

## **An analytical investigation on Performance of tax saver funds in India**

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### **ABSTRACT**

A mutual fund is a financial intermediary that pools the savings of investors for collective investment in a diversified portfolio of securities. A variety of mutual fund schemes available for investors for meeting their financial goals. This paper attempts to study the performance evaluation of selected equity tax diversified growth funds from various fund houses using standard deviation, beta, Sharpe ratio, alpha, and sortino ratio. The study period was taken from 2010-2015.

### **Introduction**

Mutual Funds have become extremely popular over the last 20 years. What was once just another obscure financial instrument is now a part of our daily life. More than 80 million people, or one half of the households in America, invest in mutual funds. That means that, in the United States alone, trillions of dollars are invested in mutual funds.

In fact, for many people, investing means buying mutual funds. After all, it is a common knowledge that investing in mutual funds is (or at least should be) better than simply letting your cash waste away in a savings account, but, for most people, that's where the understanding of funds ends. It doesn't help that mutual fund salespeople speak a strange language that is interspersed with jargon's that many investors don't understand.

### **Concept of mutual fund**

A Mutual Fund is a trust that pools the savings of a number of investors who share a common financial goal. The money thus collected is then invested in capital market instruments such as shares, debentures and other securities. The income earned through these investments and the capital appreciation realized is 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 basket of securities at a relatively low cost. Every Mutual Fund is managed by a fund manager, who using his investment management skills and necessary research works ensures much better return than what an investor can manage on his own. The capital appreciation and other incomes earned from these investments are passed on to the investors (also known as unit holders) in proportion of the number of units they own.

### **Mutual Fund History**

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

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

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

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

1987 marked the entry of non-UTI, public sector mutual funds set up by public sector banks and Life Insurance Corporation of India (LIC) and General Insurance Corporation of India (GIC). SBI Mutual Fund was the first non-UTI Mutual Fund established in June 1987 followed by Canbank Mutual Fund

(Dec 87), Punjab National Bank Mutual Fund (Aug 89), Indian Bank Mutual Fund (Nov 89), Bank of India (Jun 90), Bank of Baroda Mutual Fund (Oct 92). LIC established its mutual fund in June 1989 while GIC had set up its mutual fund in December 1990. At the end of 1993, the mutual fund industry had assets under management of Rs. 47,004 crores.

### ***Third Phase - 1993-2003 (Entry of Private Sector Funds)***

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

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

The number of mutual fund houses went on increasing, with many foreign mutual funds setting up funds in India and also the industry has witnessed several mergers and acquisitions. As at the end of January 2003, there were 33 mutual funds with total assets of Rs. 1,21,805 crores. The Unit Trust of India with Rs. 44,541 crores of assets under management was way ahead of other mutual funds.

### ***Fourth Phase - since February 2003***

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

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

### **How the mutual fund can work**

A mutual fund is a company that pools investors' money to make multiple types of investments, known as the portfolio. Stocks, bonds, and money market funds are all examples of the types of investments that may make up a mutual fund.

The mutual fund is managed by a **professional investment manager** who buys and sells securities for the most effective growth of the fund. As a mutual fund investor, you become a "shareholder" of the mutual fund company. When there are profits you will earn dividends. When there are losses, your shares will decrease in value.

### **Types of Mutual Funds**

The different types of Mutual Funds are as follows -

#### **Equity Funds / Growth Funds**

Funds that invest in equity shares are called equity funds. They carry the principal objective of capital appreciation of the investment over a medium to long-term investment horizon. Equity Funds are high risk funds and their returns are linked to the stock markets. They are best suited for investors who are seeking long term growth. There are different types of equity funds such as Diversified funds, Sector specific funds and Index based funds.

#### **Diversified Funds**

These funds provide you the benefit of diversification by investing in companies spread across sectors and market capitalisation. They are generally meant for investors who seek exposure across the market and do not want to be restricted to any particular sector.

#### Sector Funds

These funds invest primarily in equity shares of companies in a particular business sector or industry. While these funds may give higher returns, they are riskier as compared to diversified funds. Investors need to keep a watch on the performance of those sectors/industries and must exit at an appropriate time.

#### Index Funds

These funds invest in the same pattern as popular stock market indices like CNX Nifty Index and S&P BSE Sensex. The value of the index fund varies in proportion to the benchmark index. NAV of such schemes rise and fall in accordance with the rise and fall in the index. This would vary as compared with the benchmark owing to a factor known as "tracking error".

#### *Tax Saving Funds*

These funds offer tax benefits to investors under the Income Tax Act, 1961. Opportunities provided under this scheme are in the form of tax rebates under section 80 C of the Income Tax Act, 1961. They are best suited for long investors seeking tax rebate and looking for long term growth.

#### *Debt Fund / Fixed Income Funds*

These Funds invest predominantly in rated debt / fixed income securities like corporate bonds, debentures, government securities, commercial papers and other money market instruments. They are best suited for the medium to long-term investors who are averse to risk and seeking regular and steady income. They are less risky when compared with equity funds.

#### Liquid Funds / Money Market Funds

These funds invest in highly liquid money market instruments and provide easy liquidity. The period of investment in these funds could be as short as a day. They are ideal for Corporates, institutional investors and business houses who invest their funds for very short periods.

#### *Gilt Funds*

These funds invest in Central and State Government securities and are best suited for the medium to long-term investors who are averse to risk. Government securities have no default risk.

#### *Balanced Funds*

These funds invest both in equity shares and debt (fixed income) instruments and strive to provide both growth and regular income. They are ideal for medium- to long-term investors willing to take moderate risks.

#### **Advantages of mutual fund**

- **Portfolio Diversification:** Mutual Funds invest in a well-diversified portfolio of securities which enables investor to hold a diversified investment portfolio (whether the amount of investment is big or small).
- **Professional Management:** Fund manager undergoes through various research works and has better investment management skills which ensure higher returns to the investor than what he can manage on his own.
- **Less Risk:** Investors acquire a diversified portfolio of securities even with a small investment in a Mutual Fund. The risk in a diversified portfolio is lesser than investing in merely 2 or 3 securities.
- **Low Transaction Costs:** Due to the economies of scale (benefits of larger volumes), mutual funds pay lesser transaction costs. These benefits are passed on to the investors.

- **Liquidity:** An investor may not be able to sell some of the shares held by him very easily and quickly, whereas units of a mutual fund are far more liquid.
- **Choice of Schemes:** Mutual Funds provide investors with various schemes with different investment objectives. Investors have the option of investing in a scheme having a correlation between its investment objectives and their own financial goals. These schemes further have different plans/options.
- **Transparency:** Funds provide investors with updated information pertaining to the markets and the schemes. All material facts are disclosed to investors as required by the regulator.
- **Flexibility:** Investors also benefit from the convenience and flexibility offered by Mutual Funds. Investors can switch their holdings from a debt scheme to an equity scheme and vice-versa. Option of systematic (at regular intervals) investment and withdrawal is also offered to the investors in most open-end schemes.
- **Safety:** Mutual Fund industry is part of a well-regulated investment environment where the interests of the investors are protected by the regulator. All funds are registered with SEBI and complete transparency is forced.

### **Drawbacks of mutual funds**

Mutual funds have their drawbacks and may not be for everyone:

- **No Guarantees:** No investment is risk free. If the entire stock market declines in value, the value of Mutual Fund shares will go down as well, no matter how balanced the portfolio. Investors encounter fewer risks when they invest in mutual funds than when they buy and sell stocks on their own. However, anyone who invests through a Mutual Fund runs the risk of losing money.
- **Fees and commissions:** All funds charge administrative fees to cover their day-to-day expenses. Some funds also charge sales commissions or "loads" to compensate brokers, financial consultants, or financial planners.
- **Taxes:** During a typical year, most actively managed Mutual Funds sell anywhere from 20 to 70 percent of the securities in their portfolios.
- **Management risk:** When one invests in a mutual fund, one depends on the fund's manager to make the right decisions regarding the fund's portfolio.
- **No Customized Portfolio:** The portfolio of securities in which a fund invests is a decision taken by the fund manager. Investors have no right to interfere in the decision making process of a fund manager, which some investors find as a constraint in achieving their financial objectives.
- **Difficulty in Selecting a Suitable Fund Scheme:** Many investors find it difficult to select one option from the plethora of funds/schemes/plans available. For this, they may have to take advice from financial planners in order to invest in the right fund to achieve their objectives.

### **Review of literature**

K. Lakshmana Rao (2011) in his study deals with mutual fund investors awareness and adoption of different mutual fund schemes with educational levels. Educational level is an important factor that influences the behaviour of investment decisions. Increasing educational level attainment is associated with decreased levels of risk tolerance. An investor's level of formal education has found to influence risk tolerance. Three hundred and fifty respondents have been selected for this study, for three districts and five schemes in the Andhra Pradesh. The chi-square test has been adopted to examine the association between the formal and technical education factors with the awareness and adoption of the mutual fund schemes.

Santhi (2011) in her study makes an attempt to analyze the investor's attitude towards their investment on Tax saving mutual funds. The study finds that the participation of investors in Tax saving mutual funds is comparatively less than other safer investment areas like Insurance, Postal Deposit Schemes and Fixed Deposits. The dynamic relationship between investors' biographical information and their behaviour has been examined by using relevant statistical techniques. The investors' knowledge and satisfaction on Tax saving mutual funds and awareness on regulating bodies has also been analyzed.

The study finds that a majority of the investor does not have the knowledge on schemes and awareness on controlling authorities and they are satisfied with the overall benefits on Tax saving mutual funds.

### **Objectives of the study**

1. To evaluate return and risk of selected tax growth funds and compare the performance with bench mark Index (Sensex) and risk-free return.
2. To evaluate financial performance of selected schemes through various performance measures.

### **Research methodology**

To conduct the study, the researcher selected 10 tax saving mutual funds. All schemes are growth option schemes and selected using convenient sampling, researcher emphasized only on secondary data. The major source of data is CRISIL, Text books, journals, websites and news papers. Period of the study is taken limited for 5 years.i.e. 2010-15.

### **Tools used for analysis**

#### **Portfolio return**

The monetary return experienced by a holder of a portfolio. Portfolio returns can be calculated on a daily or long-term basis to serve as a method of assessing a particular investment strategy. Dividends and capital appreciation are the main components of portfolio returns.

$$R_p = \frac{(NAV_t - NAV_{t-1}) + Dt + Ct}{NAV_{t-1}}$$

Where  $R_p$  = portfolio return,  $dt$  = dividend in the form of bonus during the tenure and  $C_t$  = Cash dividend during the period.

### **Risk measurement tools**

#### **Alpha**

Alpha is a measure of an investment's performance on a risk-adjusted basis. It takes the volatility (price risk) of a security or fund portfolio and compares its risk-adjusted performance to a benchmark index. The excess return of the investment relative to the return of the benchmark index is its "alpha."

Simply stated, alpha is often considered to represent the value that a portfolio manager adds or subtracts from a fund portfolio's return. A positive alpha of 1.0 means the fund has outperformed its benchmark index by 1%. Correspondingly, a similar negative alpha would indicate an underperformance of 1%. For investors, the more positive an alpha is, the better it is.

#### **Beta**

Beta, also known as the "beta coefficient," is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta is calculated using regression analysis, and you can think of it as the tendency of an investment's return to respond to swings in the market. By definition, the market has a beta of 1.0. Individual security and portfolio values are measured according to how they deviate from the market.

A beta of 1.0 indicates that the investment's price will move in lock-step with the market. A beta of less than 1.0 indicates that the investment will be less volatile than the market, and, correspondingly, a beta of more than 1.0 indicates that the investment's price will be more volatile than the market. For example, if a fund portfolio's beta is 1.2, it's theoretically 20% more volatile than the market.

#### **Standard deviation**

Standard deviation measures the dispersion of data from its mean. In plain English, the more that data is spread apart, the higher the difference is from the norm. In finance, standard deviation is applied to the annual rate of return of an investment to measure its volatility (risk). A volatile stock would have a high standard deviation. With mutual funds, the standard deviation tells us how much the return on a fund is deviating from the expected returns based on its historical performance.

#### **Sharpe ratio**

Since the Sharpe ratio was derived in 1966 by William Sharpe, it has been one of the most referenced risk/return measures used in finance, and much of this popularity can be attributed to its simplicity. The ratio's credibility was boosted further when Professor Sharpe won a Nobel Memorial

Prize in Economic Sciences in 1990 for his work on the capital asset pricing model (CAPM).

Most people with a financial background can quickly comprehend how the Sharpe ratio is calculated and what it represents. The ratio describes how much excess return you are receiving for the extra volatility that you endure for holding a riskier asset. Remember, you always need to be properly compensated for the additional risk you take for not holding a risk-free asset.

We will give you a better understanding of how this ratio works, starting with its formula:

Sharpe ratio = (Mean portfolio return – Risk-free rate)/Standard deviation of portfolio return

$$= \frac{\bar{r}_p - r_f}{\sigma_p}$$

Where:

$\bar{r}_p$  = Expected portfolio return

$r_f$  = Risk free rate

$\sigma_p$  = Portfolio standard deviation

### **Sortino ratio**

Sortino ratio is the statistical tool that measures the performance of the investment relative to the downward deviation. Unlike Sharpe, it doesn't take into account the total volatility in the investment. Sortino ratio is similar to Sharpe ratio, except while Sharpe ratio uses standard deviation in the denominator, Frank A Sortino uses downside deviation in the denominator.

Standard deviation involves both the upward as well as the downward volatility.

Since investors are only concerned about the downward volatility, Sortino ratio presents a more realistic picture of the downside risk ingrained in the fund or the stock.

*Sortino is calculated as:*

Sortino ratio: **(R) - Rf /SD**

where,

**(R):** Expected return , **Rf:** Risk free rate of return , **SD:** Standard deviation of the Negative Asset Return.

### **Data analysis and interpretation:**

From the tables (see Annexure), it was observed that

1. Axis long term fund has highest mean value (31.09%) and Hdfc tax saver fund has lowest mean value (22.78%).
2. In terms of return, Axis long term fund stands first (21.0%) and Hdfc tax saver fund stands last (10.25%).
3. Coming to risk, Reliance tax saver stands atop (21.67%), and Edelweiss ELSS fund stands atop with lowest risk (12.74%).
4. As per Sharpe ratio, Axis long term fund stands first rank (1.82), and Hdfc tax saver fund stands last rank (0.95).
5. Axis long term fund exceptionally good with a highest Alpha value (15.02) and on the other hand Hdfc tax saver fund stands poor (4.19).
6. Reliance tax saver fund has highest beta value (1.31) and Edelweiss ELSS fund, Tata long term equity fund have lowest beta values (0.84).
7. The sortino ratio of Axis long term fund has highest value (3.21) and Hdfc tax saver has lowest value (2.05).
8. The Hdfc tax saver offered highest return (27.97) since launch date and BNP Paribas long term equity fund offered lowest return (11.55).

## Conclusion

On the basis of evaluation of the performance of selected tax saver funds in India, it can be concluded that majority of selected funds offered moderate returns. Taking in to account all parameters of evaluation in consideration, Axis long term equity fund offered highest returns with the commencement of low risk and Hdfc tax saver was least performer.

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**ANNEXURE  
TABLE1**

s.no	Fund name	Mean	Return	Standard deviation	Sharpe ratio	Sortino ratio	Alpha	Beta
1	Birla SL tax relief 96	27.95	12.76	14.42	1.47	2.63	11.24	0.94
2	Axis long-term equity fund	31.09	21.0	13.36	1.82	3.21	15.02	0.88
3	BNP Paribas long term equity fund	27.21	16.08	14.26	1.44	2.70	10.61	0.93
4	DSP Block rock tax saver fund	25.89	13.04	14.61	1.31	2.37	8.58	1.0
5	Edelweiss ELSS fund	24.78	12.55	12.74	1.42	2.45	9.13	0.84
6	Franklin India tax shield fund	25.56	17.29	13.18	1.43	2.58	9.37	0.89
7	ICICI prudential tax plan	24.86	14.38	14.72	1.23	2.30	8.16	0.94
8	Tata long term equity fund	24.16	14.40	12.92	1.35	2.34	8.50	0.84
9	Hdfc tax saver fund	22.78	10.25	16.94	0.95	2.05	4.19	1.12
10	Reliance tax saver fund	29.29	15.51	21.67	1.04	2.17	8.67	1.31

TABLE-2

s.no	Fund name	Launch date	Net assets(Rs crore)	Risk grade	Return grade	Type	Return since launch date (%)
1	Birla SL tax relief 96	March - 29,1996	2024	Avg	Above avg	Open	26.72
2	Axis long-term equity fund	Dec - 29,2009	5,879	Low	High	Open	21.40
3	BNP Paribas long term equity fund	Jan - 15,2006	427	Below avg	High	Open	11.55
4	DSP Block rock tax saver fund	Jan - 18,2007	1,171	Avg	Above avg	Open	14.07
5	Edelweiss ELSS fund	Dec - 30,2008	62	Below avg	Avg	Open	20.60
6	Franklin India tax shield fund	Apr - 10,1999	1,854	Low	High	Open	25.42
7	ICICI prudential tax plan	Apr - 19,1999	2,780	Avg	Above avg	Open	22.52
8	Tata long term equity fund	Mar - 31,1996	232	Low	Above avg	Open	20.25
9	Hdfc tax saver fund	Mar - 31,1996	5,380	Above avg	Avg	Open	27.97
10	Reliance tax saver fund	Sep - 21,2005	4,580	High	High	Open	15.70