infrastructure funds:

• Infrastructure funds in India are overweight in two sectors viz. Industrial Materials (having an average allocation of 41.70% as of Aug 2010) and Financial Services (having an average allocation of 19.12% as of Aug 2010).

• The assets growth of infrastructure funds has not kept pace with rise in markets, indicating that there have been net outflows from these funds so far this year.

• Among the largest five infrastructure funds in India, the key underperformers over the past one year have been UTI Infrastructure Advantage Ser I Gr (+7.70%), UTI Infrastructure Gr (+9.04%) and ICICI Prudential Infrastructure Gr (+15.28%).

• The top performing infrastructure fund over one year period (as of September 2010) is HDFC Infrastructure Fund Gr, which has returned 29.42%. The second largest infrastructure related fund in India viz. DSP BlackRock India Tiger Gr has also managed to perform well over the past one year delivering a return of 22.90% (and ranking in the third spot).

• Performance Attribution analysis points to Industrial Materials, Energy and Utilities sectors as the main culprits for underperformance of infrastructure funds over the past one year.

• Over a one year period (as of September 2010), the BSE 100 index has delivered a return of 19.00%, whereas the BSE Capital Goods, BSE Oil & Gas and BSE Power indices have returned 16.27%, -0.27% and 5.17% respectively over the same period.

5.9 Infrastructure gets a massive push in India

Infrastructure seems to be the new buzzword doing the rounds of markets these days. The various advertising campaigns, and frequent mention of Indian infrastructure in press and other media, a young kid will probably now be able to relate to the word, if not fully understand it. There is no doubt that infrastructure in India needs to be ramped up considerably, and there have been many reports citing that poor infrastructure in India is one of the key reasons for the country not achieving double digit GDP growth rates on a more consistent basis.

The Indian government plans to double the spending on infrastructure to US$1 trillion in its next five year plan, which runs from year 2012-17. It also announced plans to roll out a US$ 11

billion debt fund by next year, as part of its massive push to the infrastructure sector. Meanwhile, as per news reports, the World Bank is also expected to lend around US$ 15 billion – US$ 20 billion to India's infrastructure sector in the next five years. The Government of India is also trying to let domestic investors participate in the Indian infrastructure story, by announcing a separate Rs. 20,000 exemption for investments in infrastructure bonds. This provision was actually made in last year budget but has been extended for one more year till 2012 vide **Union Budget of 2011**. These bonds will have a minimum tenure of ten years and a lock-in period of five years.

5.10 Infrastructure funds in India and their sector allocation

In the mutual fund domain, the industry has launched several infrastructure funds that invest in stocks of companies related to the infrastructure space. As of September 2010, there are about 22 infrastructure related funds in India. These funds not only invest in stocks of companies engaged in the infrastructure business but various ancillary industries like banking & financial services, energy, utilities, and some even have exposure to sectors like media and consumer goods. Thus the investment universe of these funds is quite diversified. Interestingly enough the recently launched CNX Infrastructure index by the National Stock Exchange, doesn't include any banking or financials stocks in the index. However it can be seen that the infrastructure funds in India maintain a high allocation to banking & financial stocks, and at the end of August 2010 the average allocation to this sector was 19.12%, making it the

second most popular sector among these funds in India. The most popular sector amongst infrastructure funds in India is clearly 'Industrial Materials', which has an average allocation of 41.70% as of August 2010.

5.11 Assets growth of Infrastructure funds have not kept pace with markets

The assets under management (AUM) of infrastructure funds in India have not kept pace with rise in markets, indicating that there have actually been net outflows from infrastructure funds so far this year. A point to note is that the AUM of every infrastructure fund in India at the end of August 2010 is lower than the AUM at the end of year 2009, even though the BSE Sensex index has gone up by 3.62%, and infrastructure funds have delivered an average return of 5.97% over the same period. The total assets of all infrastructure funds stood at Rs. 21,896 crores (or 12.53% of industry equity AUM) at the end of 2009, and it fell to Rs. 19,486 crores (or 10.87% of industry equity AUM) at the end of August 2010, making it a fall of about 11%. It can be seen that the AUM of the five largest infrastructure funds in India has fallen by 10% to 23% since the end of 2009.

5.12 Performance Attribution analysis points to Industrial Materials, Energy and Utilities sectors as the main culprits for underperformance.

The performance attribution analysis of these infrastructure funds points to the high exposure to Industrial Materials, Energy and Utilities sectors, as the main cause for the underperformance of

these funds over a one year period. The average allocation of these funds to the Industrial Materials sector at the end of August 2010 is 41.70% compared to an allocation of about 25% in both the BSE Sensex and Nifty indices respectively. Meanwhile the average allocation of these funds in the Energy and Utilities sectors are 14.77% and 11.46% respectively as of August 2010. Industrial materials include companies that provide or manufacture chemicals, machinery, building materials and commodities. Thus a suitable benchmark index for this sector would be the BSE Capital Goods index. For the Energy and Utilities sectors the suitable benchmark indices would be BSE Oil & Gas index and BSE Power index respectively. Over a one year period (as of September 2010), the BSE 100 index has delivered a return of 19.00%, whereas the BSE Capital Goods, BSE Oil & Gas and BSE Power indices have returned 16.27%, -0.27% and 5.17% respectively over the same period.

5.13 Performance of Dedicated Infrastructure Schemes vis-à-vis Diversified equity mutual fund schemes.

To analyze the return from DIF's and other diversified scheme following Null hypothesis was formulated:

H_o3: There is no significant difference between the performance **(returns)** of Dedicated Infrastructure funds and Diversified equity funds.

H_A3: There is significant difference between the performance **(return)** of Dedicated Infrastructure funds and Diversified equity funds.

Table 5.1: Comparative Analysis of DIF vis-à-vis Diversified Equity funds

Scheme Name	6-Mth (%)	1-Yr (%)	3-Yr (%)	5-Yr (%)	Standard Deviation (%) *	Sharpe Ratio*
ICICI Pru Infrastructure (G)	11.5	11.5	-2.6	23.5	9.52	-0.01
Birla SL Infrastructure-A (G)	11.5	13.3	-3.1	-	11.28	0.00
Principal services industries limited (G)	12.4	16.3	-3.7	20.1	10.19	-0.02
Taurus Infrastructure (G)	5.6	15.8	-3.7	-	14.38	0.02
Sahara Infra-Fixed Pricing (G)	3.1	3.0	-4.2	-	10.33	-0.02
Tata Infrastructure (G)	11.4	11.1	-5.7	20.3	10.33	-0.03
Canara Robeco Infrastructure (G)	5.3	3.6	-9.5	16.4	9.23	-0.09
CNX Infrastructure	4.4	-0.6	-16.3	12.4	11.1	-0.1

Diversified Equity Funds						
Quantum LT Equity (G)	21.5	31.0	13.5	-	8.92	0.12
IDFC Premier Equity-A (G)	23.0	34.5	11.6	29.4	9.79	0.11
Reliance Regular Savings-Equity (G)	16.0	21.2	9.2	27.0	11.16	0.10
Templeton India Growth (G)	15.2	22.0	8.3	22.2	9.81	0.07
Fidelity Equity (G)	18.2	27.1	6.8	22.4	8.80	0.06
Franklin India Blue chip (G)	17.9	23.9	5.8	21.1	8.85	0.05
Sahara Midcap (G)	18.8	29.6	5.3	18.7	12.14	0.08
BSE Sensex	16.7	16.7	0.3	17.8	10.0	0.01

*Standard deviation and Sharpe ratio has been calculated on 3 year period.

The **table 5.1** reveals that the faith in the infrastructure theme / sector funds, has led to a dreadful destination. When analyzed from a 3-Years time frame, all infrastructure funds have given negative returns on CAGR (Compounded Average Growth Rate) basis.

To simply put the risk which were exposed to (as revealed by the Standard Deviation), was not compensated well as revealed by the **negative Sharpe Ratio**.

But on the other hand, all diversified equity funds irrespective of their market cap bias and style of investing which they follow during the same time period of 3 Year delivered enticing positive returns on a CAGR basis, by well managing their risk. Moreover, infrastructure funds have been unsuccessful even in beating the performance of the broader index – BSE Sensex.

5.14 Bull and Bear Markets

Bull market refers to a market that is on the rise, it has sustained increase in market share prices. In such times, participants have faith that the uptrend will continue in the long term. Typically, country's economy is strong and employment levels are high.

Bear market is one that is in decline, share prices are continuously dropping, resulting in a downward trend that participants believe will continue in the long run, having a spiraling effect. During a Bear market, the economy typically slows down and unemployment may rise as companies begin laying off workers.

Table 5.2 in the next page shows under Bull and Bear phase how the dedicated infrastructure schemes and diversified equity schemes have performed in comparison to the benchmark index.

Table 5.2: Performance of DIF's and Diversified equity funds in Bull & Bear Phase

Schemes and Index	BULL	BEAR	BULL
	17-Jan-06 to 09-Jan-08	17-Jan-08 to 09-Mar-09	09-Mar-09 to 06-Nov-10
Diversified equity funds	46.56	-57.26	72.43
Infrastructure sector funds	66.18	-61.44	61.44
BSE Sensex	50.36	-55.36	67.05

Conclusion: It has been seen that Infrastructure theme has not worked for the Asset Management Companies in providing high return to the investors hence the **null hypothesis stands rejected.** It means that there is significant difference between the performance of dedicated infrastructure funds and diversified equity funds.

There is little doubt on the scope or potential of the infrastructure space within India, owing to the massive push to this sector from the government and also now from foreign agencies. Even though the infrastructure stocks and dedicated infrastructure mutual funds may have underperformed as seen from **tables 5.1 & 5.2**, but their long term performance is still quite robust, and therefore the researcher feels that there is potential in Infrastructure funds in the upcoming years. Probably this is what the various infrastructure funds in the market have been expecting since long.

CHAPTER 6

FUTURE SCOPE OF GROWTH OF SECTORAL MUTUAL FUNDS

CHAPTER 6

FUTURE SCOPE OF GROWTH OF SECTORAL MUTUAL FUNDS

Introduction

While the Indian Mutual fund industry has come a long way since its inception, there are certain areas of concerns which need to be addressed in order to grow at the rapid pace. The factors that could turn out to be the major impediment going forward are: low levels of customer awareness, unwillingness to undertake even minimal risk, inadequate reach of funds/ distributors to retail investors, limited innovation in product offerings, limited focus of the public sector network on distribution of mutual funds, multiple regulatory frameworks, and competition from assured return products like Government of India bonds, post office monthly income schemes, senior citizen savings schemes, national saving certificates, etc.

6.1 Areas of Concern

6.1.1 Low level of Customer Awareness

As noted earlier, low levels of customer awareness is the biggest challenge in channelizing household's savings into mutual

funds. A majority of investors in Tier 2 cities as well as metros lack understanding of mutual fund products and can draw little distinction in their approach to investing in mutual funds and direct stock market investments. As a result, they are generally unwilling to undertake even minimal risk.

6.1.2 Inadequate reach of funds / distributors to retail investors

The mutual funds in India have historically raised funds by targeting the institutional investors segment that accounts for 63% share in AUM as at March 2010. This can primarily be attributed to the tax arbitrage available to corporates on investing in money market mutual funds and easy access to institutional customers concentrated in Tier 1 cities. Besides, raising funds from retail investors require a significant distribution capability. The Indian Mutual fund industry has limited penetration beyond the top 20 cities. In fact, the retail investors residing in Tier 2 & 3 towns, though aware and willing, are unable to invest in mutual funds due to limited access to suitable distribution channels and investor servicing. However, with the deepening of the global financial crisis, many mutual funds witnessed sudden redemption pressures due to their dependence on institutional AUM. This is expected to lead AMCs to start focusing on retail investors' segment.

6.1.3 Limited innovation in product offering

Though over the years, the Indian Mutual fund industry has introduced a range of products, it has limited focus on innovation and new product development. It is still to launch green funds,

socially responsible instruments, fund of hedge funds, enhanced money market funds, renewable and energy/ climate change funds, etc. Multi-manager funds that are among the most hybrid funds world-over have also not grown in India due to the prevailing tax structure.

6.1.4 Multiple Regulatory Frameworks

Besides, multiple regulatory frameworks governing financial services sector verticals have affected the Mutual fund industry in India. For instance, the mandatory PAN card requirement for an investment of Rs 50,000 and above in mutual funds has restricted the Mutual fund industry's ability to tap small investors. On the other hand, Unit Linked Insurance Plans (ULIPs) which is a competing product do not have the mandatory PAN requirement. In addition to the PAN card requirement, the customers are required to procure KYC acknowledgement which requires submission of several documents and an extensive paper-work.

Moreover, while the payment for investment into mutual fund is required to be made only through banking facility, no such requirement exists for ULIP. These complicated regulations restrict potential customers from investing in mutual funds. Further, this calls for an urgent need for government to harmonise policies and processes across different verticals in the financial services sector.

6.2 Future Outlook

The low penetration level of domestic AMCs as well as limited share of mutual funds in the household financial savings point towards the future potential of the Mutual fund industry in

India. Further, given the rise in income levels and household financial savings, an increasing number of households are expected to invest in mutual fund products that yield higher returns with reasonable risk. The continuous process of urbanisation, enhanced financial literacy and a huge young population with an increased risk appetite are also likely to be instrumental in the long term growth of the retail segment of the Mutual fund industry. Further, the public sector network of nationalised banks and post offices are likely to increase their focus on the distribution of mutual funds in Tier 2 and Tier 3 towns. This will enhance the reach of mutual funds to the rural population.

In case of institutional segment of mutual fund, rising corporate earnings, maturing capital markets and increased demand for sophisticated treasury management products are expected to play a key role in accelerating the growth of the Indian Mutual fund industry. Profitability of the Mutual fund industry in India is expected to witness a gradual decline as AMCs' focus on low margin products to attract risk-averse investors will affect revenue generation. At the same time, AMCs' focus on increasing their penetration in rural population beyond Tier 2 cities will lead to increase in operating costs.

Furthermore, with the entry of global players, competition for the domestic mutual funds is expected to increase. In view of the intense competition and shrinking margins, the industry is likely to witness some consolidation as AMCs will review business strategy and explore exit/mergers in case of no significant competitive advantage.

6.3 Eight Indian Mutual Funds in World's 25 Best Funds in a Decade

Eight domestic equity mutual fund schemes, including SBI Magnum Contra , HDFC Equity and Reliance Growth , are among the 25 best-performing open-ended equity funds in the world of the last decade, according to investment research firm Morningstar. These funds benefited from the 10-fold growth in total value of India's stock markets, led by a robust performance of one of the fastest growing economies in the world.

The eight funds returned 31% to 38% on a compounded basis in the past decade. The Sensex returned 17.8% on a compounded basis during the 10 years.

The trend of rising personal incomes has been witnessed not only amongst the young population, but also the high net worth (HNI) segment, which have sizeable sums to invest. One estimate indicates that there are more than 120,000 dollar millionaires in India and the number is increasing. The house-hold segment therefore proffers immense scope for attracting investments. India has a strong middle class of 250-300 million, which is expected to double over the next two decades. It is in the backdrop of some of these encouraging statistics that the Indian mutual fund industry has fostered itself.

Since the 1990's when the mutual fund space opened up to the private sector, the industry has traversed a long path, adapting itself continuously, to the changes that have come along. Growth in Assets Under Management (AUM) experienced has been

unprecedented, growing at a CAGR of 28% over the last four years, slowing down only over the last two years, as fallout of the global economic slowdown and financial crisis. Although investor confidence was significantly eroded and AUMs suffered a dent, the sale of mutual funds has revived over the last few quarters,which implies regained confidence of investors, striving to look at alternate investment opportunities and any attendant higher returns, though the markets continue to be choppy.

In today's volatile market environment, mutual funds are looked upon as a transparent and low cost investment vehicle, which attracts a fair share of investor attention helping spur the growth of the industry. Over time, inclusive growth across the financial sector, seems to have taken centre-stage, re-designing all business strategies around this sole objective. The mutual fund industry being no exception, various measures are being taken by fund houses and distributors to spread access and reach to the semi-urban and rural segments.

Clearly, the role of technology as a growth enabler has assumed enhanced responsibility in this respect, to enable improved reach, inclined towards efficient distribution.

The landscape of the financial sector in India is continuously evolving, accredited to regulatory changes being undertaken, which is leading market participants like the asset management companies (AMCs) and distributors to restructure their strategies and adopt business models which will yield sustainable benefits. Some of the other trends which have emerged strongly over the past year are heavy outflows triggered by market volatility and partnering of

asset management companies with banks, to increase the strength of distribution networks. It is worthwhile at this point to take note of some of the business and regulatory trends taking shape across the global economies, which might cast a shadow on the Indian markets. Developments on aspects of entry load, management fees paid to asset management companies, regulation of distributors and taxation of mutual funds from the investor point of view, are some of the areas which deserve to be given attention.

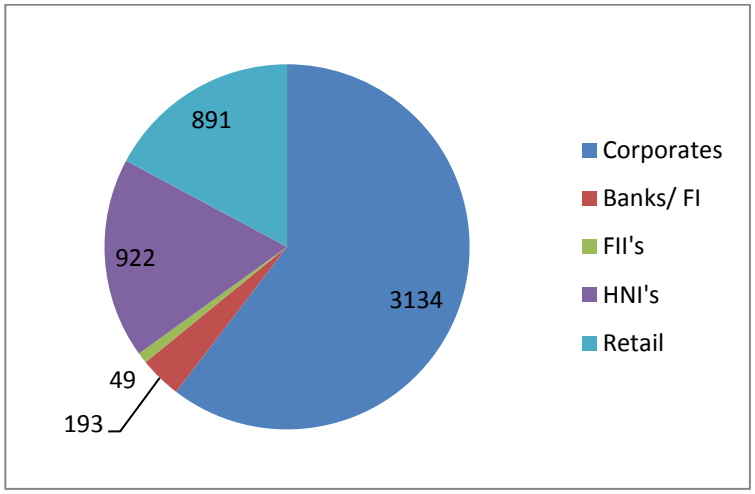
The **road ahead for the mutual fund industry** will be paved by the performance of the capital markets. But, more importantly, it remains to be seen, how fund houses adapt themselves to changes in regulations, thereby shaping growth for the future. A continuously evolving regulatory framework makes it mandatory for the industry to elicit a clear growth path, making it easier to assess obstacles and tide over them with time.

6.4 Investor contribution remains skewed towards the Corporate Sector.

Inspite of India offering an exciting retail environment, with abundant growth opportunities, participation from the segment of retail investors continues to remain at deplorably low levels. As of March 31, 2010, the participation from the retail segment was 26.6%, a marginal increase from 21.3% as on March 31, 2009.

Dependence on the corporate sector is still pretty pronounced at 51%, which is not much of a change from last year. Volatile market conditions, sound a note of caution for the industry, as high dependence on the corporate sector may result in the fund houses being prone to unexpected redemption pressures.

Figure: 6.1 Investor Contributions as of March 31, 2010

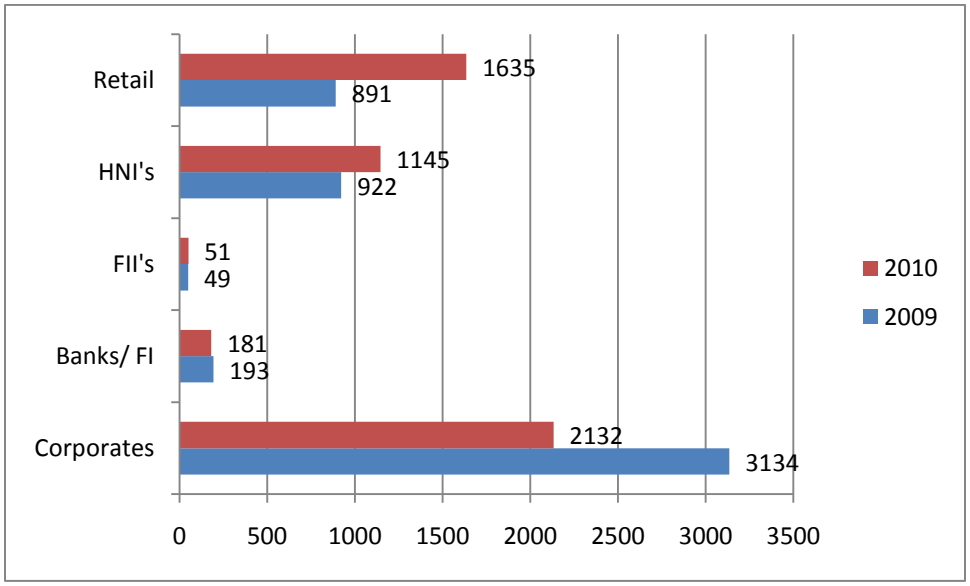


Source: AMFI,2010

The rationale behind institutional sales claiming such a large chunk of the AUM pie is the benefit of tax arbitrage and lack of short term investment options. When compared with economies like US and China, investments channelized through corporate, comprise only around 15% and 30% of the assets under management (AUM), respectively.

Overall, the assets under management recorded an impressive growth of 47%, as of March 2010 which was predominantly driven by the corporate sector, posting the same level of growth. In the same period, the retail sector also managed to report a strong growth of 84% in its assets under management, followed by the HNI segment growing 24%. It has been observed of late, that the HNI segment especially in Tier 2 & Tier 3 cities has expanded creating a pool of investible surplus at the disposal of the mutual fund industry.

Figure 6.2: AUM in 2009 & 2010



Source:AMFI,2010

6.5 All roads lead to increased investor awareness

In the midst of this entire ambit of distribution, the investor undoubtedly stands to reap long term gains, as all the alternatives in one way or other urge investors to move towards better awareness and product education. It has become increasingly important for the distributor to spread financial literacy among the investor community as they depend hugely on volumes generated, and this can only happen, when investors are assured that investing in mutual funds yield realistic returns vis a vis the risk, and the ticket size of the investment is manageable.

Although investor education is being harped upon continuously, segmenting the client base, and aligning product offerings to cater

to requirements of customers are also key to redefine the business and operating models to enhance key investment related value proposition.

6.6 Financial inclusion: The New Buzz in the Financial Services Sector

6.6.1 Reaching out to Tier 2 & Tier 3 cities

As defined by the RBI, Tier 2 cities are those that have a population base of 50,000 and above, while Tier 3 cities have a population base upto 50,000. A survey conducted by National Council of Applied Economic Research (NCAER) in 2008 suggested that although Indians have a positive attitude towards increased savings, around 65 percent of savings are with banks or post office deposits and cash at home, while 23 percent are invested in real estate and gold and only 12 percent is channelized towards financial instruments. This manifests tremendous opportunity for growth in mutual funds, while indicating that penetration level of mutual funds in the smaller towns is lagging behind that of urban cities. As per RBI statistics, the household financial savings (net) was 10.9% of GDP in 2009, lower than 11.5% in 2008.

Household investment in shares and debentures (inclusive of mutual funds), was 1.9% of GDP in 2009, which declined to 0.4% in 2010, reflecting a reduction in investor confidence in these instruments. Steadily rising disposable income in the Tier 2 and Tier 3 cities, have showcased the latent potential for investments in mutual funds. Investors in these cities are gradually awakening to other potential investment areas like equity and mutual funds, apart from the traditional bank fixed deposits, national savings certificates

from Government of India, gold and real estate. It has also been observed that the HNI segment in these cities is slowly expanding, with very large amounts of investible income at their disposal.

Diversity of Indian culture implies that different models need to be explored and executed in order to make a breakthrough in these smaller towns. A few banks intend to adopt the hub-and-spoke model, gradually adding locations to each hub, where the hub could perhaps cater to 2-3 locations each. Emergence of Stock Exchange platforms is seen as a suitable means to increase penetration levels of financial assets and thus mutual funds. Currently, it serves as an alternate mechanism for performing mutual fund transactions.

This method although not all pervasive, allows investors to carry out basic transactions. Cost implications point favorably towards investing directly through the investment portals (stock exchange platforms). As this mechanism gains popularity, further improvements and modifications are expected in the system, which will inevitably enhance efficiency, and provide several amenities to both investors and distributors.

6.6.2 Investor awareness has to spread its wings to lead sustainable growth of the industry

In today's dynamic environment, spreading financial literacy is the most critical imperative for spearheading growth in the mutual fund industry. Measures and initiatives undertaken should be structured with a long term horizon in mind, aiming to introduce innovation in products. Also, the investor education programs should be customer oriented with emphasis on the risk appetite of

investors rather than simply a demonstration of the range of products. Although, in the metros, investors are more familiar with mutual funds as a profitable investment, people in smaller towns and cities still have inhibitions about investing into mutual funds.
The rural strata of society looks for investment alternatives which primarily have a nominal initial investment, and the terms and conditions attached are simple to grasp. Most of the investors in this segment are not in a position to consider the pros and cons of the investment schemes, along with the risks attached to it, and therefore disclosures should be made very clear and apparent to the investors. In addition, products should be designed to bolster income levels of the rural segment and also increase their spending capacity. Taking a step towards inclusive growth, Fund houses have agreed to conduct investor awareness programmes from time to time.

6.7 The industry adapts to changing regulations

The Indian mutual fund industry is undergoing a transformation, adapting to the various regulatory changes that are coming about. The researcher highlight some of the key ones which have undergone an amendment, impacting the industry as a whole. However, all of them primarily would seem to have the interest of the investor in mind.

6.7.1 Entry Load

In recent years, the industry regulator, Securities and Exchange Board of India ('SEBI') has focused more on investor

protection, introducing a number of regulations to empower retail investors in Mutual Funds ('MFs').

SEBI began by prohibiting the charging of initial issue expenses, which were permitted for closed-ended schemes, and mandating that such MF schemes shall recover sales and distribution expenses through entry load only. These steps aimed at creating more transparency in fees paid by investors and helping make informed investment decisions.

Subsequently, w.e.f. August 1, 2009, SEBI banned the entry load that was deducted from the invested amount, and instead allowed customers the right to negotiate and decide commissions directly with distributors based on investor's assessment of various factors and related services to be rendered. The objective was to bring about more transparency in commissions and encourage long-term investment. Though the intent of the amendment was to benefit the investor, it has hit the margins of the Asset Management Companies (AMC's).

Further, higher distributor commission on Unit Linked Insurance Products (issued by Insurance companies) is giving tough competition to the business of mutual funds.

6.7.2 Direct Tax Code

With the Direct Tax Code ('DTC') on the anvil, taxability of income from mutual funds, at the hands of investors will also have a bearing on the growth of the mutual fund industry. Unlike the extant tax provisions, DTC does not provide for any benefit for investment in equity linked savings scheme, and also proposes to increase the compliance in the hands of MFs by widening the scope of deduction of tax to include payments made to residents. The code

has also created an anomaly on the taxability of the MF investors. It is unclear whether the income earned will be exempt or taxed in the hands of the investors on accrual basis, as stated in the Discussion Paper on the DTC.

6.7.3 Documentation

In December 2009, SEBI had made it mandatory for all AMCs to maintain a copy of full investor documentation including Know Your Customer i.e. KYC details. Such documentation was earlier maintained by the respective MF distributors who have now been asked to give a copy of the same to the fund houses.

6.7.4 Disclosure of Investor Complaints in the Annual Report

In order to improve the transparency in the 'grievance redressal mechanism', SEBI has recently issued a Circular that requires MFs to include details of investor complaints in their Annual Report as part of the Report of the Trustees, beginning with the annual report for the year 2009-10. MFs provide abridged booklets of the Annual Reports to all the unitholders.

6.7.5 Fund of Fund Schemes

In the past, AMCs had been entering into revenue sharing arrangements with offshore funds in respectof investments made on behalf of Fund of Fund ('FoF') schemes. Recently, SEBI has issued directions stating that since these arrangements create conflict of interest, AMCs shall be prohibited from entering into any revenue sharing arrangement with the underlying funds in any manner and they have been prohibited from receiving any revenue by whatever

means/ head from the underlying fund.

Further, SEBI is also in discussions to raise the AMC fees from the present cap of 0.75% of the net assets in the case of FoF schemes.

6.8 Next step for the Mutual Fund Industry

Performance of the industry has been strong and it is well-placed to achieve sustainable growth levels. The way forward for the next couple of years for the mutual fund industry would be influenced hugely by the journey undertaken till this point of time and the changing demographic profile of investors.

6.8.1 Diverse Range of Products

There is a need for Indian MFs to come out with innovative products that cater to the ever changing customer requirements. In US, MFs provide products that cater to the entire life cycle of the investor. Diversified products will keep the present momentum going for the industry in a more competitive and efficient manner. Further, MFs have to compete with bank deposits and government securities for their share of consumer savings. Thus, in order to make MFs more acceptable to the retail investors, the MF would have to mature to offering comprehensive life cycle financial planning and not products alone.

6.8.2 Regulation for MF Distributors

Currently, distributors of MF schemes are not separately regulated by any authority in India. Further, many of them though certified by AMFI still leave a lot to be desired so as to render professional advice to investor and reduce mis-selling of the MF

products. MFs need distributors who are able to inform the investors about the efficacy of the product for a particular risk profile and stage in their life cycle..

SEBI is planning to put in place a compliance certification examination (by NISM) and is expected to run it online from mid-2010. Further, SEBI is also expected to soon come out with a new set of guidelines for MF distributors. As the affluence of Indians increase, the range of financial products to meet people's need will expand and with it the need for professional financial advice from the MF distributors will increase.

6.8.3 Recommendations to re-visit the eligibility norms of AMCs

SEBI had constituted the "Committee on Review of Eligibility Norms" (CORE) to re-visit the eligibility norms and other functional aspects prescribed for various intermediaries. Amongst other recommendations, the key ones are relating to increase in the minimum net worth of AMCs from the existing Rs. 10 crores to Rs. 50 crores, change in the definition of net worth, sponsor to be a regulated entity and change in definition of control. The objective of the proposed recommendations is to allow only the serious players to enter/ remain in the market. The proposed changes can lead to a better governance of the MF players, thereby boosting investor confidence in the industry.

6.8.4 Trading through stock exchange platforms

Recently, SEBI has permitted trading of MF units on recognised stock exchanges. Subsequently, Bombay Stock Exchange

and National Stock Exchange have launched trading platforms enabling investors to invest by availing services of stock brokers. While trading through the stock exchange, the investor would get to know about the validity of his order and the value at which the units would get credited/ redeemed to his account by the end of the day. Whereas, while investing through MF distributor or directly with the MF, the investor gets information of the subscription and redemption details only in the form of direct communication from the MF/ AMC. Thus, by trading through the stock exchange, the investor would be able to optimize his investment decisions due to the reduced time lag in the movement of funds. This transparency in knowing the status of order till completion helps in reducing disputes. Further, the investor would able to get a single view of his portfolio across multiple assets like securities, MF units etc.

6.8.5 Real Estate Mutual Funds

Real Estate Mutual Funds could be the next big thing for the industry provided the regulators bring in more clarity on the tax and regulatory aspects.

In the light of the current state of the industry, and the huge latent opportunity for growth for Sectoral Mutual Funds, the researcher like to highlight a few imperatives on this road to success.

Asset management companies today need to stay focused on a few aspects in order to ensure that the industry meets its growth objectives.

Chapter 6 FUTURE SCOPE OF GROWTH OF SECTORAL MUTUAL FUNDS

Attractive Product offerings

Asset management companies need to introduce a new range of sectoral mutual funds in the market in order to attract investments. The new age investor today looks for returns higher with tax benefits than the traditional bank deposits. Fund houses should be encouraged to design products to suit investor requirements of a higher return and with better diversification of risk.

Exchange Traded Funds

Exchange Traded Funds should be given a boost and brought into increased focus for the investor. Gold ETFs serve as a good investment option in times of market volatility. These products prove to be a viable solution for risk averse investors, without diluting the urge to have the physical asset.

Investments in technology

Fund houses need to assign an increased budget for investment in technology, which will help them streamline their distribution networks and increase efficiencies in their business. Use of technology, is a must to come up with a feasible cost-benefit business model and participate in financial inclusion, more effectively.

Investor Education

It is an unspoken responsibility of the asset management companies to spread financial literacy among investors, which will inevitably lead to increased penetration of their products.

Awareness campaigns and education drives should be more regularly undertaken.

Cost Rationalization

Optimum operating efficiencies need to exist in asset management companies, and for this, cost containment measures need to be undertaken by them. Outsourcing could be looked upon as a possible measure to reduce costs, provided the risks emanating from this are better managed.

Exploring Distribution Networks from Other Sectors

It may be worthwhile to cite examples from other sectors, which have shown exemplary growth, predominantly relying on the strength of their distribution networks. A strong case here would be that of Hindustan Unilever, which has an enviable distribution network, reaching out to the rural populace. The company aims to align its offerings to the needs of this segment, after assessing their buying behavior. The company's popular initiative, "Project Shakti" has been devised to target villages with a population of less than 5000. The broad objectives of this program are -

- Reaching out to new consumers in rural areas
- Conduct consumer education programs to develop markets
- Creation of employment opportunities
- Establish a sustainable business model

This program is adequately supported by "Shakti Entrepreneurship program", which offers suitable investment opportunities and sustainable income for the people. To bring in efficiencies in their supply chain network, adequate amount of investment in technology

like SAP application systems, has been made, to create better logistics.

These strategies and initiatives have served their purpose, as a result of which, Hindustan Unilever showcases a customer base of over 700 million, having a reach of 6.3 million retail outlets, with over 2,000 suppliers and associates. In addition, "Project Shakti" has succeeded in equipping 45,000 Shakti entrepreneurs in rural areas, spanning 15 states, across 100,000 villages and enabled income generating opportunities.

Another example germane to the context, would be the case of demat accounts and the slow and steady journey of growth. The number of investor accounts as of April 2010 stands at 105.57 lakhs, up from 63 lakhs reported in April 2005.

This increase is attributed to the growing awareness of the depository system, the tangible benefits of a "paper-less" but secure environment and the addition of an increasing number of instruments to the list of dematerialized securities, resulting in higher participation. The overall performance of the markets has also contributed to this trend. Retail participation accounts for 90 per cent of demat registrations. Even remote areas like Guwahati, Jorhat, Silchar and Tinsukia in Assam, Gangtok in Sikkim and Jammu and Srinagar, have had clients opening accounts.

Conclusion

It is time perhaps for the asset management industry to look to these sectors, and pick up a few pointers on strengthening distribution, with a focus on inclusive growth, considering that the challenges faced to capture the market beyond Tier 1 & Tier 2 cities, would be somewhat similar.

While fund houses concentrate on the above mentioned areas, it would also be important for the market regulator to continuously help create a favorable environment for growth for sectoral mutual funds. The nature and the cost of disclosures to retail clients need to be looked at simultaneously, to help determine a more effective model and enhance levels of financial literacy.

CHAPTER 7

SUMMARY, CONCLUSIONS AND SUGGESTIONS

CHAPTER 7

SUMMARY, CONCLUSION & SUGGESTIONS

After undergoing an immense and in-depth study of the literature available, the researcher has come upon with certain conclusion which has formed the basis of suggestions for the better future of the Indian Mutual Fund Industry with special reference to Sectoral Mutual Funds.

Before that a brief summary of the entire research work undergone is also mentioned. The researcher hopes that the suggestions made on the basis of this research work may be followed by the Asset Management Companies and investment consultants.

7.1 SUMMARY

In the **First chapter** the research work was initiated with the study of financial sector liberalization and attempted to understand that mutual funds are key contributors to the globalization of financial market and it is the one of the main source of capital flows to emerging economies. The researcher also discovered that in India the contribution of Asset under Management as a percentage of GDP is comparatively low when compared to other countries. Along with this, history of mutual funds, its regulations and recommendations of launch of dedicated infrastructure funds were discussed. It further highlights the household savings in Uttarakhand state.

In the **second chapter** the researcher has done immense literature review of the empirical studies on mutual funds in India and other countries and came with a conclusion that research work and found various performance measure like Beta measure, Treynor measure, Sharpe ratio, Jensen model, Fama decomposition model which were applied in the research work. Besides this various reports like of AMFI & CRISIL made us aware that government is increasing its focus on Infrastructure development by introducing infrastructure based thematic schemes.

In order to analyze the performance of sectoral mutual funds and the underlying factors which influence investment consultant and investors for investing in the mutual funds, research methodology has been outlined in the **third chapter.** The researcher has used a blend of secondary and primary data to evaluate the performance of sectoral mutual fund and has analyzed the correlation between the opinion of investment consultant & investors with regard to the factors affecting the choice of sectoral mutual fund schemes in Uttarakhand state respectively.

Part A of the Fourth Chapter, analyses that only Banking sector outperformed in comparison to other sector in terms of risk-return criteria. The analysis of the study also indicates that the diversification process undertaken by the fund managers has not provided any additional return which compensates investors for the diversifiable risk. **Part B** analyses the correlation between investment consultant and investors with the help of Spearman's Rank Coefficient of Correlation and found that there exist significantly negligible correlation or in other words there is

significant difference of opinion of Investment consultant and investors with regard to the factors affecting the choice of sectoral mutual fund schemes. Factors analysis using SPSS were also applied to know the factors affecting the investors in Uttarakhand state in investing into sectoral mutual funds. Factors like Brand image, Fringe benefit, Intrinsic qualities of product, Existence of scheme, High risk, Timing factor, Capital appreciation were identified.

Fifth chapter focus on the performance evaluation of Dedicated Infrastructure Funds vis-à-vis diversified equity schemes and it was found that inspite of government focus, these dedicated schemes are not able to provide significant returns to the investors as compared to other diversified funds.

Further rigorous know how was increased when researcher studied the future scope of growth in the **Sixth chapter** which highlights various areas of concern on the part of distributors and retail investors and with the help of various articles from AMFI, RBI researcher understood that there is a need to reach the retail investors in tier 2 & tier 3 cities and there should be more participation from retail investors into investment in mutual funds to match with developed countries growth rate.

7.2 CONCLUSION

On the basis of the study the researcher was able to reach the following conclusion:

1. The funds mobilized and the number of schemes launched by the industry had shown a tremendous increase. The Assets under Management of the industry had shown a CAGR of 22.3% over last 10 years.

2. Out of 15 sectoral mutual fund schemes 60% of sectoral schemes have not earned even equivalent to risk-free rate of return during the study period. Banking Mutual fund schemes are amongst the top in comparison to other sectors. In terms of **total risk** again Banking schemes are able to deliver superior return in comparison to other sectors.

3. The analysis of the study also indicates that the diversification process undertaken by the fund managers has not provided any additional return which compensates investors for the diversifiable risk.

4. The profile of investors covered showed that, 32 percent were in the age group of 25-30 years, 75 percent were male investors, 45 percent were postgraduates, 61 percent were earning between 2 to 5 lakhs and 59 percent were saving less than Rs.50,000 annually, 32 percent of the investor invest their savings in mutual funds and 32 percent of investors invest in mutual fund in the month of feburary and 45 percent of investors are from Dehradun.

5. The most important benefit of investing in mutual funds was profitability followed by tax shelter and capital appreciation.

6. The most important **factor** influencing the choice of sectoral mutual fund scheme as revealed by Factor Analysis was Brand image followed by fringe benefits, intrinsic qualities of product and existence of scheme.

7. There exist a **significantly negligible** correlation with regard to the factors affecting the choice of sectoral mutual fund schemes between investment consultant and investors.

8. Infrastructure funds have been unsuccessful even in beating the performance of the broder index-BSE Sensex
.
9. Dedicated Infrastructure funds are found be laggard in comparison to diversified equity mutual funds.

10. The **eight** Indian mutual funds are found to be in world's 25 best fund in a decade.

7.3 SUGGESTIONS

The analysis of the sample investors' opinion as regard to the factors affecting the choice for sectoral mutual fund schemes shows that majority of the investors are not aware of thematic schemes offered by the Indian mutual funds industry. However, the sample sectoral mutual fund schemes were also not performing upto their expectations and does not provide adequate returns commensurate with the risk involved. **Hence, for the better future of the Indian Mutual Fund Industry the following suggestions are made**:

For harnessing the savings of the nation especially from rural areas into financial assets, the units of mutual funds should certainly become one such asset that can attract these savings through a wide spread and efficient network of operations.

Sectoral mutual funds should build confidence in the existing unit holders as well as the public not covered so far. Mutual funds have to prove as an ideal investment vehicle for retail investors by way of assuring better returns in relation to the risk involved and by way of better customer services.

The **fund managers** have to provide the benefits of professional management by way of market timing and stock selection skills which was found lacking from sectoral mutual fund's point of view.

The **Asset Management companies** by way of superior management, efficient market forecasting have to ensure not only out performance but also consistency in the performance. While many of potential investors are not fully aware of the sectoral mutual funds, most of the investors who have invested are not fully aware of their rights and obligations. Hence, the government should arrange for more number of massive educational programs on investment avenues.

AMFI and **SEBI** could carry out research works to introduce many mutual fund products proved successful in foreign countries but not yet introduced in India. Sectoral mutual fund schemes should be introduced with **tax advantage.**

Investors have to make **self-analysis** of one's needs, risk-bearing capacity, and expected returns so as to develop a prudent investment ideology. Investors have to be aware of the mutual fund regulations, the channeling of money, objectives of schemes, besides ensuring better diversification of investment and must be aware of the fact that sectoral mutual fund investment is of the highest risk avenue of investing in mutual fund category.

Chapter 1

INTRODUCTION

1.1	Financial Sector Liberalization	5
1.2	Indian Financial Sector	5
1.3	5th Mutual Fund Summit in 2009	9
1.4	Wealth Report by Goldman Sachs	11
1.5	Mutual Funds: An Overview	13
	1.5.1 Organization of a Mutual Fund	15
1.6	Mutual Fund Function within strict regulatory framework	18
	1.6.1 A Brief History of Mutual Funds and their Regulation in India	19
	1.6.2 Regulations pertaining to distribution and costs of mutual funds	21
	1.6.3 Regulation pertaining to transparency of mutual fund products	23
1.7	Association of Mutual Funds in India (AMFI)	25
	1.7.1 The objectives of Association of Mutual Funds in India	26
1.8	History of Mutual Fund in India	27
	1.8.1 First Phase – 1964-87	28
	1.8.2 Second Phase – 1987-1993 (Entry of Public Sector Funds)	28
	1.8.3 Third Phase – 1993-2003 (Entry of Private Sector Funds)	28
	1.8.4 Fourth Phase – since February 2003	29
1.9	Types of Mutual Funds	30
	1.9.1 By Structure	31
	1.9.2 By Investment Objective	32
	1.9.3 Other Schemes	33
1.10	Benefits of Mutual Fund investment	34

1.11	Limitation of Mutual Fund Investment	37
1.12	Mutual Fund Accounting	38
	1.12.1 Performance Evaluation of Mutual Funds	39
	1.12.2 Presentation of Accounts	39
	1.12.3 Accounting Policies	40
	1.12.4 Annual Report	41
1.13	The Risk-Return Trade-off	42
	1.13.1 Risk associated with Mutual funds	42
1.14	Recent Trends in Mutual Fund industry	46
1.15	Current Scenario of the Mutual Fund Industry	47
1.16	Growth in Asset Under Management (AUM)	49
	1.16.1 AUM Growth	49
	1.16.2 AUM Base and growth relative to the global industry	49
	1.16.3 AUM to GDP Ratio	50
1.17	Impact of the Global Financial Crisis	51
1.18	Future Scenario	54
1.19	Recommendation on "Launch of Dedicated Infrastructure Funds" (DIF's) by Mutual Funds Companies	55
1.20	Uttarakhand at a Glance	57
	1.20.1 Geography and Location	57
	1.20.1 Recent Developments in Uttarakhand State	63
1.21	Household Savings in Uttarakhand State	63

Chapter 2

REVIEW OF LITERATURE

Introduction

2.1	Mutual Fund: A Global Perspective	68
2.2	Mutual Fund: The Indian Scenario	83
2.3	Theories of Mutual Fund	99
	2.3.1 Theories of Regulation	99
	2.3.2 Theories of Risk Measurement	102
2.4	Empirical Review	104
	2.4.1 Review of Studies on Mutual Funds performance	104
	2.4.2 Review of Empirical Studies on Mutual Fund Costs and Fees	107
	2.4.3 Empirical Studies on Fund Size and Returns	109
	2.4.4 Fund Style and Fund Returns	110
2.5	Empirical studies on Indian Mutual Funds	111

Chapter 3

RESEARCH METHODOLOGY

Introduction

3.1	Rationale of the Study	129
3.2	Statement of the Problem	130
3.3	Objectives of the Study	131
3.4	Scope of the Study	132
3.5	Research Design	133
	3.5.1 Data Collection	133
3.6	Sampling Frame	134
	3.6.1 Secondary Data Collection	134
	3.6.2 Primary Data Collection	136
3.7	Data Analyses & Interpretation	136
	3.7.1 Tools for Secondary Data Analysis	136
	3.7.2 Tools for Primary Data Analysis	146
3.8	Formulation of Hypotheses	148
3.9	Limitations of the Study	149

Chapter 4

ANALYSIS OF DATA & DATA INTERPRETATION

Part A- Secondary Data Analysis **152**

4.1 Risk and Return Analysis 153

4.2 Results of Sharpe and Treynor Ratio 156

4.3 Result of Jensen Alpha Model 158

4.4 Fama's Component of Investment Performance 159

4.4.1 Performance on Risk 159

4.4.2 Performance on Diversification 159

4.4.3 Performance on Net Selectivity 159

Conclusion 162

Part B- Primary Data Analysis **165**

4.5 Sample Profile of Investors 165

4.5.1 Gender of Investors 166

4.5.2 Age of Investors 167

4.5.3 Annual Income 168

4.5.4 Annual savings 169

4.5.5 Investment in Mutual fund as a % of Savings 170

4.5.6 Education Level 171

4.5.7 Name of the Mutual Fund Scheme 172

4.5.8 Month of Investment 173

4.5.9 Area profile of Investors 175

4.6 Study of Investment consultant recommendations 176

4.6.1 Spearman's Coefficient of Correlation 177

4.6.2 Determination of underlying factors affecting the choice of investors in investing into sectoral mutual fund schemes 181

Conclusion 185

Chapter 5

PERFORMANCE OF DEDICATED INFRASTRUCTURE FUNDS

Introduction

5.1 Infrastructure Financing 190

5.2 Visible Growth Prospects 190

5.3 Policy Reforms to provide huge business potential 191

5.4 Infrastructure spending to remain strong in XIIth Five Year Plan 191

5.5 Improving liquidity conditions 192

5.6 Infrastructure funds: More than a Sectoral Fund 192

5.7 Infrastructure Companies: Underperformed in the Early Global Economic Recovery 193

5.8 Key Points for Infrastructure Funds 193

5.9 Infrastructure gets a massive push in India 194

5.10 Infrastructure funds in India and their sector allocation 195

5.11 Assets growth of Infrastructure funds have not kept pace with markets 196

5.12 Performance Attribution analysis points to Industrial Materials, Energy and Utilities sectors as the main culprits for underformance. 196

5.13 Performance of Dedicated Infrastructure Schemes vis-à-vis Diversified equity mutual fund schemes 197

5.14 Bull and Bear Markets. 200

Conclusion

Chapter 6

FUTURE SCOPE OF GROWTH OF SECTORAL MUTUAL FUNDS

Introduction

6.1	Areas of Concern	205
	6.1.1 Low level of Customer Awareness	205
	6.1.2 Inadequate reach of funds / distributors to retail investors	206
	6.1.3 Limited innovation in product offering	206
	6.1.4 Multiple Regulatory Frameworks	207
6.2	Future Outlook	207
6.3	Eight Indian MFs in World's 25 best funds in a decade	209
6.4	Investor contribution remains skewed towards the corporate sector	211
6.5	All roads lead to increased investor awareness	213
6.6	Financial Inclusion: The new buzz in the Financial Services Sector	214
	6.6.1 Reaching out to Tier 2 & Tier 3 cities	214
	6.6.2 Investor awareness has to spread its wings to lead sustainable Growth of the Industry	215
6.7	The industry adapts to Changing Regulations	216
	6.7.1 Entry Load	216
	6.7.2 Direct Tax Code	217

6.7.3 Documentation 218

6.7.4 Disclosure of Investor Complaints in the Annual Report 218

6.7.5 Fund of Fund Schemes 218

6.8 Next step for the Mutual Fund Industry 219

6.8.1 Diverse Range of Products 219

6.8.2 Regulation for MF Distributors 219

6.8.3 Recommendations to re-visit the eligibility norms of AMC's 220

6.8.4 Trading through stock exchange platforms 220

6.8.5 Real Estate Mutual Funds 221

Conclusion 225

Chapter 7

SUMMARY, CONCLUSIONS AND SUGGESTIONS

7.1	Summary	228
7.2	Conclusions	231
7.3	Suggestions	233

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ANNEXURES

Questionnaire for Investment Consultant/ Broker **Annexure I**

Name of the Investment Consultant/ Broker: _____
Designation: _____
Company: _____
Address _____
Time since working as Investment Consultant/ Broker: _____Yrs_____Months

Please mark your degree of agreement by putting a tick (√) with respect to the following points.

Selection of schemes	*Strongly Disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
Points	*1*	*2*	*3*	*4*	*5*

S.No	Particulars	1	2	3	4	5
1	The **large size of fund** influences the investors to invest in sectoral mutual fund schemes.					
2	Investors are aware of **high risk factor** involved in sectoral mutual fund scheme investment.					
3	Investors restrain in paying e**ntry & exit Load** on sectoral mutual fund schemes.					
4	**Existence of scheme** in the past period influences investors to invest in sectoral mutual fund scheme.					
5	Huge commissions and promotions induce you to sell **NFO's** for sectoral mutual fund schemes					
6	**Past performance record** of Sectoral mutual fund scheme is an indicator for future performance.					
7	**Market timing factor** affects investment in sectoral mutual fund schemes.					
8	**Advertising** affects sales of sectoral mutual funds schemes.					
9	**Reputation of portfolio manager** affects investment in sectoral mutual funds schemes.					
10	Rating by **credit agency** induces investor to invest in sectoral mutual fund schemes.					
11	Sectoral mutual fund schemes with **tax benefit** are favorites amongst investors					
12	In your opinion, do investors look for **disclosure of NAV** of sectoral mutual fund schemes on every trading day while investing					
13	**Fringe benefit** like free Insurance, free credit cards etc., affects investment in sectoral mutual fund schemes.					
14	In your opinion do investors get affected by **recommendation of their friends/ relatives** for investment in sectoral mutual fund schemes.					
15	**After sale service** offered by brokers/Investment Consultant affects investment in sectoral mutual fund schemes.					
16	**Fund manager's expertise** in money management of sectoral mutual fund schemes affects investment decisions of investors.					
17	**Brand name** affects investment decision in sectoral mutual fund schemes for investors.					
18	**Capital appreciation** is one of the motive behind investment in in sectoral mutual fund schemes.					

Questionnaire for Investors **Annexure II**

Performance Evaluation of Sectoral Mutual Fund Schemes

(**Note: This information is purely for the purpose of research and will never be disclosed to anyone anywhere)**

Name_____ **Gender**: Male / Female **Age**_____

Annual Income: ☐ less than 2 lacs ☐ 2 to 5 lacs ☐ 5 to 10 lacs ☐ More than 10 lacs

Annual Savings: ☐ less than 50000 ☐ 50000 to 1 lacs ☐ More than 1 lacs

Investment in Mutual fund: Yes/ No. If **yes *please specify:***

- ***The name of Scheme***_____
- **Investment in mutual fund as % of Savings:** _____%
- **Month of Investment**_____

Education: ☐ Intermediate ☐ Undergraduate ☐ Graduate ☐ Post Graduate ☐ Professional

Please mark your degree of agreement by putting a tick (√) with respect to the following points.

Selection of schemes	***Strongly Disagree***	***Disagree***	***Neutral***	***Agree***	***Strongly Agree***
Points	*1*	*2*	*3*	*4*	*5*

S.No	**Particulars**	**1**	**2**	**3**	**4**	**5**
1	The **large size of fund** induces you to invest in sectoral mutual fund schemes.					
2	**High risk factor** is involved in sectoral mutual fund schemes investment.					
3	For investment in sectoral mutual fund schemes paying **entry and exit load** are the concern areas.					
4	Investor tends to invest in sectoral schemes which have **existence in the past**.					
5	Investors invest in **NFO's** of sectoral mutual fund schemes as compared to existing schemes in spite of high commission.					
6	**Past performance record** of Sectoral mutual fund scheme is also considered an indicator for future performance.					
7	**Time factor** is considered while making investment in sectoral mutual fund schemes.					
8	**Advertising**, Pamphlets, etc. induces you to invest in sectoral mutual funds schemes.					
9	Before investing in sectoral mutual funds schemes, investor looks for the **reputation of portfolio manager.**					
10	Rating by **credit agency** induces you to invest in sectoral mutual fund schemes.					
11	Sectoral mutual fund schemes with **tax benefit affects investment** decisions.					
12	Investor look for **disclosure of NAV** of sectoral mutual funds schemes on every trading day					
13	**Fringe benefit** like free insurance, free credit cards induces investors to invest in sectoral mutual fund schemes					
14	**Recommendation of friends/ relatives** induces investors in making investment in sectoral mutual fund schemes.					
15	**After sale service** offered by Brokers/Investment Consultant induces you to invest in sectoral mutual fund schemes.					
16	**Fund manager's expertise in money management** of sectoral mutual fund schemes affects your investment decisions.					
17	**Brand Name** affects your investment decisions in sectoral mutual fund schemes					
18	**Capital appreciation** is one of the motive behind investment in sectoral mutual fund schemes.					