A Comparative analysis on performance of Mutual Funds with reference to private sector

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BY

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INTRODUCTION

The term " mutual funds (MF)" refers to a group of investors who pool their money to invest in various MF schemes. MFs are a dynamic institution that mobilises resources and invests them in the capital market, forming a link between savings and the capital market. A MF is a financial institution that pools public funds to invest in a broad portfolio of securities. MF investing relies heavily on pooling. Each MF has a defined investment goal and uses active portfolio management to try to achieve that goal. As an investment company, a MF pools or collects money from its investors and invests it in a variety of equities, bonds, and money market instruments. Securities, commercial papers, certificates of deposit, and other financial instruments fall into this category.

MFs offer expert fund management as well as investment diversification to their investors. MF investors are given stock market units in exchange for their money. These units are a type of investment vehicle that allows consumers who don't have the time, money, or competence to engage directly in stocks to participate in the stock market. On the other hand, they offer access to niche areas where direct investing often necessitates more time and experience than the average investor. The value of the underlying securities determines the unit price of any MF. As a result, just like a stock investment, the value of an investor's stake in a unit might move up and down.

As a result, MFs are said to be vulnerable to market risk. A set rate of return cannot be guaranteed by a MF. If a plan is operating well, a higher return can be anticipated.

It also depends on the fund manager's experience and expertise. It has also been observed that customers invest in specific funds based on the fund manager. A MF is a trust that pools the savings of a group of individuals with similar financial goals. The money raised is then invested by the fund management in various types of securities, based on the scheme's goal.

NEED OF THE STUDY

- The major goal of this research was to learn about MFs and how they work, as well as to understand different MF schemes
- Identifying which MF strategy is suitable for investment.

SCOPE OF THE STUDY

• To provide information regarding advantages and disadvantages of MFs.

• To raise public awareness about MFs.

• To provide information on which MF scheme is the most advantageous.

OBJECTIVES OF THE STUDY

1. To describe the performance testing of the selected companies' Tax saving fund, large cap fund (LCF)(LCF), and mid cap fund (MCF) (MCF).

2. To assess the individual and overall performance of the schemes that has been chosen.

3. To describe the rate of return on MFs invested in certain companies.

RESEARCH METHODOLOGY

This research project is based on secondary data. Because no primary data was used in this study, there was no need for a questionnaire. Three private MF companies were chosen to study three different strategies. The study uses data from the previous five years. In this study, statistical approaches are employed to calculate Risk and Return. Standard Deviation, Average Return, and Sharpe Ratio are statistical techniques. Quantitative information gathered from websites.

Sharpe Ratio= (RP-RF)/p Sharpe Ratio= (RP-RF)/p Sharpe Ratio= (RP-RF)

RP stands for portfolio return.

The risk-free rate of return is abbreviated as RF.

The portfolio standard deviation is denoted by the letter p.

LIMITATIONS OF THE STUDY

The study's limitations are listed below.

1. The research is limited to a few different MFs from a few different companies.

2. The majority of the research is based on secondary data.

3. The research is limited to three types of funds and schemes: tax-advantaged funds, large-cap funds, and small-cap funds.

4. The research is limited to three AMCs: ADITYA BIRLA SUN LIFE, TATA, and NIPPON INDIA.

LITERATURE REVIEW

1. CMA PANIGRAHI ET (2020) conducted a study of 10 equities linked saving scheme MFs. Financial ratios and methods such as the Average Return, Coefficient of Determination, Standard Deviation, Beta, Sharpe Ratio, and Jensen Alpha are used in the study. They discovered ELSS MFs with a higher yield and a tax benefit of 1.5 lakhs.

2. In January 2016, Dr. K. Veeraiah et al., published a study titled Comparative Performance Analysis of Select Indian MF Schemes. The performance of MFs owned by Indians is examined and analysed in this study. NAVs and portfolio allocation were used to measure the performance of these funds over a five-year period. MFs outperform nav investments, according to the study's findings. MFs are considered by investors as a viable medium-to-long-term investment alternative.

DATA ANALYSIS:

Table 1: Selected Schemes of 3 Companies.

COMPANY	**I.TAX SAVING FUNDS**	**II. LARGE CAP FUND (LCF)S**	**III. MID CAP FUND (MCF)S**
ADITYA BIRLA	ADITYA BIRLA Tax saving-Equity long term fund(G)	ADITYA BIRLA Equity fund(G)	ADITYA BIRLA Mid Cap(G)
TATA	TATA Tax saving-long term equity fund(G)	TATA Focused Blue chip equity(G)	TATA Mid cap fund (MCF)(G)
NIPPON	NIPPON Magnum Tax gain(G)	NIPPON Blue Chip Fund(G)	NIPPON Magnum Mid cap fund (MCF)(G)

Schemes of all AMC'S

I.TAX SAVING FUNDS COMPARISION

Table 2: Tax Saving Fund of ADITYA BIRLA Company

Year	Return(R)%	D	D^2
2016	-23.6	-34.22	1191.0084
2017	26.9	18.28	265.0384
2018	6.6	-4.02	18.1804
2019	40.8	30.20	910.8324
2020	2.4	-8.22	67.5684
ΣR=	53.1	Σd^2=	2430.608

AVG RETURN	ΣR/N=53.1/5	10.62%
STANDARD DEVIATION(σ)	$\sqrt{\Sigma D^2/N}$=2430.608/5	22.04819%
SHARPE RATIO	Rp-Rf/σp=	0.16

Note: ΣR is the total of return of 5 years

N is the no of years

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

In the above table Rf value is the standard current risk free rate of return in India i.e.,7.35

Table 3: Tax Savings Fund of TATA Company

Year	Return(R)%	D	D^2
2016	-24.3	-39.68	1774.5024
2017	37.1	21.72	471.7584
2018	9.5	-5.88	34.5744
2019	50.5	35.12	1233.4164
2020	4.1	-11.28	127.2384
ΣR=	76.9	Σd^2=	3441.488

AVG RETURN	ΣR/N=76.9/5	17.38%
STANDARD DEVIATION	$\sqrt{\Sigma D^2/N}$=3441.488/5	26.23543%
SHARPE RATIO	Rp-Rf/σp=	0.30

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 4: Tax Saving Fund of NIPPON INDIA Company

Year	Return(R)%	D	D^2
2016	-23.8	-37.54	1609.2518
2017	34.1	20.36	416.5296
2018	6.2	-7.54	56.8518
2019	49.2	35.46	1257.4118
2020	3	-10.74	117.3476
ΣR=	68.7	Σd^2=	3253.392

AVG RETURN	ΣR/N=68.7/5	13.74%
STANDARD DEVIATION(σ)	$\sqrt{\Sigma D^2/N}$=3253.392/5	25.5084%
SHARPE RATIO	Rp-Rf/σp=	0.25

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 5: Return and Risk of Tax Savings Funds of 3 Companies.

SCHEMES	AVG RETURN	STANDARD DEVIATION(RISK)
ADITYA BIRLA Tax saving-Equity long term fund(G)	10.62%	22.04%
TATA Tax saving- long term equity fund(G)	17.38%	26.23%
NIPPON Magnum Tax gain(G)	13.74%	25.50%

INTERPRETATION:

Based on the above table , TATA tax saving scheme has a higher Return of 17.38 % with a risk of 26.23 %, followed by NIPPON INDIA tax saving scheme with a return of 13.74 % with a risk of 25.50 %, and finally ADITYA BIRLA tax saving scheme with a return of 10.62 % with a risk of 22.04 %.

Table 6: Sharpe Ratio Analysis of Tax Savings Fund

SCHEMES	Ratio	RANK
ADITYA BIRLA Tax saving-Equity long term fund(G)	0.16	3
TATA Tax saving- long term equity fund(G)	0.30	1
NIPPON Magnum Tax gain(G)	0.25	2

INTERPRETATION:

According to the table above, TATA tax saver plan ranks first with a Sharpe ratio of 0.30, followed by NIPPON magnum Tax saving- long term equity fund(G) scheme at 0.25, and ADITYA BIRLA at 0.16.

II.LARGE CAP FUND (LCF COMPARISON

Table 7: Large cap fund (LCF) of ADITYA BIRLA Company

Year	Return(R)%	D	D^2
2016	-19.5	-33	1089
2017	32.4	20.9	357.21
2018	7	-6.5	42.25
2019	46.8	33.3	1108.89
2020	0.8	-12.7	181.29
ΣR=	67.5	Σd^2=	2758.64

ADITYA BIRLA Equity fund (G)

AVERAGE RETURN	ΣR/N=67.5/5	13.5
STANDARD DEVIATION	$\sqrt{\Sigma D^2/N}$=2758.64/5	23.48889
SHARPE RATIO	Rp-Rf/σp=	0.26

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 8: Large cap fund (LCF) of TATA Company

Year	Return(R)%	D	D^2
2016	-18.5	-28.66	821.3956
2017	27.3	17.16	229.2196
2018	9.4	-2.76	7.6196
2019	40.9	28.74	825.9876
2020	-0.3	-12.46	175.2518
ΣR=	60.8	Σd^2=	2039.472

TATA Focused blue chip equity (G)

AVG RETURN	ΣR/N=60.8/5	12.18
STANDARD DEVIATION	$\sqrt{\Sigma D^2/N}$=2039.472/5	20.1964
SHARPE RATIO	Rp-Rf/σp=	0.23

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 9: Large cap fund (LCF) of NIPPON INDIA Company

Year	Return(R)%	D	D^2
2016	-24.7	-39.78	1782.4484
2017	38.2	23.12	534.5344
2018	6.6	-8.48	71.9104
2019	47.4	32.32	1044.5824
2020	7.9	-7.20	51.5524
ΣR=	75.4	Σd^2=	3285.028

AVG RETURN	ΣR/N=75.4/5	17.08
STANDARD DEVIATION	$\sqrt{\Sigma D^2/N}$=3285.028/5	25.63212
SHARPE RATIO	Rp-Rf/σp=	0.26

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 10: Risk and Return of Large cap fund (LCF)

SCHEMES	AVG RETURN	STANDARD DEVIATION
ADITYA BIRLA Equity fund(G)	13.5%	23.48%
TATA Focused Blue chip equity(G)	12.18%	20.19%
NIPPON Blue Chip Fund(G)	17.08%	29.65%

INTERPRETATION:

The above table show that NIPPON INDIA large cap fund (LCF) has the highest return of 17.08 % with a risk of 29.65 %, followed by ADITYA BIRLA large cap fund (LCF) with a return of 13.50 % with a risk of 23.48 %, and TATA large cap fund (LCF) with a return of 12.18 % with a risk of 20.19 %.

Table 11: Sharpe Ratio Analysis of Large cap fund (LCF)

SCHEMES	RATIO	RANK
ADITYA BIRLA Equity fund(G)	0.26	1
TATA Focused Blue chip equity(G)	0.23	3
NIPPON Blue Chip Fund(G)	0.26	1

INTERPRETATION:

Based on the table, we may deduce that ADITYA BIRLA equity fund and NIPPON Blue chip fund rank first and second, respectively, with Sharpe ratios of 0.26 and 0.23, respectively.

III .MID CAP FUND (MCF)S COMPARISION

Table 12: Mid cap fund (MCF) of ADITYA BIRLA Company

Year	Return(R)%	D	D^2
2016	-24.7	-49.04	2404.9218
2017	41.8	19.46	304.8518
2018	9	-17.34	235.3176
2019	89.6	65.26	4258.8676
2020	6	-20.34	336.3556
ΣR=	121.7	Σd^2=	7540.312

AVG RETURN	ΣR/N=121.7/5	24.34
STANDARD DEVIATION	$\sqrt{\Sigma D^2/N}$=7540.312/5	38.83378
SHARPE RATIO	Rp-Rf/σp=	0.43

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 13: Mid cap fund (MCF) of TATA Company

Year	Return(R)%	D	D^2
2016	-32.8	-53.5	2862.25
2017	40.8	20.1	404.01
2018	6.3	-16.4	207.36
2019	84.3	63.6	4044.96
2020	4.9	-17.8	249.64
ΣR=	103.5	ΣD^2=	7768.22

AVG RETURN	ΣR/N=103.5/5	20.7
STANDARD DEVIATION	$\sqrt{\Sigma d^2/N}$=7768.22/5	39.41829
SHARPE RATIO	Rp-Rf/σp=	0.33

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 14: Mid cap fund (MCF) of NIPPON INDIA Company

Year	Return(R)%	D	D^2
2016	-26.3	-50.24	2524.0576
2017	48.3	24.36	593.4096
2018	12.3	-11.64	135.4896
2019	71.1	47.18	2224.0656
2020	16.3	-9.64	92.9296
ΣR=	119.7	ΣD^2=	5569.952

AVG RETURN	ΣR/N=119.7/5	23.94%
STANDARD DEVIATION	$\sqrt{\Sigma D^2/N}$=5569.952/5	33.37649%
SHARPE RATIO	Rp-Rf/σp=	0.49

Rp = the expected return on the investor's portfolio

Rf = the risk-free rate of return

σp = the portfolio's standard deviation, a measure of risk

Table 15: Return and Risk Analysis of Mid cap fund (MCF)s

SCHEMES	AVG RETURN	STANDARD DEVIATION
ADITYA BIRLA Mid Cap(G)	24.34%	38.83%
TATA Mid cap fund (MCF)(G)	20.7%	39.41%
NIPPON Magnum Mid cap fund (MCF)(G)	23.94%	33.37%

INTERPRETATION:

TATA mid cap fund (MCF) scheme has a higher risk of 39.41 % with a lower return of 20.7 %, followed by ADITYA BIRLA mid cap fund (MCF) scheme with a risk of 38.83 % and a return of 24.34 %, and finally NIPPON with a risk of 33.27 % and a return of 23.94 %.

Table 16: Sharpe Ratio Analysis of Mid cap fund (MCF)s

SCHEMES	SHARPE RATIO	RANK
ADITYA BIRLA Mid Cap(G)	0.43	2
TATA Mid cap fund (MCF)(G)	0.33	3
NIPPON Magnum Mid cap fund (MCF)(G)	0.49	1

INTERPRETATION:

Based on the table, we can deduce that NIPPON Magnum mid cap fund (MCF) scheme ranks first with a Sharpe ratio of 0.49, followed by ADITYA BIRLA Mid cap fund (MCF)(G) scheme with a Sharpe ratio of 0.43, and TATA with a Sharpe ratio of 0.33.

Table 17: Sharpe Ratio of Tax saving fund, Large cap fund (LCF) and Mid cap fund (MCF) of 3 Companies

COMPANIES	SHARPE RATIO		
	TAX SAVING FUND	LARGE CAP FUND (LCF)	MID CAP FUND (MCF)
ADITYA BIRLA	0.16	0.26	0.43
TATA	0.30	0.23	0.33
NIPPON	0.25	0.26	0.49

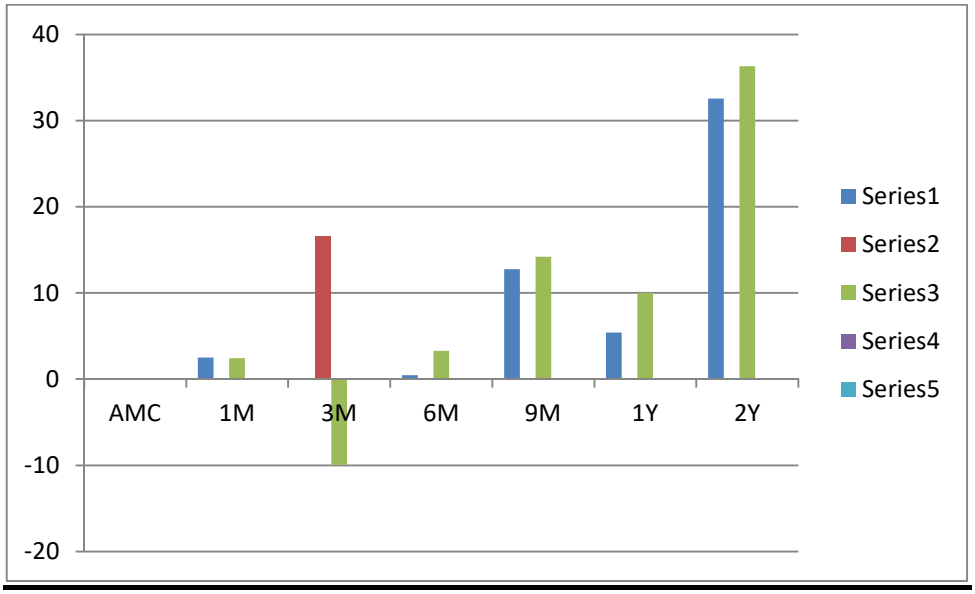
INTERPRETATION:

The Sharpe ratios of ADITYA BIRLA's Tax saving fund, big cap fund, and mid cap fund (MCF) are 0.16, 0.26, and 0.43, respectively, whereas Sharpe ratios of TATA are 0.30, 0.23, 0.33, and Sharpe ratios of NIPPON are 0.25, 0.26, 0.49.

Table 18: RATE OF RETURNS OF MFS IN SELECTED AMC's DURING 2018-2020

AMC	1M	3M	6M	9M	1Y	2Y
TATA AIA	8.89	-12.8	9.1	24.66	18.94	**81.4**
NIPPON INDIA MF	-5.8	-15.7	0.17	18.96	8.29	**48.38**
BIRLA	2.52	-16.6	0.47	12.78	5.41	**32.56**

Graph 8: RATE OF RETURNS OF MFS IN SELECTED AMC's DURING 2018-2020



INTERPRETATION:

TATA is providing 18.94 % in the first year and 81.4 % in the second year, while NIPPON INDIA MF is providing 8.29 % in the first year and 48.38 % in the second year, and ADITYA BIRLA is providing 5.41 % in the first year and 32.56 % in the second year, with lower returns than TATA.

FINDINGS:

1. The following AMCs schemes has the highest return under tax saving funds, large cap fund (LCF)s and mid cap fund (MCF)s
    - Tax saving fund: TATA tax saving long term equity fund(G) and its return is 17.38%
    - Large cap fund (LCF): NIPPON Blue Chip Fund(G)and its return is 17.08%
    - Mid cap fund (MCF): ADITYA BIRLA Mid Cap(G)and its return is 24.34%
2. The following AMCs schemes has the less return under tax saving funds, large cap fund (LCF)s and mid cap fund (MCF)s
    - Tax saving fund: ADITYA BIRLA Tax saving-Equity long term fund(G)and its return is 10.62%.

- Large cap fund (LCF): TATA focused blue chip equity(G) and its return is 12.18%
- Mid cap fund (MCF): TATA Mid cap fund (MCF)(G))and its return is 20.7%

3. The following AMCs schemes has the highest risk under tax saving funds, large cap fund (LCF)s and mid cap fund (MCF)s

- Tax saving fund: TATA Tax saving long term equity fund(G) and its risk is 26.23%
- Large cap fund (LCF): NIPPON Blue Chip Fund(G)and its risk is 29.65%
- Mid cap fund (MCF): TATA Mid cap fund (MCF)(G)and its risk is 39.41%

4. The following AMCs schemes has the lowest risk under tax saving funds, large cap fund (LCF)s and mid cap fund (MCF)s.

- Tax saving fund: ADITYA BIRLA Tax saving Equity long term fund(G) and its risk is 22.04%
- Large cap fund (LCF): TATA Focused Blue chip equity(G)and its risk is 20.19%
- Mid cap fund (MCF): NIPPON magnum Mid cap fund (MCF)(G) and its risk is 33.37%

5. The performance of the AMC's scheme has been evaluated with the help of Sharpe ratio under each fund and the scheme with highest Sharpe ratio is given the top rank. Top ranked AMC's scheme under each fund is as follows:

- Tax saving fund: TATA tax saver fund with 0.30
- Large cap fund (LCF): ADITYA BIRLA equity fund and NIPPON Blue chip fund with 0.26
- Mid cap fund (MCF): NIPPON Magnum mid cap fund (MCF) scheme with 0.49.

SUGGESTIONS:

1.The investor should take moderate risk to invest in ADITYA BIRLA mid cap(G) which gives more return.

2.If an investor likes to take less risk he can invest in TATA Focused blue chip equity (G).

3. It is necessary to inform potential investors about MF investments.

4.It is preferable for investors to have a complete understanding of the various financial services and instruments in order to make better judgments.

5.Investors should not be mislead if risk-return analysis is done properly.

CONCLUSION:

In this research the performance of tax saving fund, large cap fund (LCF) and mid cap fund (MCF) of the three companies are investigated. It is found that among the different types of funds Mid cap fund (MCF)s are performing well with more returns and more risk. It is also found that NIPPON magnum mid cap fund (MCF) scheme has highest Sharpe ratio of 0.49 and investing in the same will lead to profit.

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