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A STUDY ON THE PERFORMANCE OF MUTUAL FUNDS SCHEMES

**A PROJECT REPORT**

**Submitted by**

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Reg. No. 0820400045

**In partial fulfilment of the requirements**

**for the award of the degree**

**of**

**MASTER OF BUSINESS ADMINISTRATION**

**JUNE-2010**

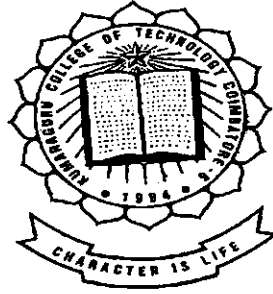
**KCT Business School**

**Department of Management Studies**

**Kumaraguru College of Technology**

**(An autonomous institution affiliated to Anna University, Coimbatore)**

**Coimbatore – 641 006**



DEPARTMENT OF MANAGEMENT STUDIES

KUMARAGURU COLLEGE OF TECHNOLOGY (AUTONOMOUS)

COIMBATORE

**BONAFIDE CERTIFICATE**

Certified that this project titled "A STUDY ON THE PERFORMANCE OF MUTUAL FUNDS SCHEMES" is the bonafide work of Mr.R.Selvanathan (REG NO 0820400045) who carried out this project under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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PROF Dr. S.V.DEVANATHAN

Director

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Examiner II

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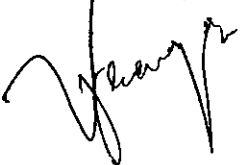
## CERTIFICATE

This is to certify that **Mr.R.SELVANATHAN (Reg. No. 0820400045)** Master of Business Administration from Kumaraguru College Of Technology, Coimbatore, had successfully completed his project titled **“AN ANALYTICAL STUDY ON THE PERFORMANCE OF MUTUAL FUND SCHEMES ”** in our branch during the period March 15,2010 to June 9,2010.

During the project period his character and conduct was good.

We wish him all success in his future endeavors.

Authorized Signatory



Vincent George.S

Business Development Manager

## DECLARATION

I hereby state that the dissertation report entitled “A STUDY ON THE PERFORMANCE OF MUTUAL FUNDS SCHEMES” submitted in partial fulfillment for the award of **MASTER OF BUSINESS ADMINISTRATION** to the Anna University, is a record of independent research work carried out by me under the guidance of **PROF.MR.K.R.AYYASAMY**, Department of Management Studies, Kumaraguru College Of Technology, Coimbatore. I also declare that this dissertation report is result of my own effort and has not been submitted earlier for the award of any other Degree / Diploma / Associate ship and prize by Anna University or any other university.

Place: Coimbatore

Date:



**R.SELVANATHAN**

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## **EXECUTIVE SUMMARY:**

Stock markets are highly risky and volatile. It's very difficult to predict the stock market. Very minute changes in stock market affects the share prices of an organization to a very large extent. Therefore, investment in stock market involves a high amount of risk. In order to reduce the risk involved in stock market, Mutual Fund came into existence. In Mutual Fund, investment is diversified by investing in several types of investments like shares, debt market instruments, money market instrument and so on. Depending upon the entry and exist criterion mutual funds can be divided into Open ended and Close ended funds. It becomes necessary to evaluate the Risk and Return involved in mutual fund to guide the clients with better ideas to make them invest in the right fund depending on their risk taking capability. In this study, with the help of variables like Alpha, Beta, Sharpe's index, Treynor's index, Standard deviation and Mean Return Rank Statement have been arrived for all categories of funds. The Rank Statement gives the ranks based on Sharpe, Treynor, Jensen index of the funds taken for study. This would be very much helpful for the clients to make the right investment and also acts as an indicator to choose the right funds.

## TABLE OF CONTENTS

<b>Chapter</b>	<b>Contents</b>	<b>Page No.</b>
	<b>ACKNOWLEDGEMENT</b>	
	<b>EXECUTIVE SUMMARY</b>	
	<b>LIST OF TABLES</b>	
<b>1</b>	<b>INTRODUCTION</b>	<b>1</b>
<b>1.2</b>	<b>Review of Literature</b>	<b>18</b>
<b>1.3</b>	<b>Statement of the Problem</b>	<b>21</b>
<b>1.4</b>	<b>Objectives of the Study</b>	<b>21</b>
<b>1.6</b>	<b>Scope of the Study</b>	<b>21</b>
<b>1.7</b>	<b>Methodology</b>	<b>21</b>
<b>1.7.1</b>	<b>Type of Study</b>	<b>21</b>
<b>1.7.2</b>	<b>Sample Design</b>	<b>22</b>
<b>1.7.3</b>	<b>Method of Data Collection</b>	<b>22</b>
<b>1.7.5</b>	<b>Tools used of Analysis</b>	<b>22</b>
<b>2</b>	<b>ORGANISATION PROFILE</b>	<b>24</b>

<b>Chapter</b>	<b>Contents</b>	<b>Page No.</b>
<b>2.1</b>	<b>History of the Organisation</b>	<b>24</b>
<b>2.2</b>	<b>Management team</b>	<b>27</b>
<b>3</b>	<b>DATA ANALYSIS &amp; INTERPRETATION</b>	<b>31</b>
<b>4.1</b>	<b>Findings</b>	<b>77</b>
<b>4.2</b>	<b>Suggestions</b>	<b>81</b>
<b>4.3</b>	<b>Conclusion</b>	<b>86</b>
	<b>BIBLIOGRAPHY</b>	<b>87</b>



**LIST OF TABLES**

<b>TABLE NO</b>	<b>TITLE</b>	<b>PAGE NO</b>
3.1	<b>SBI ARBITRAGE FUND</b>	31
3.2	<b>SBI MAGNUM BALANCED FUND</b>	33
3.3	<b>SBI MAGNUM BLUECHIP FUND</b>	35
3.4	<b>LIC MF BALANCED FUND</b>	37
3.5	<b>LIC MF BOND FUND</b>	39
3.6	<b>LIC MF EQUITY FUND</b>	41
3.7	<b>UTI BOND FUND</b>	43
3.8	<b>UTI BANKING FUND</b>	45
3.9	<b>UTI BOND ADVANTAGE</b>	47
3.10	<b>RELIANCE-BANKING FUND</b>	49
3.11	<b>RELIANCE DIVERSIFIED SECTOR FUND</b>	51
3.12	<b>RELIANCE EQUITY ADVANTAGE FUND</b>	53
3.13	<b>TATA CONTRA FUND</b>	55
3.14	<b>TATA DYNAMIC BOND FUND</b>	57
3.15	<b>TATA FIXED HORIZON FUND</b>	59
3.16	<b>BIRLA SUNLIFE BOND INDEX FUND</b>	61
3.17	<b>BIRLA SUNLIFE BALANCED FUND</b>	63

3.18	<b>BIRLA SUNLIFE CASH PLUS</b>	65
3.19	<b>TOTAL SCHEMES COMPARISON – SYSTEMATIC RISK</b>	67
3.20	<b>TOTAL SCHEMES COMPARISON – TOTAL RISK</b>	69
3.21	<b>TOTAL SCHEME COMPARISON – SHARPE PERFORMANCE INDEX</b>	71
3.22	<b>TOTAL SCHEME COMPARISON – TREYNOR PERFORMANCE INDEX</b>	73
3.23	<b>TOTAL SCHEME COMPARISON – JENSEN ALPHA</b>	75

<b>CHART NO</b>	<b>TITLE</b>	<b>PAGE NO</b>
3.19.1	<b>TOTAL SCHEMES COMPARISON – SYSTEMATIC RISK</b>	68
3.20.1	<b>TOTAL SCHEMES COMPARISON – TOTAL RISK</b>	70
3.21.1	<b>TOTAL SCHEME COMPARISON – SHARPE PERFORMANCE INDEX</b>	72
3.22.1	<b>TOTAL SCHEME COMPARISON – TREYNOR PERFORMANCE INDEX</b>	74
3.23.1	<b>TOTAL SCHEME COMPARISON – JENSEN ALPHA</b>	76

## CHAPTER 1

### 1. INTRODUCTION

An Investment is the use of capital to create more money through the acquisition of a security that promises the safety of the principal and generates a reasonable return.

### Industry Scenario

Since 1991, there has been a radical change in the Indian economic environment. In the early 90's the country was confronted with a severe crisis due to a sharp plunge in the foreign exchange reserves, a downgrading of the credit rating, suspension of foreign private capital flows and a decline in the industrial output. India was on the verge of defaulting on its foreign debt obligations. The only way was to initiate reforms and a structural adjustment program. The country would have to lift restrictions on foreign investments, on the flow of private capital and on private initiatives in many area of economic development.

The structural reforms focused on liberalizing industry, trade, taxation and foreign investment, and on reforming the financial sector.

**In Pipeline of Mutual Fund.** A company that invests in securities of other companies; using funds acquired by selling shares to investors. A mutual fund is one type of Investment Company.

Any purchase that fails to meet the safety and returns criteria is not an investment. It could either be speculation or gambling.

For instance, betting or buying lottery tickets could make you lose all your money or give huge unreasonable returns. This is gambling and not an investment. There is a very thin line differentiating the two and one has to be careful not to cross that line.

- SAFETY
- LIQUIDITY
- RETURN

The order is quite clear: Safety- always first, then the Liquidity- next and Return- third. A lot of people fall prey to the lure of high returns, and usually, this has resulted in a LOSS.

## **INVESTMENT OPTIONS AVAILABLE IN INDIA**

There are basically two kinds of investment options available for the investor on the basis of their Risk, Return and time horizon. As per the Return is concern one can earn a fixed rate of interest and other where the rates fluctuate depending on certain factors prevailing in the market at that point of time.

Given below are the options available in each category.

### **Investment avenues in the last decades**

The Indian investors in the last decades were very risky so the saving was focused in high fixed earning investment. Also there were not many investment options and investments with sovereign guarantee were preferred. This was partly due to high interest rates in India.

### **Investment Avenues**

#### **Fixed Return Options:**

1. Post Office (KVP, NSC, M.I.S.)
2. Public Provident Fund
3. Bank Fixed Deposits
4. Government Securities or Gilts
5. RBI Taxable Bonds
6. Insurance
7. Company Debentures

#### **Variable Return Options:**

1. Mutual Fund
2. Shares and Stock Market
  - Primary Market (IPO)
  - Secondary Market
3. Bullion Market (Gold & Silver)
4. Property
5. Foreign Exchange Assets

## **About the Industry**

### **Definition:**

**Mutual Fund is a pool of money, collected from investors, and is invested according to certain investment objective.**

**Mutual Fund is the pooling of Money from the retail investors to the corporate investor's for Sustainable growth of the investments.**

### **Introduction:-**

A Mutual Fund is a pool of money, collected from investors, and is invested according to certain investment objectives with a common financial goal. A Mutual Fund is created when investors put their money together. The most important characteristic of a mutual fund is that the contributors and the beneficiaries of the fund are the same class of people, namely the investors.

The money thus collected is invested by the fund manager in different type of securities depending upon the objective of the scheme. These could range from shares to debentures to money market instruments. The income earned by these instruments and the capital appreciation realized by the scheme are shared by its unit holders in proportion to the number of units owned by them. 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. Each Mutual Fund scheme has a defined investment objective and strategy.

### **Characteristics:**

- A mutual fund actually belongs to the investors who have pooled their funds.
- A mutual fund is managed by investment professionals and other service providers, who earn a fee for their services, from the fund.
- The pool of funds is invested in a portfolio of marketable investments. The value of the portfolio is updated every day.
- The investor's share in the fund is denominated by 'units'. The value of the units changes with change in the portfolio's value, every day.

## **History of the Indian Mutual Fund Industry:**

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 the. The history of mutual funds in India can be broadly divided into four distinct phases.

### **First Phase: 1964-1987**

An Act of Parliament established Unit Trust of India (UTI) on 1963. It was set up by the Reserve Bank of India and functioned under the Regulatory and administrative control of the RBI. 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 AUM.

### **Second Phase: 1987-1993 (Entry of Public Sector Funds)**

In 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.

### **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 industry now functions under the SEBI (Mutual Fund) Regulations 1996. As at the end of January 2003; there were 33 mutual funds with total assets of Rs. 1,21,805 crores. The

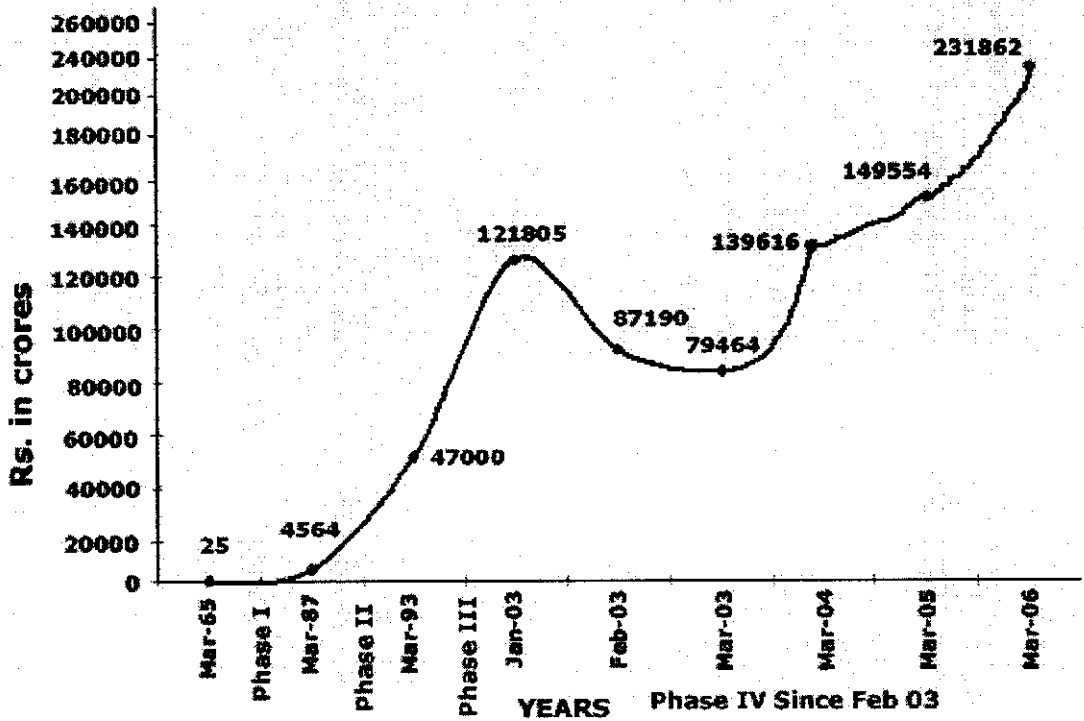
### Fourth Phase – Since February 2003

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 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.

### Growth in Assets under Management

Graph 2



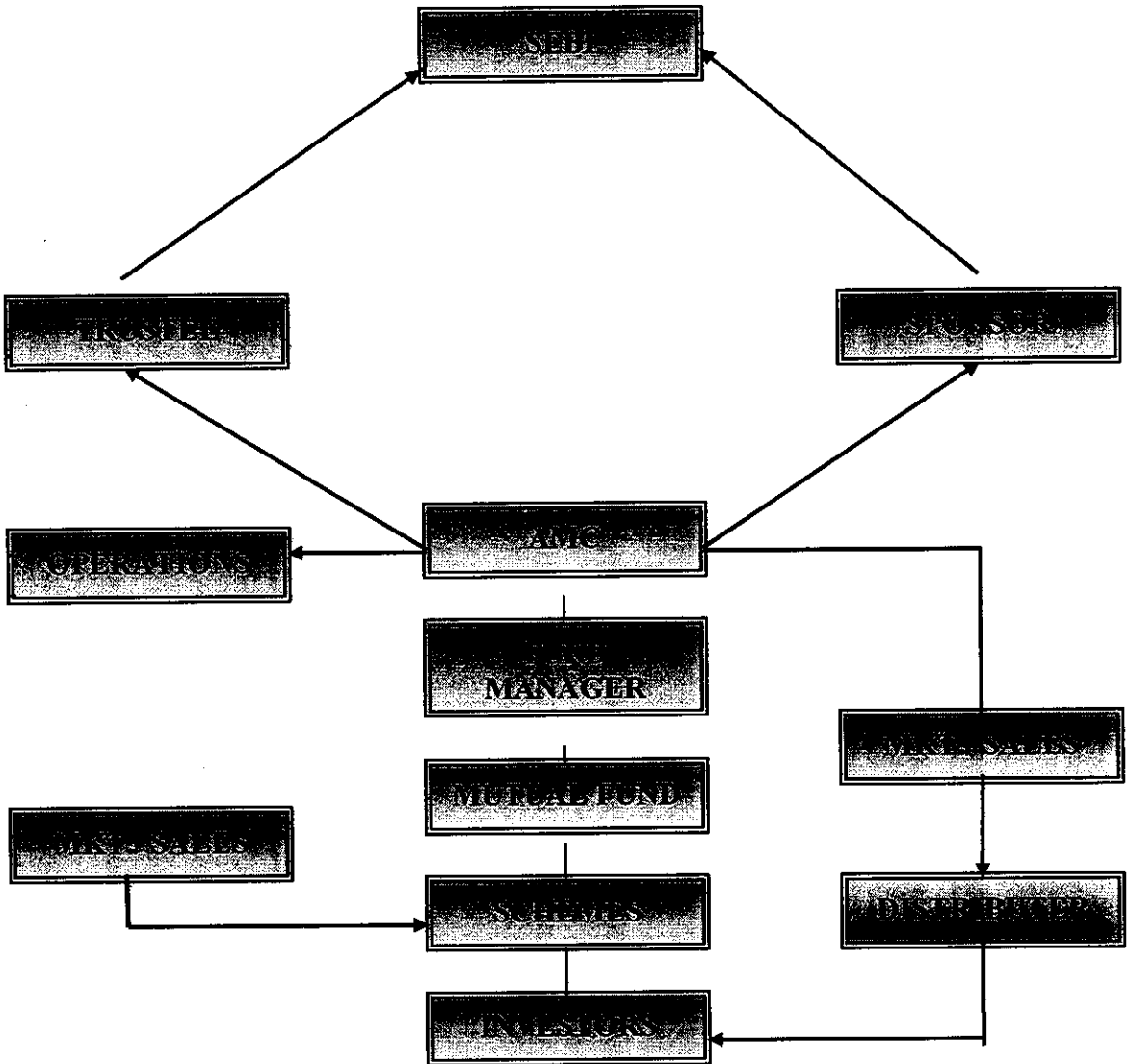
Source : [www.amfiindia.com](http://www.amfiindia.com)



# STRUCTURE OF ASSET MANAGEMENT COMPANY (AMC)

## MUTUAL FUND STRUCTURE

Diagram 5



Sources : [www.hdfcfund.com](http://www.hdfcfund.com)

## **The Structure Consists**

The structure of mutual funds in India is governed by the SEBI Regulations, 1996. These regulations make it mandatory for mutual funds to have a 3-tier structure of Sponsors-Trustee-AMC (Asset Management Company).

The Sponsor is the promoter of mutual fund, and appoints the Trustee. The Trustees are responsible to the investors in the mutual funds, and appoint the AMC for managing the investment portfolio. The AMC is the business face of the mutual funds, as it manages all the affairs of mutual funds. The mutual funds and AMC have to be registered by the SEBI.

### **Sponsor**

Sponsor is the person who acting alone or in combination with another body corporate establishes a mutual fund. Sponsor must contribute atleast 40% of the networth of the Investment Managed and meet the eligibility criteria prescribed under the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996. The Sponsor is not responsible or liable for any loss or shortfall resulting from the operation of the Schemes beyond the initial contribution made by it towards setting up of the Mutual Fund

### **Trust**

The Mutual Fund is constituted as a trust in accordance with the provisions of the Indian Trusts Act, 1882 by the Sponsor. The trust deed is registered under the Indian Registration Act, 1908.

### **Trustee**

Trustee is usually a company (corporate body) or a Board of Trustees (body of individuals). The main responsibility of the Trustee is to safeguard the interest of the unit holders and inter-alia ensure that the AMC functions in the interest of investors and in accordance with the Securities and Exchange Board of India (Mutual Funds) Regulations, 1996, the provisions of the Trust Deed and the Offer Documents of the respective Schemes. At least 2/3rd directors of the Trustee are independent directors who are not associated with the Sponsor in any manner.

## **Asset Management Company (AMC)**

The AMC is appointed by the Trustee as the Investment Manager of the Mutual Fund. The AMC is required to be approved by the Securities and Exchange Board of India (SEBI) to act as an asset management company of the Mutual Fund. At least 50% of the directors of the AMC are independent directors who are not associated with the Sponsor in any manner. The AMC must have a net worth of at least 10 crores at all times.

## **Registrar and Transfer Agent**

The AMC if so authorized by the Trust Deed appoints the Registrar and Transfer Agent to the Mutual Fund. The Registrar processes the application form, redemption requests and dispatches account statements to the unit holders.

## **Custodian**

A custodian handles the investment back office of a mutual fund. Its responsibilities include receipt and delivery of securities, collection of income, distribution of dividends, and segregation of assets between schemes. The sponsor of a mutual fund cannot act as a custodian to the fund. For example, Deutsche Bank is a custodian, but it cannot service Deutsche Mutual Fund, its mutual fund arm.

## **Depository**

Indian capital markets are moving away from having physical certificates for securities, to ownership of these securities in 'dematerialized' form with a Depository. sponsor hires an asset management company to invest the funds according to the investment objective. It also hires another entity to be custodian of the assets of the funds and perhaps a third one to handle registry work for holders (subscribers) of the funds. In the Indian context, the sponsors promote the Asset Management Company also in which it holds majority stake. In many cases a sponsor can hold a 100% stake in Asset Management Company (AMC). This has floated different mutual funds schemes and also acts as an assets manager for the funds collected under the scheme.

### **Risk Associated With Mutual Fund:-**

- **Interest Rate Risk** Bond price move inversely to changes in interest rate. If interest rate go up bond price come down and vice-versa changes in bond price will affect the NAV of income funds since NAV is compiled on a daily basis, the effect of interest rate fluctuation will get reflected in the NAV.
- **Liquidity Risk** This refer to at which security can be sold at or near its true value. The primary assessment of liquidity risk is the spread between the bid price and the offer price quoted by dealer.
- **Credit Risk** Credit risk or default risk refers to the risk that on investors of a fixed income security may default. Because of the risk, debentures are sold at a fixed spread above these offered a treasury security, which are considered as risk free. Normally, fixed income security will fluctuate depending upon the actual changes in the provided level of credit risk and actual event of default.
- **Market Risk** The prices of shares are subject to wide price fluctuations depending upon market conditions over which nobody has a control. Moreover, every economy has to pass through a cycle-Boom, Recession, Slump and Recovery. The phase of the business cycle affects the market conditions to a larger extent.

## **Types of Mutual Fund**

A Mutual Fund may float several schemes, which may be classified on the basis of its structure, its investment objectives and other objectives.

### **Mutual Fund schemes by structure:**

1. **Open Ended Scheme:** Open-Ended fund scheme is open for subscription all through year. An investor can buy or sell the units at "NAV" (Net Asset Value) related price at any time.
2. **Close Ended Scheme:** A Close-Ended fund is open for subscription only during a specified period, generally at the time of initial public issue. The Close-Ended fund scheme is listed on the some stock exchanges where an investor can buy or sell the units of this type of scheme.
3. **Interval Schemes:** These combine the features of open- ended and close-ended schemes. They may be traded on the stock exchange or may be open for sale or redemption during pre- determined intervals at NAV related prices.

### **Mutual Fund schemes by Investment Objectives:**

#### **(1) EQUITY FUNDS**

These funds invest a major part of their corpus in equities. The composition of the fund may vary from scheme to scheme and the fund manager's outlook on various scrip's.

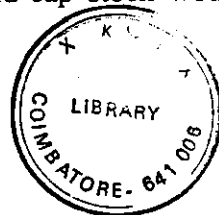
The Equity Funds are sub-classified depending upon their investment objective, as follows:

1. **Growth Fund :** Aim to provide capital appreciations over the medium to long term. These schemes normally invest a majority of their funds in equities and are willing to bear short term decline in value for possible future appreciation. These schemes are not for investors seeking regular income or needing their money back in the short-term
2. **Diversified Equity Fund :** Diversified equity funds are the most popular among investors. They invest in many stocks across many sectors, and because they have the freedom to chop and churn their portfolios as they like, diversified equity funds are a good proxy to the stock market. If a general exposure to

stocks, and even in unlisted stocks. They can invest in which ever sector they like, in what ever ratio they like.

3. **Equity – Linked Savings Schemes (ELSS)** : Equity – linked savings schemes (ELSS) are diversified equity funds that additionally offer income tax benefits to individuals. ELSS is one of the many section 80c instruments, along with the more popular debt options like the PPF, NSC and infrastructure bonds. In this Section 80c grouping, ELSS is unique. Being the only instrument to offer a total equity exposure.
4. **Index Fund** : An index fund is a diversified equity fund; with a difference- a fund manager has absolutely no say in stock selection. At all times, the portfolio of an index fund mirrors an index, both in its choice of stocks and their percentage holding. As of March 2004, equity index funds tracked either the Sensex or the Nifty. So, an index fund that mirrors the Sensex will invest only in the 30 Sensex stocks, that too in the same proportion as their weightage in the index.
5. **Sector Fund** : Sector funds invest in stocks from only one sector, or a handful of sectors. The objective is to capitalize on the story in the sectors, and offer investors a window to profit from such opportunities. It's a very narrow focus, because of which sector funds are considered the riskiest among all equity funds.
6. **Mid – Cap Fund** : These are diversified funds that target companies on the fast – growth trajectory. In the long run, share prices are driven by growth in a company's turnover and profits. Market players refer to them as 'mid-sized companies' and 'mid-cap stocks' with size in this context being benchmarked to a company's market value. So, while a typical large cap stock would have a market capitalization of over Rs 1,000 crores, a mid-cap stock would have a market value of Rs 250-2,000 crores.

P-3208



## (II) DEBT FUNDS

These Funds invest a major portion of their corpus in debt papers. Government authorities, private companies, banks and financial institutions are some of the major issuers of debt papers. By investing in debt instruments, these funds ensure low risk and provide

Debt funds are further classified as:

1. **Gilt Funds:** Invest their corpus in securities issued by Government, popularly known as GOI debt papers. These Funds carry zero Default risk but are associated with Interest Rate risk. These schemes are safer as they invest in papers backed by Government.
2. **Income Funds:** Income funds aim to maximize debt returns for the medium to longer term. Invest a major portion into various debt instruments such as bonds, corporate debentures and Government securities.
3. **MIPs:** Invests around 80% of their total corpus in debt instruments while the rest of the portion is invested in equities. It gets benefit of both equity and debt market. These scheme ranks slightly high on the risk-return matrix when compared with other debt schemes.
4. **Short Term Plans (STPs):** Meant for investors with an investment horizon of 3-6 months. These funds primarily invest in short term papers like Certificate of Deposits (CDs) and Commercial Papers (CPs). Some portion of the corpus is also invested in corporate debentures.
5. **Liquid Funds:** Also known as Money Market Schemes, These funds are meant to provide easy liquidity and preservation of capital. These schemes invest in short-term instruments like Treasury Bills, inter-bank call money market, CPs and CDs. These funds are meant for short-term cash management of corporate houses and are meant for an investment horizon of 1day to 3 months. These schemes rank low on risk-return matrix and are considered to be the safest amongst all categories of mutual funds.
6. **Floating Rate Funds:** These income funds are more insulated from interest rate than their conventional peers. In other words, interest rate changes, which cause the NAV of a conventional debt fund to go up or down, have little, or no, impact on NAVs of floating rate funds.

### **( III ) BALANCED FUNDS**

These funds, as the name suggests, are a mix of both equity and debt funds. They invest in both equities and fixed income securities, which are in line with pre-defined investment objective of the scheme. These schemes aim to provide investors with the best of both the worlds. Equity part provides growth and the debt part provides stability in returns.

Each category of funds is backed by an investment philosophy, which is pre-defined in the objectives of the fund. The investor can align his own investment needs with the funds objective and invest accordingly.

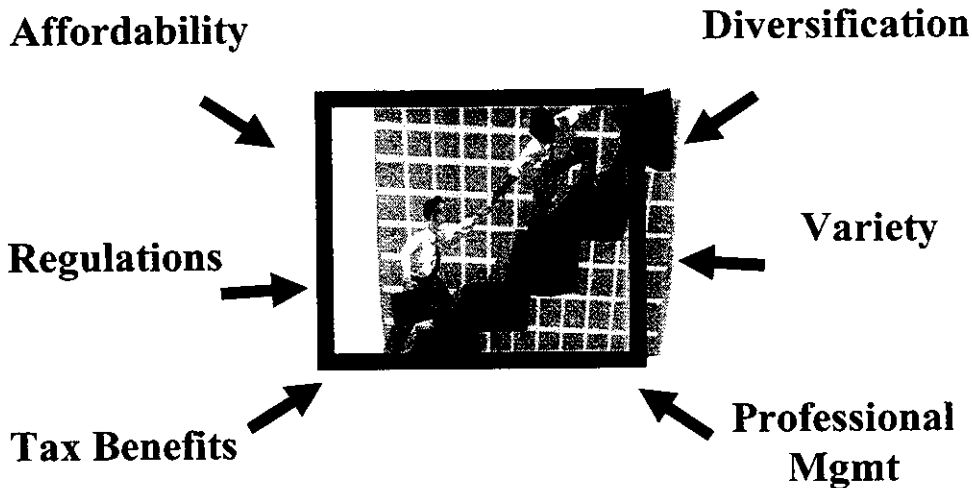
### **( IV ) HYBRID FUNDS:-**

1. **Growth and Income Fund:** Strike a balance capital appreciation and income for the investors. In these funds portfolio is a mix between companies with good dividend paying record and those with potential capital appreciation. These funds are less risky than growth funds bit more than income funds.
2. **Asset Allocation Fund :** These funds follow variable asset allocation policy. These move in an out of an asset class (equity, debt, money market or even non-financial assets). Asset allocation funds are those, which follow more stable allocation policies like balanced funds. Those, which flexible allocation policies, are like aggressive growth or speculative funds.



## ADVANTAGES OF MUTUAL FUND

Diagram 6



Source : [www.amfiindia.com](http://www.amfiindia.com)

Mutual Funds offer several benefits to an investor that are unmatched by the other investment options. Last six years have been the most turbulent as well as exiting ones for the industry. New players have come in, while others have decided to close shop by either selling off or merging with others. Product innovation is now passé with the game shifting to performance delivery in fund management as well as service. Those directly associated with the fund management industry like distributors, registrars and transfer agents, and even the regulators have become more mature and responsible.

- 1. Affordability :** Small investors with low investment fund are unable to invest in high-grade or blue chip stocks. An investor through Mutual Funds can be benefited from a portfolio including of high priced stock.
- 2. Diversification :** Investors investment is spread across different securities (stocks, bonds, money market, real estate, fixed deposits etc.) and different sectors (auto, textile, IT etc.). This kind of a diversification add to the stability of returns, reduces the risk for example during one period of time equities might under perform but bonds and money market instruments might do well do well and

- 3.Variety :** Mutual funds offer a tremendous variety of schemes. This variety is beneficial in two ways: first, it offers different types of schemes to investors with different needs and risk appetites; secondly, it offers an opportunity to an investor to invest sums across a variety of schemes, both debt and equity
- 4.Professional Management :** Mutual Funds employ the services of experienced and skilled professionals and dedicated investment research team. The whole team analyses the performance and balance sheet of companies and selects them to achieve the objectives of the scheme.
- 5.Tax Benefits :** Depending on the scheme of mutual funds, tax shelter is also available. As per the Union Budget-99, income earned through dividends from mutual funds is 100% tax free. Under ELSS of open-ended equity-oriented funds an exemption is provided up to Rs. 100,000/- under section 80C.
- 6.Regulation :** 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.

### **Other Benefits**

- **Potential Return :** 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-ended schemes, investor can get money promptly at net asset value related prices from the Mutual Fund itself. In close-ended schemes the units can be sold on a stock exchange at the prevailing market price or avail of the facility of direct repurchases at NAV related prices which some close-ended and interval schemes offer you periodically.
- **Transparency :** Mutual Funds have to disclose their holdings, investment pattern and the necessary information before all investors under a regulation framework.

dividend reinvestment plans; you can systematically invest or withdraw funds according to your needs and convenience.

## **DISADVANTAGES OF MUTUAL FUND:**

The following are the disadvantages of investing through mutual fund:

- **No control over cost** : Since investors do not directly monitor the fund's operations, they cannot control the costs effectively. Regulators therefore usually limit the expenses of mutual funds.
- **No tailor-made portfolio** : Mutual fund portfolios are created and marketed by AMCs, into which investors invest. They can not made tailor made portfolio.
- **Managing a portfolio of funds** : As the number of funds increase, in order to tailor a portfolio for himself, an investor may be holding portfolio funds, with the costs of monitoring them and using hem, being incurred by him.
- **Delay in Redemption** : The redemption of the funds though have liquidity in 24-hours to 3 days takes formal application as well as needs time for redemption. This becomes cumbersome for the investors.
- **Non-availability of loans** : Mutual funds are not accepted as security against loan. The investor cannot deposit the mutual funds against taking any kind of bank loans though they may be his assets.

## **Facts about Mutual Fund**

Equity instruments like shares from only a part of securities held by Mutual Funds. Mutual Fund also invests in debt market, which is relatively much safer.

The biggest advantage of Mutual Funds is their ability to diversify the risk.

Mutual Funds exist in India since 1963. Mutual Fund market is much evolved in India and they're for last 60years.

Mutual Fund the best solutions for the people who want to manage their risk and get good returns.

The size of Mutual Fund market in India is Rs. 107728 crores.

According to the SEBI-NCAER survey of Indian Investor about 15 million of 8.7% of households have investe'd in Mutual Funds and about 23 millions are unit holders in India.

US-64 is very much a part of the market and is not immune to vagaries. The crisis

## Where Do Mutual Fund Invest?

Broadly mutual funds invest basically in 3 types of asset classes:

**Stocks:** Stocks represent ownership or equity in a company, popularly known as shares.

**Bonds:** These represent debt from companies, financial institutions or government agencies.

**Money market instruments:** This includes short term debt instrument such as treasury bills, certificate of deposits and inter-bank call money.

### What Is Net Asset Value ?

Net Asset Value (NAV) denotes the performance of a particular scheme of a mutual fund. Mutual funds invest the money collected from the investors in securities markets. In simple words, Net Asset Value is the market value of the securities held by the scheme. Since market value of securities changes every day, NAV of a scheme also varies on day to day basis. The NAV per unit is the market value of securities of a scheme divided by the total number of units of the scheme on any particular date. For example, if the market value of securities of a mutual fund scheme is Rs 200 lakhs and the mutual fund has issued 10 lakhs units of Rs. 10 each to the investors, then the NAV per unit of the fund is Rs.20. NAV is required to be disclosed by the mutual funds on a regular basis - daily or weekly - depending on the type of scheme.

### Basic Concepts and Loads in Mutual Fund

1. **Determination of NAV:** The NAV of the any scheme at any time shall be determined by dividing the net assets of the scheme by the number of outstanding units on the valuation date.

The NAV of the scheme will be calculated on daily basis:

$$\begin{aligned} & \text{Fair/market value of securities} + \text{Approved} \\ & \text{Income} + \text{Receivable} + \text{other assets} + \\ & \text{Unauthorized issue Exp. Accrued exp.-payables-} \\ & \text{Other liabilities} \end{aligned}$$

2. **Recurring Expenses:** The total annual recurring expenses of the scheme excluding issue or redemption expenses.
3. **Entry Load:** The load charged at the time of investment is known as entry load. It's meant to cover the cost that the AMC spends in the process of acquiring subscriber's commission payable to brokers, advertisements, register expenses etc. The load is recovered by way of charging a sale price higher than the prevailing NAV.
4. **Exist Load:** Some AMC do not charge an entry load but they charged an exist load i.e., they deduct a load before paying out the redemption proceeds. Psychologically, investors are much more willing to pay exist loads as compared to entry loads.

**Unit:** Units mean the investment of the unit holders in a scheme. Each unit represents one undivided share in the assets of a scheme. The value of each unit changes, depending on the performance of the fund.

## 1.1 BACKGROUND OF STUDY

Stock market is highly volatile and risky. In order to reduce the risk involved in the stock market mutual funds came into existence. Mutual funds can be classified into open ended mutual funds and close ended mutual funds depending on the mode of entry and exit into them. The risk and return varies based on different categories of mutual funds. This study gives an insight about the risk and return involved in top 3 mutual funds in public and private sectors.

## 1.2 LITERATURE REVIEW

Literature on mutual fund performance evaluation is enormous. A few research studies that have influenced the preparation of this paper substantially are discussed in this section.

Sharpe, William F. (1966) suggested a measure for the evaluation of portfolio performance. Drawing on results obtained in the field of portfolio analysis, economist Jack L. Treynor has

those used previously by incorporating the volatility of a fund's return in a simple yet meaningful manner.

Michael C. Jensen (1967) derived a risk-adjusted measure of portfolio performance (Jensen's alpha) that estimates how much a manager's forecasting ability contributes to fund's returns. As indicated by Statman (2000), the e SDAR of a fund portfolio is the excess return of the portfolio over the return of the benchmark index, where the portfolio is leveraged to have the benchmark index's standard deviation.

S.Narayan Rao , et. al., evaluated performance of Indian mutual funds in a bear market through relative performance index, risk-return analysis, Treynor's ratio, Sharpe's ratio, Sharpe's measure , Jensen's measure, and Fama's measure. The study used 269 open-ended schemes (out of total schemes of 433) for computing relative performance index. Then after excluding funds whose returns are less than risk-free returns, 58 schemes are finally used for further analysis. The results of performance measures suggest that most of mutual fund schemes in the sample of 58 were able to satisfy investor's expectations by giving excess returns over expected returns based on both premium for systematic risk and total risk.

Bijan Roy, et. al., conducted an empirical study on conditional performance of Indian mutual funds. This paper uses a technique called conditional performance evaluation on a sample of eighty-nine Indian mutual fund schemes .This paper measures the performance of various mutual funds with both unconditional and conditional form of CAPM, Treynor- Mazuy model and Henriksson-Merton model. The effect of incorporating lagged information variables into the evaluation of mutual fund managers' performance is examined in the Indian context. The results suggest that the use of conditioning lagged information variables improves the performance of mutual fund schemes, causing alphas to shift towards right and reducing the number of negative timing coefficients.

Mishra, et al., (2002) measured mutual fund performance using lower partial moment. In this paper, measures of evaluating portfolio performance based on lower partial moment are developed. Risk from the lower partial moment is measured by taking into account only those states in which return is below a pre-specified "target rate" like risk-free rate.

Kshama Fernandes(2003) evaluated index fund implementation in India. In this paper, tracking error of index funds in India is measured .The consistency and level of tracking errors obtained by some well-run index fund suggests that it is possible to attain low levels of tracking error under Indian conditions. At the same time, there do seem to be periods where certain index funds appear to depart from the discipline of indexation.

K. Pendaraki et al. studied construction of mutual fund portfolios, developed a multi-criteria methodology and applied it to the Greek market of equity mutual funds. The methodology is based on the combination of discrete and continuous multi-criteria decision aid methods for mutual fund selection and composition. UTADIS multi-criteria decision aid method is employed in order to develop mutual fund's performance models. Goal programming model is employed to determine proportion of selected mutual funds in the final portfolios.

Zakri Y.Bello (2005) matched a sample of socially responsible stock mutual funds matched to randomly selected conventional funds of similar net assets to investigate differences in characteristics of assets held, degree of portfolio diversification and variable effects of diversification on investment performance. The study found that socially responsible funds do not differ significantly from conventional funds in terms of any of these attributes. Moreover, the effect of diversification on investment performance is not different between the two groups. Both groups underperformed the Domini 400 Social Index and S & P 500 during the study period.

In Gruber (1996) in his article based on USA data claims that most of the older studies are subject to survivorship bias. When this effect is adjusted, is argued that mutual funds on average under-perform the market proxy by the amount of expenses they charge the investors.

Otten and Bams (2002) Maastricht University, in 2002 carried a research on European mutual funds. Results suggest that Europeans mutual funds especially small capitalisation funds are able to add value. If the management fee is added back, some exhibits significant out performance. The author also pointed out that European mutual funds industry is still lagging

Malkiel and Radisich (2001) finds that index funds have regularly produced rates of return exceeding those of active funds by 100 to 200 basis points per annum in the United States over the 1990s and find that there are two reasons for the excess performance by passive funds: management fee and trading costs.

. In 2002 Research conducted by Bauer, Koedijk, and Otten (2002) using an international database containing German, UK and US ethical funds remarked that the existing empirical evidence on US data suggests that ethical screening leads to similar or slightly less performance relative to comparable unrestricted portfolios

### **1.3 OBJECTIVES OF THE STUDY**

- ❖ To analyse the performance of selected mutual fund schemes using various performance measures.

### **1.4 STATEMENT OF THE PROBLEM**

As the stock market is highly volatile and risky mutual funds came into existence to reduce risk. It becomes necessary to evaluate the risk and return involved in mutual funds to guide the clients with better ideas for their investment. A risk and return of the mutual funds help the investor to fit the mutual fund in their appropriate risk and return relationship category. Hence the same is taken as a problem to be studied upon

### **1.5 SCOPE OF THE STUDY**

The scope of the study is to give better ideas about the risk and return involved in mutual funds to the clients in the orders to make them invest appropriately.

### **1.6 METHODOLOGY**

#### **1.6.1 TYPE OF STUDY**

In analytical research, the researcher has to use facts or information already

held and conduct a critical evaluation of the material. This is an analytical study.



## **1.6.2 SAMPLING DESIGN**

A systematic process that connects all the details of the sampling, right from the determination of sample size of the collection of the data.

### **Method of Sampling**

Sampling method can be broadly classified as probability sampling, where every element of the population enjoys equal chance of being selected into the sample and non probability sampling, where all the elements of the population do not get equal chance of being selected into the sample. The present study adopts the probability sampling.

### **Sampling Technique**

Under probability sampling, stratified random sampling where the sample is selected at random from each of the homogeneous layers or strata of the population. The stratified random sampling can be further classified into proportionate stratified random sampling, where the selection from every stratum is in equal proportion and disproportionate stratified random sampling, where the selection from every stratum is not in equal proportion.

The sampling technique chosen for the study is Disproportionate Stratified Random Sampling.

## **1.6.3 METHOD OF DATA COLLECTION**

The data used for the study is secondary data ([www.amfiindia.com](http://www.amfiindia.com)).

### **1.6.4 Time period covered**

3years covering 1<sup>st</sup> April 2007 to 31<sup>st</sup> March 2010

### **1.6.5 Tools and analysis**

## **SHARPE RATIO**

This is a measure of risk adjusted return on investment. It is a ratio of excess return to

the portfolio is not combined with other risky portfolios. It is relevant for performance evaluation when comparing mutually exclusive portfolios.

The Sharpe measure follows his earlier work on capital asset pricing model (CAPM) dealing specifically with capital market line (CML).

The Sharpe measure of performance denoted by S is given by

$$S = \frac{R_i - R_f}{\sigma_i}$$

Where,

$R_i$  = the average rate of return on portfolio 'i' during a specified time period.

$R_f$  = the average rate of return on a risk free investment during the same period

## TREYNOR MEASURE

This is also a measure of risk-adjusted return on a portfolio. It is a ratio of excess return to the systematic risk ( $\beta$ ) of the portfolio. It is relevant for performance measurement when evaluating portfolios separately or in combination with other portfolios. A high treynor measure indicated a favourable relationship between risk and return on the portfolio.

Sharpe Ratio and Treynor measure give the same results in the case of highly diversified portfolios as the total risk of portfolios approaches that of a market portfolio.

$$T = \frac{R_i - R_f}{\beta}$$

Where,

$R_i$  = the average rate of return on portfolio 'i' during a specified time period.

$R_f$  = the average rate return on a risk free investment during the same period.

$\beta$  = the slope of the fun's characteristic line during that time period (this indicates portfolio's relative volatility with respect to market portfolio).

A larger 'T' value indicates a better portfolio performance for all investors regardless of their risk performances. The numerator of this ratio ( $R_i - R_f$ ) is the risk premium and the denominator is a measure of market risk. The Treynor measure is risk premium per unit of systematic risk.

### 2.6.8 JENSEN'S ALPHA

This is the difference between a fund's actual return and the return on a benchmark portfolio with the same systematic risk ( $\beta$ ) of the portfolio whose performance is being valued. It measures the ability of active fund management to earn returns in excess of the reward for market risk. We can infer meaningful results if it is used to compare two portfolios with similar betas.

Jensen's measure is also based on capital asset pricing model. CAPM estimates the expected return on any security or portfolio by the following expression:

$$E(R_i) = R_f + \beta_i [E(R_m) - R_f]$$

Where,

$E(R_i)$  = expected return on security or portfolio I

$R_f$  = Risk free return

$\beta_i$  = Systematic risk (beta) of security

$E(R_m)$  = expected return on the market portfolio I

Jensen's alpha ( $\alpha$ ) is defined as:

$$R_i - R_f = \alpha_i + \beta_i (R_m - R_f) + \epsilon_i$$

The value of 'aj' suggests whether the portfolio manager possesses superior (inferior) market timing and stock selection skills. A positive ( $\alpha$ ) is an indication of superior fund management ability.

## CHAPTER 2

### COMPANY PROFILE

Reliance Mutual Fund (RMF) is one of India's leading Mutual Funds, with Average Assets Under Management (AAUM) of Rs. 1,18,973 Crores and an investor count of over 74 Lakh folios. (AAUM and investor count as of May 2010) AAUM Source : <http://www.amfiindia.com/>

Reliance Mutual Fund, a part of the Reliance - Anil Dhirubhai Ambani Group, is one of the fastest growing mutual funds in the country. RMF offers investors a well-rounded portfolio of products to meet varying investor requirements and has presence in 159 cities across the country. Reliance Mutual Fund constantly endeavors to launch innovative products and

are managed by Reliance Capital Asset Management Limited., a subsidiary of Reliance Capital Limited, which holds 93.37% of the paid-up capital of RCAM Reliance Capital Asset Management Limited, the balance paid up capital being held by investors.

Reliance Capital Ltd. is one of India's leading and fastest growing private sector financial services companies, and ranks among the top 3 private sector financial services and banking companies, in terms of net worth. Reliance Capital Ltd. has interests in asset management, life and general insurance, private equity and proprietary investments, other financial services.

### **Sponsor:**

Reliance Capital Limited **Trustee:** Reliance Capital Trustee Co. Limited

**Investment Manager:** Reliance Capital Asset Management Limited

**Statutory Details:** The Sponsor, the Trustee and the Investment Manager are incorporated under the Companies Act 1956.**Risk Factors: Mutual Funds and securities investments are subject to market risks and there is no assurance or guarantee that the objectives of the Scheme will be achieved. As with any investment in securities, the NAV of the Units issued under the Scheme can go up or down depending on the factors and forces affecting the capital markets.** Past performance of the Sponsor/AMC/Mutual Fund is not indicative of the future performance of the Scheme. The Sponsor is not responsible or liable for any loss resulting from the operation of the Scheme beyond their initial contribution of Rs.1 lakh towards the setting up of the mutual Fund and such other accretions and additions to the corpus. The NAV of the Scheme may be affected, interalia, by changes in the market conditions, interest rates, trading volumes, settlement periods and transfer procedures. The Mutual Fund is not assuring that it will make periodical dividend distributions, though it has every intention of doing so. All dividend distributions are subject to the availability of distributable surplus in the Scheme. For details of scheme features and for scheme specific risk factors, please refer to the Scheme Information Document.

### **Vision Statement**

good corporate governance.

### **Mission Statement**

To create and nurture a world-class, high performance environment aimed at delighting our customers.

Reliance Mutual Fund (RMF) has been established as a trust under the Indian Trusts Act, 1882 with Reliance Capital Limited (RCL), as the Settlor/Sponsor and Reliance Capital Trustee Co. Limited (RCTCL), as the Trustee. RMF has been registered with the Securities & Exchange Board of India (SEBI) vide registration number MF/022/95/1 dated June 30, 1995. The name of Reliance Capital Mutual Fund has been changed to Reliance Mutual Fund effective 11th March 2004 vide SEBI's letter no. IMD/PSP/4958/2004 date 11th March 2004.

### **The main objectives of the Trust are :**

To carry on the activity of a Mutual Fund as may be permitted at law and formulate and devise various collective Schemes of savings and investments for people in India and abroad and also ensure liquidity of investments for the Unit holders;

To deploy Funds thus raised so as to help the Unit holders earn reasonable returns on their savings and

To take such steps as may be necessary from time to time to realise the effects without any limitation.

### **Board of Directors**

Mr. Soumen Ghosh

Mr. Kanu Doshi

Mr. Manu Chadha

### **Head equity investment**

Mr. Madhusudan Kela

Mr. Sanjiv Taneja

## **Management team**

### **CEO**

Mr. Sundeep Sikka

### **Head fixed income**

Mr. Amitabh Mohanty

### **Equity Fund Manager**

Mr. Sunil B. Singhania

Mr. Ashwani Kumar

Mr. Shailesh Raj Bhan

Mr. Shiv Chanani

Mr. Krishan Daga

Mr. Govind Agrawal

Mr. Omprakash S. Kuckian

### **Debt Fund Manager**

Mr. Amit Tripathi

Ms. Anju Chhajer

Mr. Prashant Pimple

Mr. Arpit Malaviya

### **Commodities**

#### **Fund manager**

Mr. Hiren Chandraria

### **Head of departments**

Infrastructure & Admin

Mr. Pradeep Andrade

Finance and Accounts

Mr. Milind Gandhi

Human Resource Development

Mr. Rajesh Derhgawen

Information Technology

Mr. Vinay Nigudkar

Service Delivery & Operations Excellence

Mr. Bhalchandra Joshi

Operations & Settlement

Ms. Geeta Chandran

R&T Operations & Investor Relations

Mr. Milind Nesarikar

Compliance Mr. Suresh Viswanathan

#### Zonal Heads

Northern Zone Head Mr. Gurbir Chopra

Western Zone Head Mr. Aashwin Dugal

Southern Zone Head Mr. Gopal Khaitan

Eastern Zone Head Mr. Vikas Rathie

#### **Awards and Achievements**

Reliance Mutual Fund is one of India's leading Mutual Funds, with Average Assets Under Management (AAUM) of Rs. 1,18,973 Crores (AAUM as of May 2010 ) (source: [www.amfiindia.com](http://www.amfiindia.com)) and an investor count of over 74 Lakh folios.

\*(75 lakh investor folios is calculated on the basis of live folios as on February, 2010 and includes investors across all the schemes of Reliance Mutual Fund and Presence in over 400 locations includes the Designated Investor Service Centres (DISCs) of RCAM and Registrar & Transfer Agents , Offices and Resident Representatives of RCAM as on December 31, 2009)

Reliance Mutual Fund has over 14 years of extensive market experience, 35 schemes (as on January 31, 2010) combined with a strong performance track record.

#### **CRISIL Fund House Level**

**“CRISIL Fund House Level 1”** rating denotes that RCAM has been judged by CRISIL Limited (Rating Agency) to possess HIGHEST LEVEL OF PROCESS QUALITY AND RISK MANAGEMENT CAPABILITY IN FUND MANAGEMENT PRACTICES. The other levels of rating are Level 2, Level 3, Level 4, and Level 5 denoting High, Average, Below Average and Poor ‘level of process quality and risk management capability in Fund Management Practices’, respectively. **“CRISIL Fund House Level 1”** is a rating and not a ranking. CRISIL, a Standard &

provider of independent credit ratings, indices, risk evaluation, investment research and data. The rating methodology emphasizes qualitative over quantitative factors. The Rating Agency has also factored inputs from Association of Mutual Funds of India & Securities and Exchange Board of India. The parameters which were used to arrive at the rating cover all the critical areas of operation of RCAM and a high score on these parameters which Rating Agency believes, have a strong co-relation with good long-term performance by the fund house. The five broad parameters evaluated for assigning this rating were (i) Organization Structure (ii) Investment Decision-making Process and Performance (iii) Operational Policies and Efficiencies (iv) Risk Management (v) Selling & Client Servicing Practices. The rating is valid for the period of 12 months from February 2, 2010. For detailed methodology, please visit [www.crisil.com](http://www.crisil.com) > Ratings > Methodology / Criteria > Funds.

**CNBC TV18 - CRISIL Mutual Fund of the Year Award for 2009:** Reliance Mutual Fund has won the ‘CNBC TV18 - CRISIL Mutual Fund of the Year’ Award in the Category – Mutual Fund House of the Year (Awarded by CRISIL FundServices, CRISIL Limited). In total 37 fund houses were considered as the award universe. Fund Houses winning at least one award for their schemes in the category level awards for 2009 were eligible to be in contention for the award. The award is based on consistency of fund house’s performance across various scheme categories in the four quarterly CRISIL Composite Performance Rankings (CPRs) released during the calendar year 2009. The individual CRISIL CPR ranks for their schemes were aggregated on a weighted average basis to arrive at the final ranks for fund houses. The mutual fund house with the highest final score is the “Mutual Fund House of the Year”. The award has been granted for the year 2009 and will be in vogue till the announcement of the award for the next year in the same category. A detailed methodology of the CRISIL CPR is available at [www.crisilfundservices.com](http://www.crisilfundservices.com). Past performance is no guarantee of future results.

**Rankings and Award Source: CRISIL FundServices, CRISIL Limited.**

**Asia manager of the year :**

Reliance Capital Asset Management Limited has been awarded “Asset Manager for



Media Publishing Limited. The participation was open for all the Asset Managers across Asia Pacific. Twelve Asset Managers participated for the award exercise. The Asia Risk Annual Award is renowned for recognizing and rewarding institutions for the best risk management practices adopted by them. The judging panel comprise of the editorial team of Incisive Media Publishing Limited. The panel identifies asset managers that have demonstrated a responsible approach to risk management over the year and/or launched innovative products. Key factors determining the awards include significant improvements in internal risk management practices, risk systems, corporate governance and utilization of derivatives in a prudent and responsible manner. **Past Performance may or may not be sustained in future.** Source: Asia Risk Magazine and [www.asiarisk.com.hk](http://www.asiarisk.com.hk).

## CHAPTER-3

### DATA ANALYSIS AND INTERPRETATION

**Table 3.1**

**SBI-Arbitrage Opportunities Fund**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	2.654	3.645	1.615	4.986	12.003	3.187
Feb	2.624	0.637269	3.212	2.078	8.251	2.290
Mar	5.967	7.78365	6.712	3.636	7.997	2.355
Apr	2.476	3.91725	0.984	0.386	5.707	7.890
May	6.078	9.293456	12.282	16.583	10.699	8.805
Jun	7.791	11.55789	0.757	0.081	3.067	5.426
Jul	4.644	5.869298	7.607	5.973	10.888	5.262
Aug	10.761	13.31084	3.626	0.128	6.665	2.756
Sep	3.140	3.696144	5.150	6.963	3.895	7.624
Oct	15.648	9.291876	0.870	0.390	10.739	10.198
Nov	1.329	1.621901	6.262	9.221	7.754	12.835
Dec	9.519	14.45042	10.559	7.039	7.382	4.974

**RISK**

**S.D** 3.739997344

**Beta** -0.30999172

**RATIOS**

**Sharpe** 1.723040291

**Treynor** -34.7091686

## **INTERPRETATION**

- In **Sharpe method** the performance index is 1.723040291
- In the **Treynor index** having the value of -34.7091686
- In the **Jensen index** having the value of 9.44727822,
- Total risk hold the value of 3.73997344,
- Beta hold the value of -0.30999172.

## **INFERENCE**

In the SBI-Arbitrage Opportunities Fund of all the performance index ratio's Jensen having the highest value if 9.4427822.

**Table 3.2****SBI- Magnum Balanced Fund**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	0.054	3.645	2.584	4.986	2.039	3.187
Feb	0.843	0.637269	0.370	2.078	0.462	2.290
Mar	3.040	7.78365	0.445	3.636	1.401	2.355
Apr	1.699	3.91725	1.030	0.386	2.427	7.890
May	2.594	9.293456	1.419	16.583	4.369	8.805
Jun	5.574	11.55789	1.205	0.081	0.779	5.426
Jul	0.091	5.869298	0.066	5.973	2.977	5.262
Aug	2.508	13.31084	1.402	0.128	1.555	2.756
Sep	0.704	3.696144	3.221	6.963	0.057	7.624
Oct	0.157	9.291876	1.404	0.390	3.226	10.198
Nov	4.202	1.621901	2.102	9.221	1.736	12.835
Dec	3.586	14.45042	7.761	7.039	1.762	4.974
<b>RISK</b>						
S.D	1.679869					
Beta	0.181249					
<b>RATIOS</b>						
Sharpe	1.17071					
Treynor	0.494098					
Jensen	0.553652					

## **INTERPRETATION**

- **In Sharpe Method**, the Performance Index Is 1.17071
- In The **Treynor Index** having the value Of 0.494098,
- In The **Jensen Index** having the value Of 0.553652,
- **Total Risk** Hold the value of 1.679869
- **Beta** hold the value Of 0.181249

## **INFERENCE**

In the **SBI- Magnum Balanced Fund** of all the performance index ratio's Sharpe having the highest value if 1.17071.

**Table 3.3**

**SBI- Magnum Blue Chip Fund**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	0.803	3.645	0.228	4.986	0.391	3.187
Feb	0.464	0.637269	0.666	2.078	0.566	2.290
Mar	1.205	7.78365	0.865	3.636	0.400	2.355
Apr	1.579	3.91725	0.363	0.386	0.374	7.890
May	1.044	9.293456	0.275	16.583	0.416	8.805
Jun	0.612	11.55789	0.127	0.081	0.324	5.426
Jul	0.580	5.869298	0.174	5.973	0.214	5.262
Aug	0.490	13.31084	0.448	0.128	0.328	2.756
Sep	0.546	3.696144	0.147	6.963	0.402	7.624
Oct	0.502	9.291876	0.232	0.390	0.353	10.198
Nov	0.856	1.621901	0.526	9.221	0.427	12.835
Dec	1.324	14.45042	0.435	7.039	0.110	4.974

**RISK**

**S.D** 0.337780637

**Beta** 0.010426783

**RATIO**

**Sharpe** 1.541432676

**Treynor** 55.48739184

**Jensen** 0.039125139

## **INTERPRETATION**

- In **Sharpe method**, the performance index is 1.541432676,
- In the **Treynor index** having the value of 55.48739184,
- In the **Jensen index** having the value of 0.039125139,
- **Total risk hold** the value of 0.337780637
- **Beta hold** the value of 0.010426783

## **INFERENCE**

In the **SBI- Magnum Blue Chip Fund** of all the performance index ratio's treynor having the highest value if 55.48739184.

Table 3.4

## LIC-MF Balanced Fund

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	3.762	3.645	1.491	4.986	1.206	3.187
Feb	4.959	0.637269	4.517	2.078	5.135	2.290
Mar	5.904	7.78365	5.714	3.636	5.792	2.355
Apr	2.851	3.91725	0.306	0.386	6.441	7.890
May	6.628	9.293456	16.432	16.583	6.963	8.805
Jun	8.696	11.55789	1.583	0.081	4.078	5.426
Jul	5.421	5.869298	6.676	5.973	7.712	5.262
Aug	12.412	13.31084	2.581	0.128	5.382	2.756
Sep	2.413	3.696144	3.226	6.963	9.789	7.624
Oct	15.191	9.291876	0.003	0.390	9.193	10.198
Nov	1.357	1.621901	5.595	9.221	7.888	12.835
Dec	15.060	14.45042	8.143	7.039	4.595	4.974
<b>RISK</b>						
S.D	4.042681					
Beta	0.756845					
<b>RATIOS</b>						
Sharpe	1.477588					
Treynor	7.160721					
Jensen	-0.44612					



## **INTERPRETATION**

- **In Sharpe method**, the performance index is 1.477588
- **In the Treynor index** having the value of 7.160721
- **In the Jensen index** having the value of -0.44612
- **Total risk hold** the value of 4.042681
- **Beta hold** the value of 0.756845

## **INFERENCE**

**In the LIC-MF Balanced Fund** performance index ratio's treynor having the highest value of 7.160721.

**Table 3.5**

**LIC-MF Bond Fund**

<b>Month</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>	
	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>
<b>Jan</b>	1.7970	3.645	4.370	4.986	4.400	3.187
<b>Feb</b>	3.1779	0.637269	0.618	2.078	0.630	2.290
<b>Mar</b>	4.6906	7.78365	6.015	3.636	6.004	2.355
<b>Apr</b>	1.2131	3.91725	0.519	0.386	0.506	7.890
<b>May</b>	4.3139	9.293456	11.183	16.583	11.274	8.805
<b>Jun</b>	5.9484	11.55789	0.758	0.081	0.681	5.426
<b>Jul</b>	4.0678	5.869298	5.820	5.973	5.829	5.262
<b>Aug</b>	11.1112	13.31084	3.787	0.128	3.690	2.756
<b>Sep</b>	3.9788	3.696144	7.027	6.963	6.951	7.624
<b>Oct</b>	11.5740	9.291876	6.503	0.390	6.891	10.198
<b>Nov</b>	0.3638	1.621901	5.650	9.221	5.547	12.835
<b>Dec</b>	12.4841	14.45042	4.569	7.039	5.050	4.974
<b>RISK</b>						
<b>S.D</b>	3.398138758					
<b>Beta</b>	0.585939347					
<b>RATIOS</b>						
<b>Sharpe</b>	1.462733579					
<b>Treynor</b>	6.939890654					
<b>Jensen</b>	1.146902204					

## **INTERPRETATION**

- In **Sharpe method**, the performance index is 1.462733579
- In the **treynor index** having the value of 6.939890654
- In the **Jensen index** having the value of 1.146902204
- **Total risk** hold the value of 3.398138758
- **Beta** hold the value of 0.585939347

## **INFERENCE**

In the **LIC-MF Bond Fund** of all the performance index ratio's treynor having the highest value of 6.939890654.

**Table 3.6**

**LIC-MF Equity Fund**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	3.083	3.645	7.934	4.986	7.754	3.187
Feb	0.889	0.637269	2.785	2.078	3.846	2.290
Mar	2.857	7.78365	3.027	3.636	0.308	2.355
Apr	1.715	3.91725	4.771	0.386	4.719	7.890
May	3.959	9.293456	8.956	16.583	7.888	8.805
Jun	8.238	11.55789	2.961	0.081	10.253	5.426
Jul	7.394	5.869298	0.917	5.973	1.096	5.262
Aug	7.742	13.31084	4.495	0.128	2.783	2.756
Sep	0.148	3.696144	3.050	6.963	3.032	7.624
Oct	5.048	9.291876	1.576	0.390	1.735	10.198
Nov	2.282	1.621901	5.739	9.221	5.609	12.835
Dec	10.740	14.45042	7.265	7.039	6.851	4.974
<b>RISK</b>						
S.D	2.91729					
Beta	0.324842					
<b>RATIOS</b>						
Sharpe	1.555791					
Treynor	22.75736					
	4.686495					

## INTERPRETATION

- **In Sharpe method**, the performance index is 1.555791
- **In the treynor index** having the value of 22.75736
- **In the Jensen index** having the value of 4.686495
- **Total risk** hold the value of 0.337780637
- **Beta** hold the value of 0.010426783

## INFERENCE

In the **LIC-MF Equity Fund** of all the performance index ratio's treynor having the highest value of 22.75736.

**Table 3.7****UTI-Bond Fund**

<b>Month</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>	
	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>
<b>Jan</b>	2.284	3.645	1.179	4.986	0.181	3.187
<b>Feb</b>	0.774	0.637269	2.058	2.078	2.110	2.290
<b>Mar</b>	3.585	7.78365	2.536	3.636	6.184	2.355
<b>Apr</b>	0.265	3.91725	0.483	0.386	3.761	7.890
<b>May</b>	6.842	9.293456	11.983	16.583	8.612	8.805
<b>Jun</b>	8.712	11.55789	2.596	0.081	4.666	5.426
<b>Jul</b>	6.208	5.869298	2.115	5.973	9.572	5.262
<b>Aug</b>	10.267	13.31084	1.698	0.128	2.618	2.756
<b>Sep</b>	1.332	3.696144	5.034	6.963	10.151	7.624
<b>Oct</b>	15.543	9.291876	2.609	0.390	2.499	10.198
<b>Nov</b>	1.031	1.621901	7.543	9.221	2.521	12.835
<b>Dec</b>	11.695	14.45042	9.007	7.039	2.510	4.974
<b>RISK</b>						
<b>S.D</b>	3.967297					
<b>Beta</b>	0.626192					
<b>RATIOS</b>						
<b>Sharpe</b>	1.209276					
<b>Treynor</b>	9.911589					
<b>Jensen</b>	-1.66113					

## INTERPRETATION

- In **Sharpe method**, the performance index is 1.209276
- In the **treynor index** having the value of 9.911589
- In the **Jensen index** having the value of -1.66113
- **Total risk** hold the value of 3.967297
- **beta** hold the value of -1.66113

## INFERENCE

In the **UTI-Bond Fund** of all the performance index ratio's treynor having the highest value of 9.911589.

**Table 3.8****UTI-Banking Sector Fund**

<b>Month</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>	
	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>
<b>Jan</b>	2.384	3.645	8.144	4.986	2.803	3.187
<b>Feb</b>	0.142	0.637269	0.357	2.078	5.689	2.290
<b>Mar</b>	6.553	7.78365	0.554	3.636	1.681	2.355
<b>Apr</b>	1.064	3.91725	0.334	0.386	2.105	7.890
<b>May</b>	14.941	9.293456	15.275	16.583	8.621	8.805
<b>Jun</b>	10.831	11.55789	4.341	0.081	1.385	5.426
<b>Jul</b>	5.011	5.869298	0.749	5.973	6.337	5.262
<b>Aug</b>	11.966	13.31084	1.706	0.128	4.193	2.756
<b>Sep</b>	1.692	3.696144	5.716	6.963	5.209	7.624
<b>Oct</b>	8.303	9.291876	0.341	0.390	0.680	10.198
<b>Nov</b>	7.635	1.621901	12.349	9.221	0.401	12.835
<b>Dec</b>	17.408	14.45042	7.310	7.039	0.683	4.974
<b>RISK</b>						
<b>S.D</b>	4.819814					
<b>Beta</b>	0.696487					
<b>RATIO</b>						
<b>Sharpe</b>	1.065284					
<b>Treynor</b>	7.192599					
<b>Jensen</b>	-3.95622					



## INTERPRETATION

- **In Sharpe method**, the performance index is 1.065284
- The **treynor index** having the value of 7.192599
- In the **Jensen index** having the value of -3.95622
- **Total risk** hold the value of 4.819814
- Beta hold the value of 0.696487

## INFERENCE

In the **UTI-Banking Sector Fund** of all the performance index ratio's treynor having the highest value of 7.192599.

**Table 3.9****UTI-Bond Advantage Fund LTP**

<b>Month</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>	
	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>
<b>Jan</b>	1.210	3.645	4.011	4.986	2.219	3.187
<b>Feb</b>	2.853	0.637269	6.131	2.078	5.212	2.290
<b>Mar</b>	4.515	7.78365	3.590	3.636	0.431	2.355
<b>Apr</b>	0.138	3.91725	1.590	0.386	2.278	7.890
<b>May</b>	8.642	9.293456	14.867	16.583	7.738	8.805
<b>Jun</b>	8.657	11.55789	0.154	0.081	5.173	5.426
<b>Jul</b>	7.471	5.869298	5.387	5.973	3.419	5.262
<b>Aug</b>	14.590	13.31084	3.024	0.128	9.789	2.756
<b>Sep</b>	2.857	3.696144	5.000	6.963	3.393	7.624
<b>Oct</b>	11.459	9.291876	0.455	0.390	9.727	10.198
<b>Nov</b>	4.180	1.621901	5.416	9.221	10.068	12.835
<b>Dec</b>	13.379	14.45042	8.815	7.039	3.930	4.974
<b>RISK</b>						
<b>S.D</b>	4.030324921					
<b>Beta</b>	0.719035957					
<b>RATIOS</b>						
<b>Sharpe</b>	1.390265494					
<b>Treynor</b>	10.38829134					
<b>Jensen</b>	-0.859361469					

## **INTERPRETATION**

- **In Sharpe method**, the performance index is 1.390265494
- **In the treynor index** having the value of 10.38829134
- **In the Jensen index** having the value of -0.859361469
- **Total risk** hold the value of 4.030324921
- **Beta** hold the value of 0.719035957

## **INFERENCE**

In the **UTI-Bond Advantage Fund LTP** of all the performance index ratio's treynor having the highest value of 10.38829134.

**Table 3.10**

**RELIANCE-Banking Fund**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	0.995	3.645	0.211	4.986	2.262	3.187
Feb	0.737	0.637269	0.075	2.078	1.530	2.290
Mar	0.723	7.78365	1.306	3.636	1.577	2.355
Apr	1.742	3.91725	0.255	0.386	3.512	7.890
May	1.382	9.293456	0.598	16.583	0.055	8.805
Jun	0.358	11.55789	1.143	0.081	4.548	5.426
Jul	0.430	5.869298	0.191	5.973	0.397	5.262
Aug	1.247	13.31084	0.131	0.128	1.698	2.756
Sep	0.774	3.696144	0.191	6.963	0.223	7.624
Oct	0.238	9.291876	0.376	0.390	0.338	10.198
Nov	0.218	1.621901	0.398	9.221	5.121	12.835
Dec	1.183	14.45042	0.210	7.039	0.211	4.974
<b>RISK</b>						
S.D	1.197049948					
Beta	0.010546806					
<b>RATIOS</b>						
Sharpe	0.847731729					
Treynor	40.63362875					
Jensen	0.13932593					

## **INTERPRETATION**

- **In Sharpe method**, the performance index is 0.847731729
- In the **Treynor index** having the value of 40.63362875
- In the **Jensen index** having the value of 0.13932593
- **Total risk** hold the value of 1.19704994
- **Beta** hold the value of 0.010546806

## **INFERENCE**

In the **RELIANCE-Banking Fund** of all the performance index ratio's **Treynor** having the highest value of 40.63362875.

**Table 3.11****RELIANCE- Diversified Sector Fund**

<b>Month</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>	
	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>
<b>Jan</b>	1.552	3.645	0.324	4.986	0.984	3.187
<b>Feb</b>	0.019	0.637269	0.384	2.078	0.883	2.290
<b>Mar</b>	1.474	7.78365	1.300	3.636	0.311	2.355
<b>Apr</b>	1.874	3.91725	0.307	0.386	1.216	7.890
<b>May</b>	1.888	9.293456	0.813	16.583	1.117	8.805
<b>Jun</b>	0.826	11.55789	0.738	0.081	0.563	5.426
<b>Jul</b>	1.033	5.869298	0.025	5.973	0.538	5.262
<b>Aug</b>	2.050	13.31084	0.253	0.128	0.321	2.756
<b>Sep</b>	1.073	3.696144	0.237	6.963	0.354	7.624
<b>Oct</b>	0.006	9.291876	1.954	0.390	0.538	10.198
<b>Nov</b>	0.806	1.621901	0.481	9.221	0.669	12.835
<b>Dec</b>	2.054	14.45042	1.077	7.039	0.563	4.974
<b>RISK</b>						
<b>S.D</b>	0.601039583					
<b>Beta</b>	0.042075763					
<b>RATIO</b>						
<b>Sharpe</b>	1.412043255					
<b>Treynor</b>	24.51660848					
<b>Jensen</b>	0.281380921					

## **INTERPRETATION**

- **In Sharpe method**, the performance index is 1.412043255
- In the **treynor index** having the value of 24.51660848
- In the **Jensen index** having the value of 0.281380921
- **Total risk** hold the value of 0.601039583
- **Beta** hold the value of 0.042075763

## **INFERENCE**

In the **RELIANCE- Diversified Sector Fund** of all the performance index ratio's treynor having the highest value of 24.51660848 .

**Table 3.12**

**RELIANCE- Equity Advantage Fund**

<b>Month</b>	<b>2007</b>		<b>2008</b>		<b>2009</b>	
	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>	<b>Return</b>	<b>Index</b>
<b>Jan</b>	4.071	3.645	1.386	4.986	2.716	3.187
<b>Feb</b>	1.107	0.637269	3.382	2.078	1.761	2.290
<b>Mar</b>	4.509	7.78365	0.080	3.636	3.633	2.355
<b>Apr</b>	3.579	3.91725	3.143	0.386	5.468	7.890
<b>May</b>	13.099	9.293456	15.491	16.583	3.980	8.805
<b>Jun</b>	7.974	11.55789	0.447	0.081	0.419	5.426
<b>Jul</b>	12.389	5.869298	3.957	5.973	9.916	5.262
<b>Aug</b>	15.199	13.31084	1.090	0.128	5.542	2.756
<b>Sep</b>	4.611	3.696144	4.998	6.963	2.834	7.624
<b>Oct</b>	11.827	9.291876	1.394	0.390	9.906	10.198
<b>Nov</b>	0.715	1.621901	7.651	9.221	8.627	12.835
<b>Dec</b>	11.447	14.45042	7.678	7.039	5.672	4.974
<b>RISK</b>						
<b>S.D</b>	4.37294715					
<b>Beta</b>	0.790225396					
<b>RATIOS</b>						
<b>Sharpe</b>	1.280892961					
<b>Treynor</b>	15.67597684					
<b>Jensen</b>	0.40860231					



## **INTERPRETATION**

- **In Sharpe method**, the performance index is 1.2808892961
- **In the treynor index** having the value of 15.67597684
- **In the Jensen index** having the value of 0.40860231
- **Total risk** hold the value of 4.37294715
- **Beta** hold the value of 0.790225396

## **INFERENCE**

In the **RELIANCE- Equity Advantage Fund** of all the performance index ratio's treynor having the highest value of 15.67597684.

Table 3.13

## TATA- Contra Fund

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	7.642	3.645	6.660	4.986	2.242	3.187
Feb	0.963	0.637269	7.621	2.078	2.750	2.290
Mar	7.854	7.78365	5.000	3.636	1.581	2.355
Apr	12.254	3.91725	2.279	0.386	2.778	7.890
May	1.365	9.293456	15.085	16.583	11.111	8.805
Jun	11.960	11.55789	1.095	0.081	2.215	5.426
Jul	2.530	5.869298	4.272	5.973	9.406	5.262
Aug	7.407	13.31084	3.145	0.128	6.220	2.756
Sep	4.948	3.696144	5.966	6.963	1.145	7.624
Oct	9.789	9.291876	0.662	0.390	7.203	10.198
Nov	2.305	1.621901	9.201	9.221	8.422	12.835
Dec	10.972	14.45042	12.340	7.039	7.834	4.974
<b>RISK</b>						
S.D	3.967718708					
Beta	0.571618547					
<b>RATIOS</b>						
Sharpe	1.513393995					
Treynor	4.423500626					
Jensen	4.026261547					

## **INTERPRETATION**

- **In Sharpe method**, the performance index is 1.513393995
- **In the treynor index** having the value of 4.423500626
- **In the Jensen index** having the value of 4.02626154
- **Total risk** hold the value of 3.967718708
- **Beta** hold the value of 0.571618547

## **INFERENCE**

In the **TATA- Contra Fund** of all the performance index ratio's **Treynor** having the highest value of 4.423500626.

**Table 3.14**

**TATA- Dynamic Bond Fund**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	0.261	3.645	0.242	4.986	0.194	3.187
Feb	0.422	0.637269	0.278	2.078	1.545	2.290
Mar	0.528	7.78365	0.370	3.636	0.321	2.355
Apr	0.731	3.91725	0.183	0.386	0.191	7.890
May	0.392	9.293456	0.190	16.583	0.190	8.805
Jun	0.309	11.55789	1.940	0.081	1.879	5.426
Jul	0.416	5.869298	1.641	5.973	1.645	5.262
Aug	0.506	13.31084	0.191	0.128	0.192	2.756
Sep	0.368	3.696144	0.191	6.963	0.190	7.624
Oct	0.238	9.291876	0.194	0.390	0.194	10.198
Nov	0.244	1.621901	0.197	9.221	0.194	12.835
Dec	0.234	14.45042	0.191	7.039	0.379	4.974

**RISK**

**S.D** 0.523214426

**Beta** -0.012904662

**RATIO**

**Sharpe** 0.930093493

**Treynor** -32.12443803

0.463484557

## **INTERPRETATION**

- **In Sharpe method**, the performance index is 0.930093493
- In the **treynor index** having the value of -32.12443803
- In the **Jensen index** having the value of 0.463484557
- **Total risk** hold the value of 0.337780637
- **Beta** hold the value of 0.010426783

## **INFERENCE**

In the **TATA- Dynamic Bond Fund** of all the performance index ratio's treynor having the highest value of 0.930093493.

Table3. 15

## TATA-Fixed Horizon Fund

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	1.078	3.645	1.270	4.986	0.511	3.187
Feb	0.817	0.637269	2.113	2.078	3.189	2.290
Mar	2.228	7.78365	1.598	3.636	4.592	2.355
Apr	0.670	3.91725	0.308	0.386	2.978	7.890
May	4.623	9.293456	7.579	16.583	2.625	8.805
Jun	3.993	11.55789	0.815	0.081	0.759	5.426
Jul	2.682	5.869298	2.934	5.973	2.260	5.262
Aug	3.993	13.31084	1.080	0.128	2.196	2.756
Sep	1.885	3.696144	1.854	6.963	3.571	7.624
Oct	6.038	9.291876	0.596	0.390	6.358	10.198
Nov	0.051	1.621901	3.361	9.221	3.148	12.835
Dec	9.683	14.45042	5.017	7.039	3.051	4.974
<b>RISK</b>						
S.D	2.15350958					
Beta	0.407411689					
<b>RATIOS</b>						
Sharpe	1.308612965					
Treynor	6.57947494					
Jensen	0.336682134					

## INTERPRETATION

- In **Sharpe method**, the performance index is 1.308612965
- In the **treynor index** having the value of 6.57947494
- In the **Jensen index** having the value of 0.336682134
- **Total risk** hold the value of 2.15350958
- **Beta** hold the value of 0.407411689

## INFERENCE

In the **TATA-Fixed Horizon Fund** of all the performance index ratio's treynor having the highest value of 6.57947494.

**Table 3.16**

**BIRLA SUN LIFE-Bond Index Fund**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	0.939	3.645	0.231	4.986	0.386	3.187
Feb	0.312	0.637269	0.027	2.078	0.550	2.290
Mar	0.464	7.78365	1.258	3.636	0.288	2.355
Apr	1.736	3.91725	0.133	0.386	0.189	7.890
May	1.460	9.293456	0.729	16.583	0.916	8.805
Jun	0.380	11.55789	1.124	0.081	0.440	5.426
Jul	0.754	5.869298	0.344	5.973	0.635	5.262
Aug	1.584	13.31084	0.079	0.128	0.292	2.756
Sep	0.965	3.696144	0.234	6.963	0.317	7.624
Oct	0.295	9.291876	0.162	0.390	0.389	10.198
Nov	0.512	1.621901	0.050	9.221	0.384	12.835
Dec	1.382	14.45042	1.030	7.039	0.308	4.974

**RISK**

**S.D** 0.462262754

**Beta** 0.038078794

**RATIOS**

**Sharpe** 1.275487913

**Treynor** 19.76309985

**Jensen** 0.052995938



## **INTERPRETATION**

- In **Sharpe method**, the performance index is 1.275487913
- In the **treynor index** having the value of 19.76309985
- In **Jensen index** having the value of 0.052995938
- **Total risk** hold the value of 0.462262754
- **Beta** hold the value of 0.038078794

## **INFERENCE**

In the **BIRLA SUN LIFE-Bond Index Fund** of all the performance index ratio's treynor having the highest value of 19.76309985.

Table 3.17

## BIRLA SUN LIFE- Balance Fund

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	9.393	3.645	8.995	4.986	2.099	3.187
Feb	1.079	0.637269	0.504	2.078	4.502	2.290
Mar	8.729	7.78365	7.499	3.636	1.809	2.355
Apr	14.926	3.91725	2.249	0.386	12.888	7.890
May	1.853	9.293456	0.585	16.583	14.537	8.805
Jun	11.157	11.55789	2.115	0.081	5.168	5.426
Jul	4.774	5.869298	6.637	5.973	1.509	5.262
Aug	7.270	13.31084	4.740	0.128	6.403	2.756
Sep	17.595	3.696144	4.768	6.963	2.783	7.624
Oct	1.523	9.291876	5.090	0.390	5.941	10.198
Nov	5.933	1.621901	8.946	9.221	7.713	12.835
Dec	6.553	14.45042	0.576	7.039	9.229	4.974
<b>RISK</b>						
S.D	4.365028028					
Beta	-0.031487393					
<b>RATIOS</b>						
Sharpe	1.387403462					
Treynor	-151.5703424					
Jensen	9.437223248					

## INTERPRETATION

- **In Sharpe method**, the performance index is 1.387403462
- **In the treynor index** having the value of -151.5703424
- **In the Jensen index** having the value of 9.437223248
- **Total risk** hold the value of 4.365028028
- **Beta** hold the value of -0.031487393

## INFERENCE

In the **BIRLA SUN LIFE- Balance Fund** of all the performance index ratio **Jensen** having the highest value if 9.437223248.

**Table 3.18**

**BIRLA SUN LIFE- Cash Plus**

Month	2007		2008		2009	
	Return	Index	Return	Index	Return	Index
Jan	2.729	3.645	9.812	4.986	0.739	3.187
Feb	0.471	0.637269	4.875	2.078	19.191	2.290
Mar	7.951	7.78365	1.556	3.636	0.745	2.355
Apr	5.388	3.91725	4.179	0.386	3.413	7.890
May	13.788	9.293456	10.335	16.583	8.640	8.805
Jun	4.853	11.55789	4.037	0.081	1.717	5.426
Jul	7.394	5.869298	3.862	5.973	6.025	5.262
Aug	8.780	13.31084	6.923	0.128	8.649	2.756
Sep	4.943	3.696144	8.460	6.963	0.446	7.624
Oct	5.718	9.291876	0.398	0.390	6.832	10.198
Nov	7.770	1.621901	6.983	9.221	10.886	12.835
Dec	18.635	14.45042	8.152	7.039	6.365	4.974
<b>RISK</b>						
S.D	4.497922647					
Beta	0.508836117					
<b>RATIOS</b>						
Sharpe	1.430215668					
Treynor	14.52836139					
Jensen	2.975317176					

## INTERPRETATION

- In **Sharpe method**, the performance index is 1.430215668
- In the **Treynor index** having the value of 14.52836139
- In the **Jensen index** having the value of 2.975317176
- **Total risk** hold the value of 4.497922647
- **Beta** hold the value of 0.508836117

## INFERENCE

In the **BIRLA SUN LIFE- Cash Plus** of all the performance index ratio's treynor having the highest value if 14.5282.

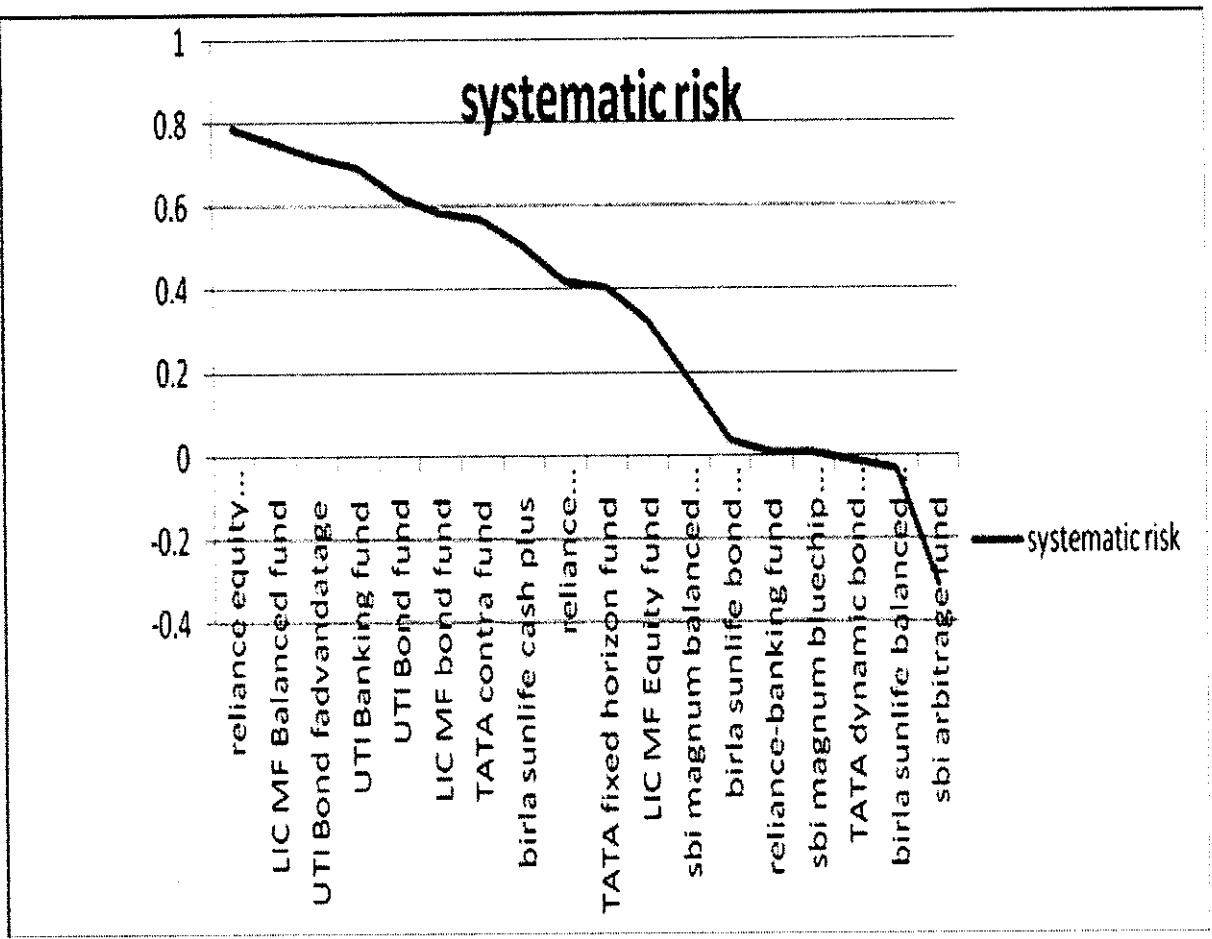
TABLE 3.19

**TOTAL SCHEMES COMPARISION**

<b>SCHEMES</b>	<b>SYSTEMATIC RISK</b>	<b>RANK</b>
Reliance Equity Advantage fund	0.790225	1
LIC MF Balanced fund	0.756845	2
UTI Bond Advantage	0.719036	3
UTI Banking fund	0.696487	4
UTI Bond fund	0.626192	5
LIC MF bond fund	0.585939	6
TATA Contra fund	0.571619	7
Birla Sunlife Cash plus	0.508836	8
Reliance Diversified Sector fund	0.420758	9
TATA Fixed Horizon fund	0.407412	10
LIC MF Equity fund	0.324842	11
SBI Magnum Balanced fund	0.181249	12
Birla Sunlife Bond Index fund	0.038079	13
Reliance-Banking fund	0.010547	14
SBI Magnum Bluechip fund	0.010427	15
TATA Dynamic Bond fund	-0.0129	16
Birla Sunlife Balanced fund	-0.03149	17
SBI Arbitrage fund	-0.30992	18

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TOTAL SCHEMES COMPARISON



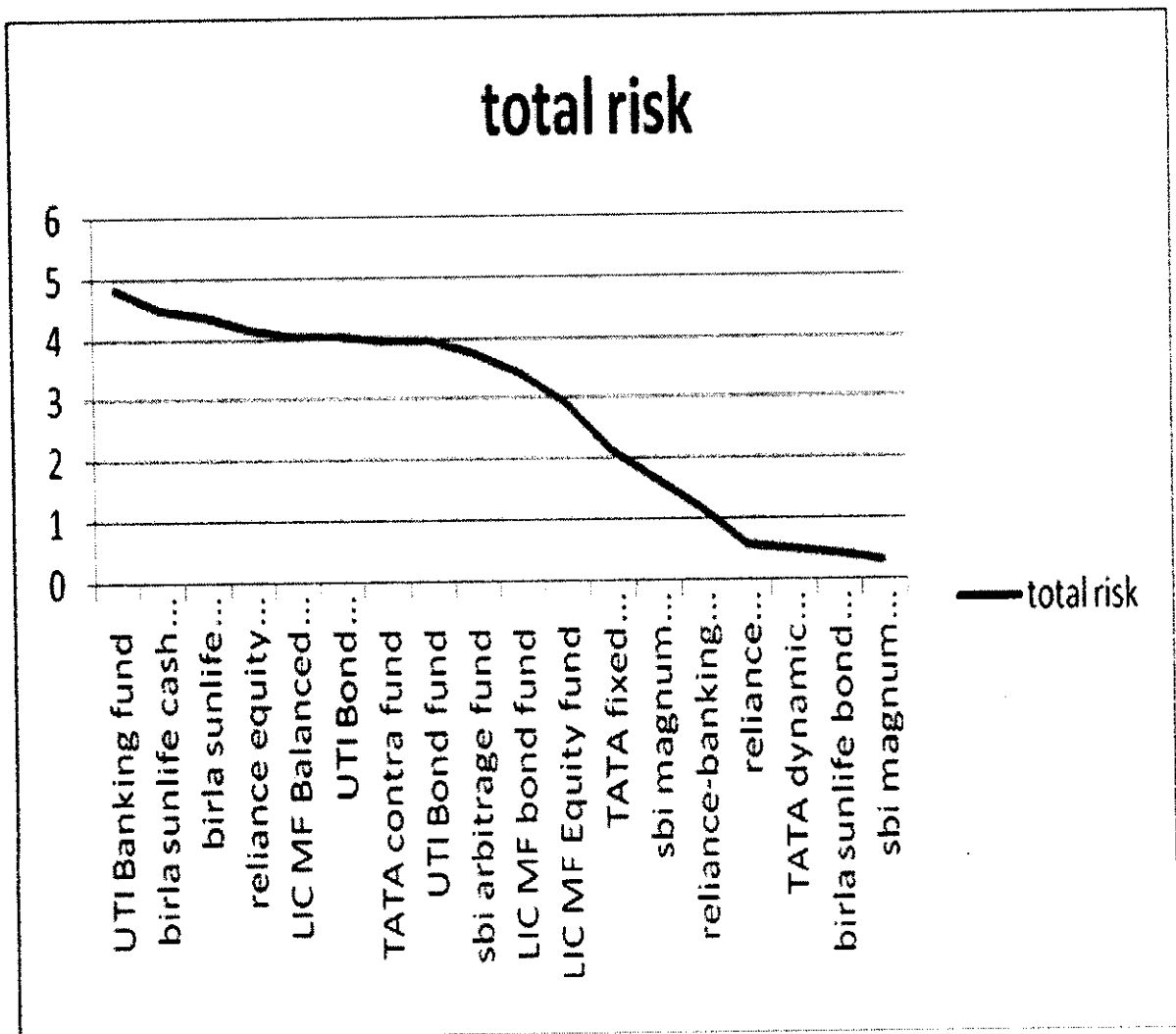
**3.20 TOTAL SCHEME COMPARISON – TOTAL RISK**

<b>SCHEMES</b>	<b>TOTAL RISK</b>	<b>RANK</b>
UTI Banking fund	4.819814	1
Birla Sunlife cash plus	4.497923	2
Birla Sunlife balanced fund	4.365028	3
Reliance Equity Advantage fund	4.153729	4
LIC MF Balanced fund	4.042681	5
UTI Bond advantage	4.03032	6
TATA Contra fund	3.967719	7
UTI Bond fund	3.967297	8
SBI Arbitrage fund	3.739997	9
LIC MF bond fund	3.398139	10
LIC MF Equity fund	2.91727	11
TATA Fixed Horizon fund	2.15351	12
SBI Magnum balanced fund	1.679869	13
Reliance-Banking fund	1.19705	14
Reliance Diversified Sector fund	0.60104	15
TATA Dynamic Bond fund	0.523214	16
Birla sunlife bond index fund	0.462263	17
SBI magnum bluechip fund	0.337781	18



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TOTAL SCHEMES COMPARISION

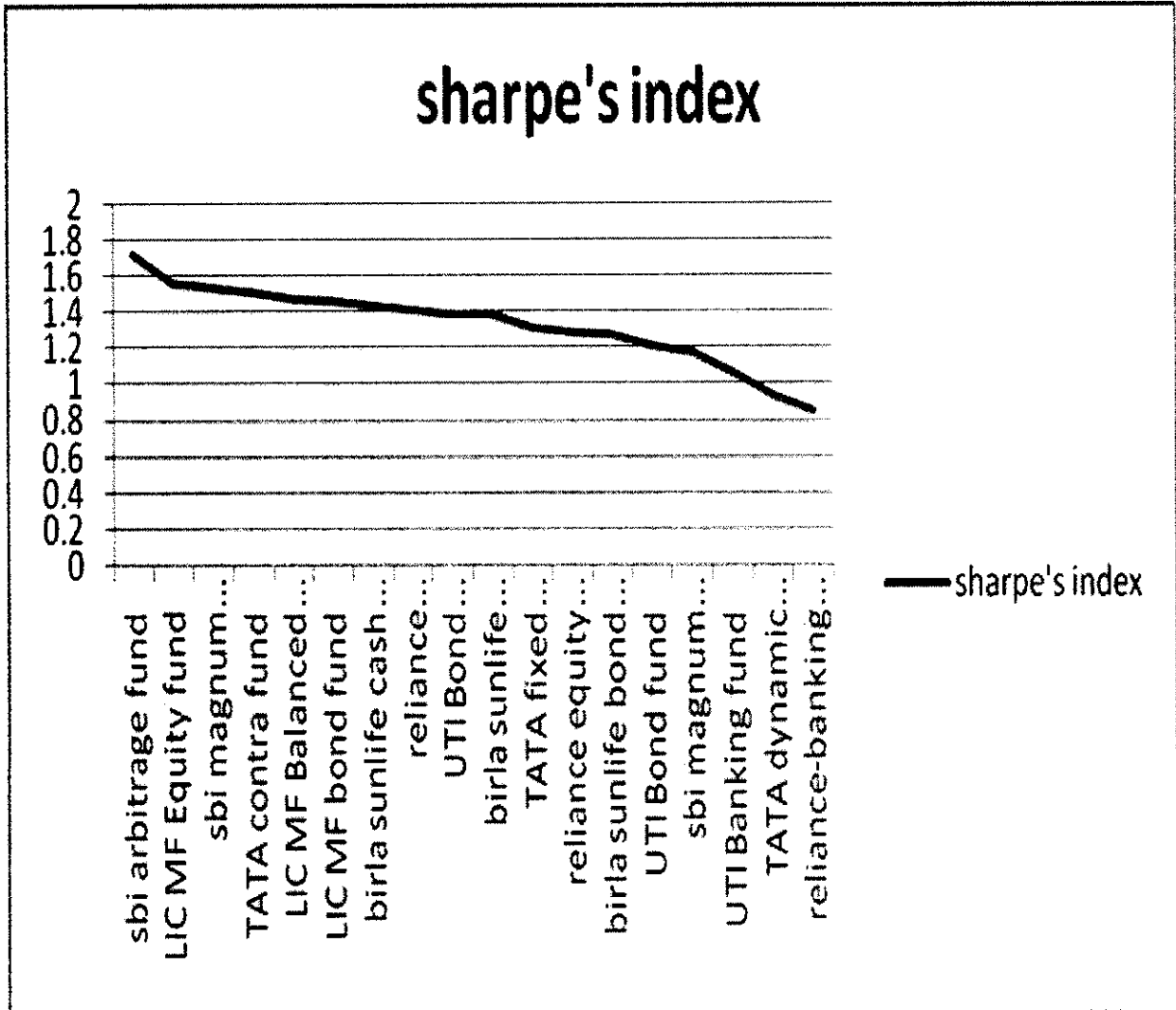


### 3.21 TOTAL SCHEME COMPARISON – SHARPE PERFORMANCE INDEX

SCHEMES	SHARPE'S	RANK
SBI arbitrage fund	1.72304	1
LIC MF Equity fund	1.55791	2
SBI magnum bluechip fund	1.541433	3
TATA contra fund	1.5134	4
LIC MF Balanced fund	1.477588	5
LIC MF bond fund	1.462734	6
Birla sunlife cash plus	1.4302	7
Reliance diversified sector fund	1.412043	8
UTI Bond advantage	1.390265	9
Birla sunlife balanced fund	1.387404	10
TATA fixed horizon fund	1.308613	11
Reliance equity advantage fund	1.280893	12
Birla sunlife bond index fund	1.27549	13
UTI Bond fund	1.209276	14
SBI magnum balanced fund	1.17071	15
UTI Banking fund	1.065284	16
TATA dynamic bond fund	0.93001	17
Reliance-banking fund	0.847737	18

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TOTAL SCHEMES COMPARISION

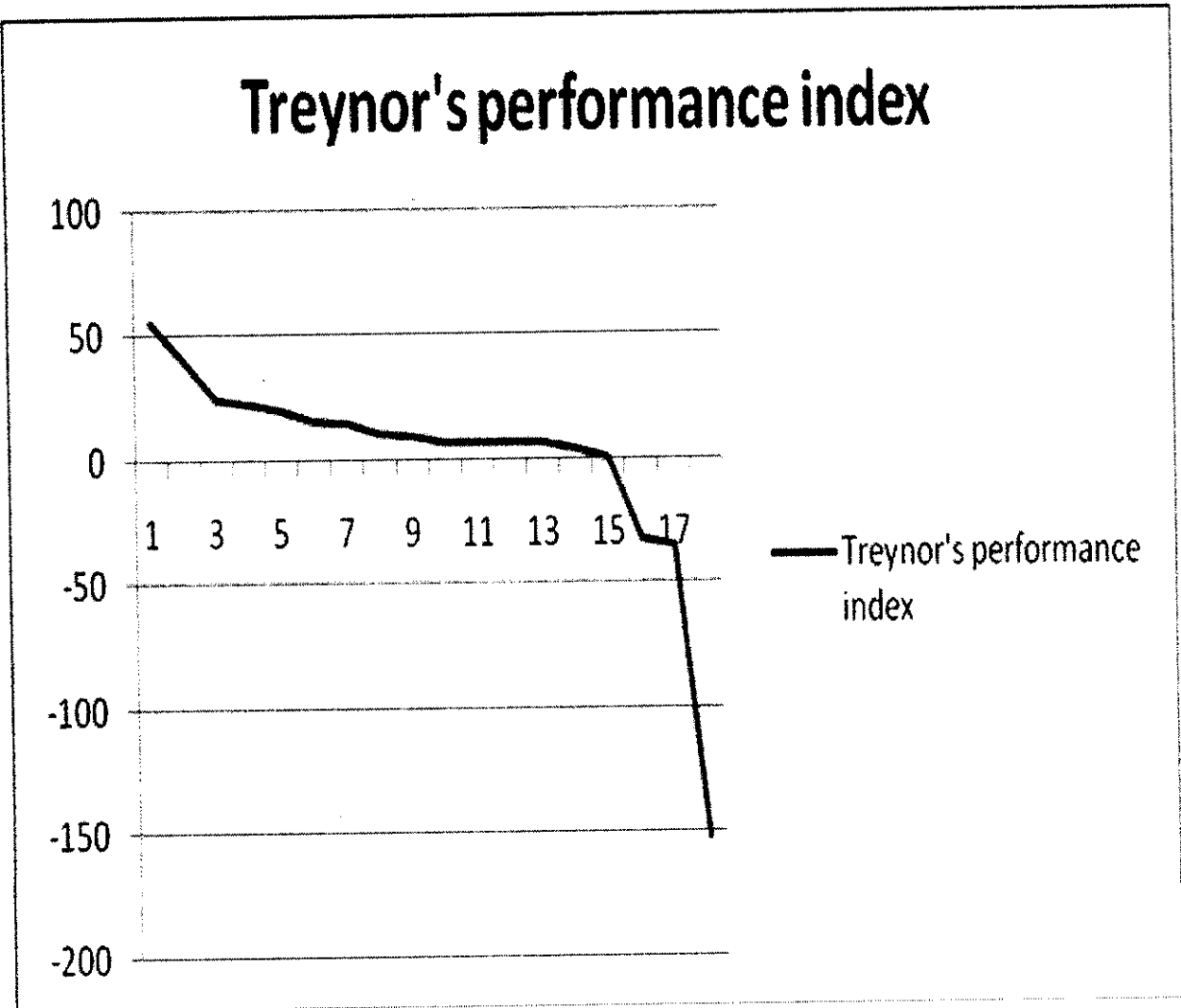


**3.22 TOTAL SCHEME COMPARISON – TREYNOR PERFORMANCE INDEX**

<b>SCHEMES</b>	<b>TREYNOR'S INDEX</b>	<b>RANK</b>
SBI Magnum Bluechip fund	55.48739	1
Reliance-Banking fund	40.6336	2
Reliance Diversified Sector fund	24.516	3
LIC MF Equity fund	22.75736	4
Birla Sunlife BondIndex fund	19.76301	5
Reliance Equity Advantage fund	15.675	6
Birla Sunlife Cash plus	14.5284	7
UTI Bond Advantage	10.389	8
UTI Bond fund	9.91159	9
UTI Banking fund	7.19251	10
LIC MF Balanced fund	7.160721	11
LIC MF Bond fund	6.939891	12
TATA Fixed Horizon fund	6.58	13
TATA Contra fund	4.423	14
SBI Magnum Balanced fund	0.49401	15
TATA Dynamic bond fund	-32.1244	16
SBI Arbitrage fund	-34.709	17
Birla Sunlife balanced fund	-151.57	18

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TOTAL SCHEMES COMPARISION



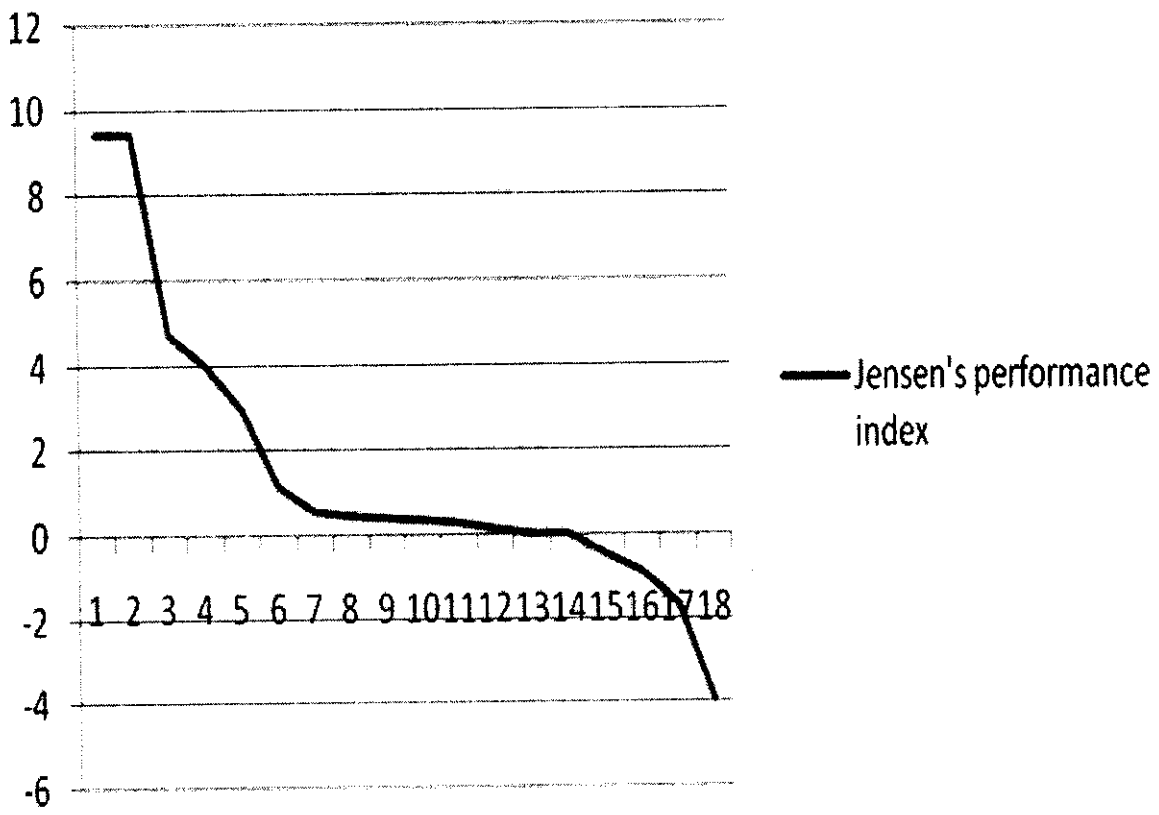
### 3.23 TOTAL SCHEME COMPARISON – JENSEN ALPHA

SCHEMES	JENSEN'S INDEX	RANK
SBI Arbitrage Fund	9.4448	1
Birla Sunlife Balanced Fund	9.437223	2
LIC MF Equity Fund	4.686495	3
TATA Contra fund	4.026262	4
Birla Sunlife Cash Plus	2.975317	5
LIC MF Bond Fund	1.146902	6
SBI Magnum Balanced Fund	0.553365	7
TATA Dynamic Bond Fund	0.463485	8
Reliance Equity Advantage fund	0.408602	9
TATA Fixed Horizon Fund	0.336632	10
Reliance Diversified Sector fund	0.281381	11
Reliance-Banking Fund	0.139326	12
Birla Sunlife Bond Index Fund	0.052996	13
SBI Magnum Bluechip Fund	0.039125	14
LIC MF Balanced fund	-0.44612	15
UTI Bond Advantage	-0.85936	16
UTI Bond Fund	-1.66113	17
UTI Banking Fund	-3.95622	18

CHART.NO.3.23.1

TOTAL SCHEMES COMPARISION

# Jensen's performance index



## Chapter 4

### 4.1 FINDINGS

#### **Sbi schemes:**

##### **Beta value:**

According to the beta value of SBI schemes , **SBI-Arbitrage Opportunities Fund** having the low beta value of  $-0.30992$  . So systematic risk is low compare to the other schemes.

##### **Sharpe's index:**

According to the Sharpe's value of SBI schemes , **SBI-Arbitrage Opportunities Fund** having the high value of  $1.72304$ .So performance index is high compare to the other schemes.

##### **Treynor's index:**

According to the Treynor's value of SBI schemes , **SBI-Magnum blue chip** the high value of  $55.48739$ .So Treynor's performance index is high compare to the other schemes.

##### **Jensen's index:**

According to the jensen's value of SBI schemes , **SBI-Arbitrage Opportunities Fund** the high value of  $9.4448$  .So Jensen's performance index is high compare to the other schemes.

#### **LIC schemes:**

##### **Beta value:**

According to the beta value of LIC schemes , **LIC MF equity fund** having the low beta value of  $0.324842$ . So systematic risk is low compare to the other schemes.

##### **Sharpe's index:**

According to the Sharpe's value of SBI schemes , **LIC MF equity fund** having the



### **Treynor's index:**

According to the Treynor's value of SBI schemes , **LIC MF equity fund** the high value of 22.75736. So Treynor's performance index is high compare to the other schemes.

### **Jensen's index:**

According to the Jensen's value of SBI schemes , **LIC MF equity Fund** the high value of 4.686495. So Jensen's performance index is high compare to the other schemes.

### **UTI schemes:**

#### **Beta value:**

According to the beta value of UTI schemes , **UTI Bond advantage** having the low beta value of 0.719036. So systematic risk is low compare to the other schemes.

#### **Sharpe's index:**

According to the Sharpe's value of UTI schemes , **UTI Bond advantage** having the high value of 1.390265. So performance index is high compare to the other schemes.

#### **Treynor's index:**

According to the Treynor's value of UTI schemes , **UTI Bond advantage** the high value of 10.389. So Treynor's performance index is high compare to the other schemes.

#### **Jensen's index:**

According to the Jensen's value of UTI schemes , **UTI Bond advantage** the high value of -0.85936. So Jensen's performance index is high compare to the other schemes.

## **RELIANCE schemes:**

### **Beta value:**

According to the beta value of RELIANCE schemes , **reliance-banking fund** having the low beta value of 0.010547. So systematic risk is low compare to the other schemes.

### **Sharpe's index:**

According to the Sharpe's value of RELIANCE schemes , **reliance diversified sector fund** having the high value of 1.412043. So performance index is high compare to the other schemes.

### **Treynor's index:**

According to the Treynor's value of RELIANCE schemes , **reliance banking fund** the high value of 40.6336. So Treynor's performance index is high compare to the other schemes.

### **Jensen's index:**

According to the Jensen's value of RELIANCE schemes , **reliance equity advantage fund** the high value of 0.408602. So Jensen's performance index is high compare to the other schemes.

## **TATA schemes:**

### **Beta value:**

According to the beta value of TATA schemes , **TATA dynamic bond fund** having the low beta value of -0.0129. So systematic risk is low compare to the other schemes.

### **Sharpe's index:**

According to the Sharpe's value of TATA schemes , **TATA contra fund** having the

### **Treynor's index:**

According to the Treynor's value of **TATA** schemes , **TATA contra fund** the high value of 4.423. So Treynor's performance index is high compare to the other schemes.

### **Jensen's index:**

According to the Jensen's value of **TATA** schemes , **TATA contra fund** the high value of 4.026262. So Jensen's performance index is high compare to the other schemes.

### **BIRLA schemes:**

#### **Beta value:**

According to the beta value of **BIRLA** schemes , **BIRLA sunlife balanced fund** having the low beta value of -0.03149. So systematic risk is low compare to the other schemes.

### **Sharpe's index:**

According to the Sharpe's value of **BIRLA** schemes , **BIRLA sunlife balanced fund** having the high value of 1.387404. So performance index is high compare to the other schemes.

### **Treynor's index:**

According to the Treynor's value of **BIRLA** schemes , **BIRLA sunlife –bond index fund** the high value of 19.76301. So Treynor's performance index is high compare to the other schemes.

### **Jensen's index:**

According to the Jensen's value of **BIRLA** schemes , **BIRLA sunlife balanced fund**

#### 4.2 SUGGESTIONS

<b>Schemes</b>	<b>beta</b>	<b>Sharpe's</b>	<b>Treynor's</b>	<b>Jensen's</b>
SBI arbitrage fund	low	high	low	high
LIC MF equity fund	low	high	high	high
UTI bond adv	low	high	high	high
Reliance banking fund	low	moderate	high	moderate
Tata contra	low	high	high	high
Birla sunlife balanced fund	low	high	moderate	high

#### 4.2.1 BETA VALUE

Beta value \ Risk	High Risk Taker	Medium Risk Taker	Risk Averser
High	Reliance Equity Advantage fund		
Medium		Reliance DiversifiedSector fund	
Low			SBI Arbitrage fund

Beta Value Indicates the volatility and the risk associated with the security or the portfolio in comparison to the performance of the market. It is appropriate to suggest the high risk taking investors to invest their funds in the Reliance Equity Advantage fund . Similarly the Reliance DiversifiedSector fund form a rosy picture for the Medium risk taking investors and SBI Arbitrage fund can be preferred by the investors averting risk.

#### 4.2.2 SHARPE RATIO

Risk \ Sharpe Ratio	High Risk Taker	Medium Risk Taker	Risk Averser
High			SBI Arbitrage fund
Medium		Reliance DiversifiedSector fund	
Low	Reliance-Banking fund		

The Sharpe ratio tells us whether a portfolio's returns are due to smart investment decisions or a result of excess risk. The greater a portfolio's Sharpe ratio, the better its risk-adjusted performance has been. It is reasonable to suggest the high risk taking investors to invest their funds in the Reliance-Banking fund. Similarly the Reliance DiversifiedSector fund form a rosy picture for the Medium risk taking investors and SBI Arbitrage fund can be preferred by the investors averting risk.

#### 4.2.3 JENSEN RATIO:

Risk Attitude Jenson Ratio	High Risk taker	Medium Risk Taker	Risk Averser
High	SBI Arbitrage fund		
Medium		Reliance Equity Advantage fund	
Low			UTI Banking fund

Jenson ratio gives the overall return of the portfolio and also the risk associated with it. On basis of the Jenson Ratio analysis, the high risk taking investors are suggested to make investments in SBI Arbitrage fund , and the medium risk taking investors are suggested to invest in Reliance Equity Advantage fund and similarly UTI Banking fund are advisable for risk averse investors.

**4.2.4 Treynor Ratio:**

Risk Attitude Treynor Ratio	High Risk Taker	Medium Risk Taker	Risk Averser
High			SBI Magnum Bluechip fund
Medium		UTI Bond fund	
Low	Birla Sunlife balanced fund		

The Treynor ratio is a risk-adjusted measure of return based on systematic risk. To make suggestions based on the analysis of the Treynor ratio, risk taking investors are suggested to invest in Birla Sunlife Balanced fund , while medium risk taking investors are advised to invest in UTI Bond fund whereas SBI Magnum Bluechip fund are advised for risk averse investors.



### 4.3 CONCLUSION:

From the beta value it is concluded that Reliance Equity Advantage Fund are having high risk and high volatility and SBI Arbitrage Fund are having less risk due to low volatility. So investor want to take less risk can invest in SBI arbitrage fund.

Sharpe Ratio concluded that SBI arbitrage fund which holds the highest rank can be preferred by Risk averse investor and reliance-banking fund which holds the lowest rank can be preferred by risk taker because it takes into account the total risk .So investor who prefers to take low risk can invest in reliance-banking fund

Treynor ratio conclude that SBI Magnum Bluechip fund which holds the highest rank can be preferred by Risk averse investor and Birla Sunlife balanced fund which holds the lowest rank can be preferred by risk taker because it takes into account the market risk. So investor who wants to take high risk can invest in Birla Sunlife Balanced Fund .

Jenson Ratio concludes that SBI Arbitrage Fund which holds the highest rank gives the highest return and UTI Banking Fund which holds the lowest rank gives the lowest return can be preferred by risk avoider. So investor want high return can go SBI Arbitrage Fund.

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