

**PERFORMAMANCE ANALYSIS OF GROWTH MUTUAL
FUNDS AND TAX-SAVING MUTUAL FUNDS (ELSS)**

A Thesis Submitted to the

ARKA JAIN University

*For the award of the degree
of*

DOCTOR OF PHILOSOPHY
in Commerce and Management

by

Mr. Rajeev Kumar Sinha

Under the Guidance of

Prof. (Dr.) Angad Tiwary



**DEPARTMENT OF COMMERECE AND MANAGEMENT
ARKA JAIN UNIVERSITY, JHARKHAND**

2022

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This is to certify that the work contained in the thesis entitled "Performance Analysis of Growth Mutual Funds and Tax-Saving Mutual Funds (ELSS)", submitted by Mr. Rajeev Kumar Sinha (Regd. No.: AJU/181449) is a record of bonafide research work carried out by him/her under my/our supervision in partial fulfillment for the award of the degree of Doctor of Philosophy in Management by ARKA JAIN University

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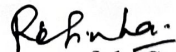
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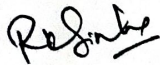
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I make a move to thank my Father late Binay Kant Prasad & my Mother Smt. Premlata Sinha, for supporting and empowering me in the entirety of my undertakings.

I likewise bow my head before my most prominent educator the all-powerful god, for giving me the psychological and actual solidarity to endure and finish this work.



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LIST OF ABBREVIATIONS

Abbreviation	Expanded Form
AMC	Asset Management Company
AUM	Asset under Management
AMFI	Association of Mutual Funds in India
BSE	Bombay Stock Exchange
CBDT	Central Board of Direct Taxes
CTR(s)	Compliance Test Reports
CAS	Common Account Statement
CDSC	Contingent Deferred Sales Charge
CAGR	Compound Annual Growth Rate
DP	Depository Participant
FATF	Financial Action Task Force
FEMA	Foreign Exchange Management Act
FIIs	Foreign Institutional Investor
NSE	National Stock Exchange
NFO	Net Asset Value
NPA(s)	Non Performing Assets
PAN	Permanent Account Number
SEBI	Securities and Exchange Board of India
SIP	Systematic investment Plan

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LIST OF ABBREVIATIONS

Abbreviation	Expanded Form
AMC	Asset Management Company
AUM	Asset under Management
AMFI	Association of Mutual Funds in India
BSE	Bombay Stock Exchange
CBDT	Central Board of Direct Taxes
CTR(s)	Compliance Test Reports
CAS	Common Account Statement
CDSC	Contingent Deferred Sales Charge
CAGR	Compound Annual Growth Rate
DP	Depository Participant
FATF	Financial Action Task Force
FEMA	Foreign Exchange Management Act
FIIs	Foreign Institutional Investor
NSE	National Stock Exchange
NFO	Net Asset Value
NPA(s)	Non Performing Assets
PAN	Permanent Account Number
SEBI	Securities and Exchange Board of India
SIP	Systematic investment Plan

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**PERFORMANCE ANALYSIS OF GROWTH MUTUAL
FUNDS AND TAX-SAVING MUTUAL FUNDS (ELSS)**

Abstract of the Thesis

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1. INTRODUCTION

In India, return in the mutual fund drastically decline due to COVID-19 situation. The positive things here that if we see the capital market history in India , after a adverse situation its always come back by a sharp growth in coming future.. According to AMFI website, Rs. 1,230 cores has been invested in the mutual fund industry in India during the lockdown and pandemic period and major rating agency said that better situation will come in term of interment opportunities in mutual funds that will increase the GDP growth rate and maintain high liquidity in the capital markets. Investment in mutual funds always based on the best portfolio theory and this will support ours interment in the adverse market situation and minimize the risk factor in the open market.

In the present situation of CPVID-19, information technology is uniformity for the right way. With the help of technology investors can do the investment in smart way in the financial market. In the era of digitization the mutual funds industry using the latest technology all its processes - fund management, executing transactions, and customer servicing. In the current situation of pandemic, the investment in mutual funds through online in association of digitalization gives a impressive features for the better investment. Assets under Management (AUM) in the mutual funds industry grown by more than tripled from Rs 7.66 trillion in August 2013 to over Rs 25 trillion in August 2018.

Objectives of the study: To analyze the comparative analysis of mutual funds investment in growth and ELSS funds on pre and post period of COVID-19

Indicative methodology: Research Methodology is a systematic or step by step procedure to carry out the research process. A lot of research process like quantitative techniques and qualitative techniques are adopted to find out the objective of the research in better ways and reduce the standard errors in the statistical analysis of desired data. Statistical data provided a best ways to find out the optimum solution of research problem. This research paper finds out the effect of highly changes in financial technology and role of artificial intelligence and evaluates the impact on the mutual funds industries in India. The latest digitization process in financial markets with a lot of additional information, minimum administrative cost, more transparency and secure digital transaction provides the investor more options to invest in this sectors to secure their future earnings..

Data Analysis: I will collect Primary data on the basis of Questionnaire surveys for meeting numerical information regarding the attributes, attitudes, or events of a inhabitants by a planned set of questions. Financial Data proved that investors from top 15 cities are more familiar and feel connivance to make investment through digital payment. The financial analysis have remarkable shown that the Foreign institutional investors (FIIs) done the highest digital payment in the current situation and more focus to follow the latest Fin-Tech in compare to individual investors. in the intervening time, growing receipt of technology by the industry will also aid in tumbling the expenditure, particularly in radiance of the long-term aspire of the regulator and industry to diminish costs connected with the investment avenue.

Key findings: Mutual Fund, Standard Deviation, Beta, Coefficient of Determination, NAV

Implications: In this research paper, we are trying the find out the impact of COVID-19 on the Indian Economy and fluctuation in mutual fund performance in the different sector and portfolio from the relevant sources on escalation pathway in post-COVID-19 for the outstanding quarters of financial year 2020- 2021. Availability of data and consequently, awareness has fortified the reason for digitalization. The public authority is doing its touch, as well, through inescapable endeavors at monetary consideration scattering monetary attention to the farthest pieces of the nation, and spanning the topographical segment. The public position and markets regulator Securities and Exchange Board of India (SEBI) has in like manner taken different drives to overhaul the Fin-Tech climate and make open new organizations with new opportunities to start relentless things. Show of portions banks and minimal expenditure banks has worked on financial consolidation.

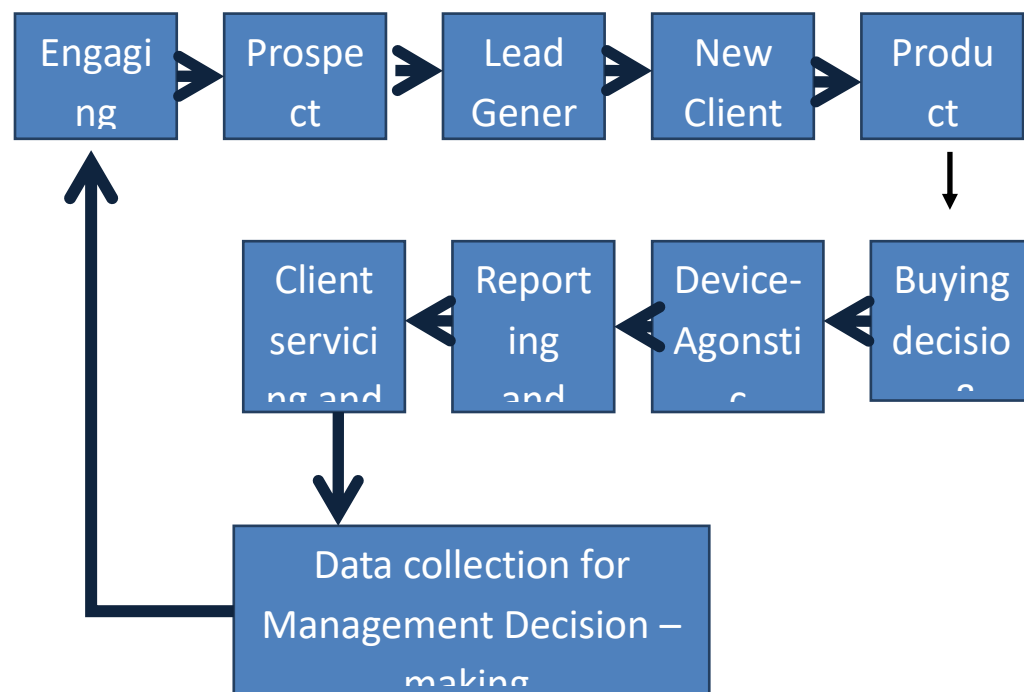
1.1 DIGITALIZATION IN MUTUAL FUNDS

As we know that the world is moving towards digitalization and speed of communication increases day by day. At present there are around 300 million user over the internet Google had done a research and Within this, Google estimates that Indian user touch a benchmark of 100 million on online platform in a time duration of 20 years, while the next 100 mn took only 2 years and 1.3 years

respectively. Google is expected that internet user in India becomes 600 million by 2020, with users across gender and age-groups. Comscore's financial report on Sept 2014 has given a more relevant figures for financial markets and financial services . It estimates ~170 mn Males of age 25+ years visited financial websites. It stated that financial services are not dominated by gender bias and not related to male domain only but equality opportunity provided to both male and female and based on their future goal and outcome they are investing in the financial markets.. Digitization has played an essential role in distribution of information and that as well in an appealing way foremost to better information and in rank about the developments in the mutual fund industry and capital market

The following are the Activities where Digital is making impact in the Financial Services Value-Chain...

From Customer Engagement to Customer Fulfillment: Chart 1.04



(Source: pubdocs.worldbank.org)

1.2 STATEMENT OF THE PROBLEM

The main objective of growth mutual funds is to enhance the better return and capital appreciation for the long term investment plan. Mutual funds provided a an average return of 16% in s duration of last 40 years history which is more than any other financial investment return in financial market. The major part of investment is done in equity funds and these investments is always facing the high risk challenges of open market operation and after the circle of globalization and liberalization, a lot of internal and external factor on worldwide affect the expected return in capital market.

A lot of financial derivatives like inflation, deflation, recession, real-estate crisis, currency convertibility risk factors, hedging and arbitration highly affect the market return in equity funds. these equity funds endow with a lot of opportunity of financial instruments like Large cap funds: Mid cap funds:. Small cap funds, Sector Mutual Funds:, Equity Linked Savings Scheme (ELSS).

From the Literature Review it is clear that no much work has been emphasized on the open ended Equity Linked Savings Scheme (ELSS) of Mutual Funds. ELSS scheme offering multiple benefits to investors like short duration, high return than other tax saving schemes and dividend etc. Even though the investor has multiple benefits but their growth was not satisfactory. When they compare public sector banks mutual fund schemes and private sector banks mutual fund schemes the performance of private sector funds is better than public sector banks. Hence we would like to study the performance of public and private sector banks mutual fund open ended tax saving schemes. With the following objectives

- To compare and evaluate the performance of various selected public and private sector banks open ended tax saving mutual fund schemes with Nifty 50 TRI.
- To offer suggestions to decide where and when to invest in order to obtain tax advantages and high returns

1.3 SIGNIFICANCE OF THE STUDY

Common assets have ended up being a fundamental speculation choice in present occasions. As of now, there are various speculation roads (counting common assets) accessible for financial backers in India. Financial backers ought to choose their speculations dependent on investigation of resource the executives organizations as far as basics can imagine monetary situation, industry/area, asset's venture objective, and so on Financial backers are confronting difficulties in choosing reasonable assets as far as hazard and return. Consequently, this review would assist financial backers with choosing resource the board organizations as indicated by the exhibition of their assets. It guides financial backers to contribute their assets to get appealing returns by taking lower chances.

1.4 PURPOSE OF STUDY

The Study would examine opinion of people towards putting resources into values through Mutual Funds, while endeavoring to set up a relationship between's development of MF industry and Indian securities exchanges. Methodology: Primary information assortment - poll glided to people of various sex, age, sexual orientation, schooling, and so forth, to survey their monetary proficiency and the variables that have added to expanded interest in MFs. Auxiliary exploration - information from AMFI/MFs sites, breaking down the increase in AUM of Equity MFs throughout the most recent twenty years' opposite Market Capitalization, utilizing connection. On the essential arrangement of data, a t-test was directed and Pearson's connection was applied on the optional information.

A rate investigation was accomplished for opinion analysis. The Study would help in measuring monetary proficiency of people, and furthermore develop our comprehension of interest in securities exchanges through MFs. Innovation: There have been a couple of concentrates on monetarily educated financial backer's inclination for direct venture over contributing through Mutual

Funds, however very few on financial backer opinion towards securities exchanges overall and Mutual Funds specifically

1.5 Difference between ELSS and Equity mutual Fund

An ELSS mutual fund provides a tax benefits up to Rs. 1.50 lakh in one assessment year under Section 80C of the Income Tax Act, 1961. Whereas growth or equity mutual funds doesn't provides any tax benefit to the investors..For novice financial backers, Equity connected investment funds conspire (ELSS) and Equity Mutual assets can be befuddling on occasion.

As a financial backer, one of your essential objectives is set up an expanded speculation portfolio. It assists you with moderating the market hazard as well as assist you with getting steady returns. Furthermore, probably the most ideal way of having an expanded portfolio is to put resources into a common asset conspire, which additionally gives capital increases to the financial backers.

Inside a shared asset conspire, there are various kinds of assets like value reserves, obligation store, half breed reserves, and so forth .Among different sorts of value connected common assets, two of the most well known assets is the Equity shared asset and ELSS. We should find out about these assets. Since we know what ELSS and Equity Mutual Funds are, let us comprehend the contrasts between the two dependent on various variables:

- Returns acquired

the profits might differ dependent available condition. The Equity common assets, then again, are known to give somewhat more significant yields than ELSS reserves. In any case, recollect with value assets, there is additionally high danger.

- Lock-in period

ELSS reserves have a lock-in time of three years. Though, the value shared assets, have no lock-in period. In this way, on the off chance that you think ELSS has an inconvenience; you should realize that it has a most brief residency. In any case, in case you are searching for a speculation choice that gives you simple liquidity choice, you can consider putting resources into value shared assets; you can pay the leave load, and reclaim your venture whenever you need.

- Tax ramifications

Investors are getting a benefit of Rs. 1.50 lakh for the investment in Tax Saving mutual funds under the Section 80C of Income Tax Act, 1961. This assessment allowance isn't accessible in the Equity Mutual Fund.

(Source 12: India Infoline)

2. REVIEW OF LITERATURE

The main reason of the research to find out the correlation between the mutual funds attributes and its effects on the performance of mutual funds. In the previous chapter we have discussed the distinct features of in the field of investment in mutual funds with a lot of pro and cons of its risk factors and better returns and I will frame a hypothesis to find out the optimum result from the testing it. I am discussing a lot of things in this literature review which provides a silver line for the further research in the field of mutual funds industry in India.

The reason for the review is to decide if common asset credits influence shared reserve execution. The past part talked about the different quandaries in this field what's more, expressed the speculations to be tried in this review. This part presents the writing audit and shows that further exploration is required. In the writing audit, the disconnected discoveries of different scientists are introduced. Traits, for example, the board residency, costs, NAV , and size are analyzed and the unique positions are cited from the writing. Finally, this part sums up why further research is justified in this field.

Equity Mutual Funds are one of the important means of pooling risk capital from small investors. In order to encourage such investment culture, the Govt. of India in the year 1992 introduced the Equity Linked Savings Scheme (ELSS) mutual funds. Investments into the scheme qualify for tax benefit. The tax benefit comes with certain regulatory provisions. These regulatory provisions make the ELSS funds distinct from Diversified Equity Funds. Tax Saving Mutual Fund is one of the financial instruments in capital market, here the study is based upon the ELSS of public sector and private sector Mutual Funds, main purpose of the study is to compare the ELSS scheme of public sector and private sector and analyze the market timing abilities of fund managers of ELSS.

A mutual fund is a financial intermediary that pools the savings of small investors for collective investment in a diversified portfolio of securities. Indian mutual fund industry is playing a significant role in the development of capital

market and in the growth of Indian economy. Mutual fund investment is quite popular among small investors for seeking tax incentives. Tax-saving mutual fund schemes or the equity-linked savings schemes (ELSS) offers tax deduction benefits to investors. Thus, this study is carried out to fulfill the objectives of the investors

2.1 WRITING REVIEW AND CHALLENGES IN FRONT OF MUTUAL FUND INDUSTRY

The writing accessible¹⁴³ is generally as articles and sections. The examination papers on digitization and banking are accessible yet with regards to digitization and MF, nothing concrete is accessible. To distinguish the variable for concentrate on the scientists have utilized the foundation of Quora and technique for centered gathering. Factors and ensuing inquiries in the survey for 3 partners depend on the sources of info assembled as above.

The survey of writing has brought following issues or difficulties looked by the MF business in digitized world.

- (i) The pace of development of MF industry isn't adequately adequate to guarantee adequate pie from investible excess. Conventional speculations actually lead the count. The MF showcasing blend should be worked out to take the flood from current 3% of investible family excess.
- (ii) Majority of interest in MF is coming from top 5 urban communities and non-retail financial backers. The entrance in level 1 and 2 urban communities is a test and country India is a far off dream.
- (iii) Only hardly any MF items are famous. In this way the financial backer investment is slanted towards not many asset classifications as it were. The bleeding edge deals people are not exceptionally clear with regards to the best attack of item and financial backer requirements. The greater part of the MF items are wrongly sold.

- (iv) Distribution directs in the current structure are ruling the market. Other creative channels are not accessible even after digitization. Portable based stages like CAMS are not yet well known.
- (v) Most of the financial backers avoid shared assets believing it to be like value. Making mindfulness about minimal expense obligation assets for first time financial backers can be an answer.
- (vi) The merchants are compensated for amount of AUM produced and not on the Quality of exhortation. A computerized stage can be utilized to assemble the reactions on the quality part of the warning (Source: citigroup.com¹⁴³)

2.2 DEMOGRAPHIC FACTORS AFFECTING MUTUAL FUND INVESTMENT DECISIONS

Tadashi Endo. (2020) from The Nikko Securities co. Ltd. Tokyo, Japan explained precisely in their book titled “The Indian Securities Market- A Guide for Foreign and Domestic Investors”. The Indian capital markets appear mysterious and puzzling to many foreign investors and even to domestic Indian investors. He explained that , there is no current information materials which comprehensively addresses investors’ concerns about this rapidly-growing market. He have tries to do is shed some light on practices and rules in the Indian market, including the problematic ones, so that foreign as well as Indian investors can look at market more rationally for their portfolio investments in Indian securities.

The Indian Financial system is regulated and supervised by two government agencies under the Ministry of Finance.

- (i) The Reserve bank of Indian, India’s Central bank, and
- (ii) The Securities Exchange Board of india, the Country’s capital market regulators

He explained that all parts of the system are interconnected with one another, and the jurisdictions of the central bank and the capital market regulator overlap in some fields of Indian financial activities. This book focuses on the capital markets of India under the latter, and primarily covers the areas involving the regulator and the market participants, as highlighted in the chart.

The Indian capital markets change amazingly quickly. Indian people in the securities industry attribute the lack of comprehensive information materials about their market to the rapid and incessant changing of rules and regulations. Yet, he believes that investors, foreign and Indian alike, need something like a benchmark from which they can develop their knowledge and understanding of this market.

Pratyashi Tamuly and Samaresh Nandy (2020) explained in “investors behavior and mutual funds - a review on available literature” in International Journal of Management (IJM) Volume 11, Issue 10, October 2020, pp. 617-625, Article ID: IJM_11_10_058 expressed that the motivation behind the review is to do an investigation of the collection of writing in International friend survey diaries, distributions, class and gathering procedures on Investors Behavior and Mutual assets. All out 30 examination papers are audited. This review put experiences into the conduct of the financial backer towards Mutual Fund Investment. From the audit of the accessible writing the paper gives an intensive investigation of a wide arrangement of studies that covers factors invigorating putting resources into common finances like speculation goals, length of venture, kinds of assets, nature of venture, stock return, market instability, financial backers opinions and then some, and components which are limiting the interest in Mutual Funds. Shared asset venture requires profundity information on various asset portfolios and plans.

In the cutting edge lifestyle, individuals have accepted to finance speculation as a method of investment funds giving high pace of profits. In any case, for speculation the financial backer needs to comprehend the diverse multidimensional components which can affect the progression of assets in the asset market. Financial backers need to explore the boundaries whereupon the buying choice can be depended on. Venture choices like financial backers hazard, anticipated returns, wellbeing and security, sorts of assets and so forth assumes a critical part in the conduct of the financial backers purchasing choice. The current review investigations the financial backers assessment and conduct in common asset venture. The review put stresses on the elements influencing the financial backer's conduct and furthermore the elements which go about as a restriction. The review uncovered that efficient method of money growth strategies is favored instead of contributing on arbitrary assets plans.

Taste is the methodical speculation made by the financial backers on an orderly premise every once in a while. The financial backers had the choice of various types of assets speculation like SBI Magnum, Reliance, ICICI, KOTAK, HDFC and so on Further the discoveries featured the components which limit the progression of assets from the financial backers. The most widely recognized variables remembered the absence of data of asset speculation for the piece of the financial backers, absence of information on reserves, absence of admittance to records of the organizations, low attention to the asset plans and so on In this manner it is the obligation of the portfolio directors to acquire the trust of the planned financial backers by upgrading the assets includes and giving data

3. RESEARCH METHODOLOGY

Nature of Research	Exploratory in nature
Nature of Data	Primary Data and Secondary Data
Source of Data	Primary Data Both Online & Offline Survey Through Questionnaire Developed Secondary Data Internet, Magazines, Newspaper, Books etc
Sample Size	500 Respondents data were collected Data Sorted and Verified for Validity and finally 395 Data were shortlisted for sample research. (ELSS funds and Growth funds are selected on the basis of performance in the financial market using judgemental sampling methods)
Period of study	2013-2014 to 2020-2021
Objectives	Statistical Tools
Tests Applied	Descriptive Statistics, Co-efficient of Variation, Standard deviation, Co-relation between variables, Sharpe's Ratio, Beta Test, Treynor Ratio, Welch t-Test, Mann U Whitney Test, Kruskal Wallis Test, Wilcox on Matched Pair Sign Rank Test, 1 Sample Chi Square Test, 1-way ANOVA, Friedman's 2 way ANOVA, Kolmogorov Smirnov Test, Jensen Alpha Test, Sornito Ratio, Expenses Ratio, CAGR of Funds.
Tools used for Analysis	SPSS, MS Excel, MS-Office

3.1 RESEARCH OBJECTIVE

The objectives of the paper are given below:

- (i) To examine the danger reward view of individual retail financial backers towards Equity Linked Savings Scheme common assets as looked at Growth shared assets plans
- (ii) To dissect the financial backer's discernment and inclination towards Equity Linked Savings Scheme shared assets when contrasted with Growth common finances plans
- (iii) To analyze the investment performance of Equity Linked Savings Scheme mutual funds plans with Growth mutual funds plans.
- (iv) To analyze the advantages and disadvantages of investing in growth mutual funds Schemes and Tax-Saving mutual funds (ELSS).

3.2 NULL HYPOTHESIS FORMATION

Hypotheses of the Study

The Hypotheses Testing for the pertinent study of shared assets is as per the following:

H01 = There is no critical distinction in the normal Sharpe Ratio of Growth Mutual Funds and ELSS mutual reserve

H1 = There is a critical distinction in the normal Sharpe Ratio of Diversified Growth Equity assets and ELSS reserves

H02 = There is no critical financial backer's view of hazard in the event of Growth Mutual Funds and ELSS common asset

H2 = There is critical financial backer's view of hazard in the event of Growth Mutual Funds and ELSS common asset

H03 = There is no critical financial backer's view of expected pace of return in the event of Growth Mutual Funds and ELSS common asset

H3 = There is significant investor's perception of expected rate of return in case of Growth Mutual Funds and ELSS mutual fund

3.3 DATA BASE

The research study has been taken the data collection from primary sources of data as well as secondary source of data also.

For targets 1 to 3, auxiliary information is utilized and for target 4 essential information is utilized.

Essential wellspring of information has been made from an example out of 395 individual potential financial backers comprising of two gatherings, one bunch of respondents having speculation experience (hereinafter called 'Financial backer' classification) in ELSS shared assets just as other duty saving ventures and one more arrangement of respondents putting resources into half and half or development mutal reserves yet not in ELSS reserves (hereinafter called 'Non-Investor' class).Secondary data related to Net Asset Values (NAV) has been taken from private data base provider of mutual fund schemes called ACE MF.

In India, the National Stock Exchange of India (NSE) and Mumbai Stock Exchange (BSE).have provided the market index value related to invement in the mutual funds.

Publication of Securities and exchange board of India(SEBI), Reserve bank of India(RBI), AMFI , other financial market website, Publication of financial journal have been selected for collection of secondary data for analysis.

3.3.1 METHODS OF DATA COLLECTION

The significant of this study is the Investor's insight related to Growth and ELSS funds. To fulfill the optimal outcomes of the objective, the survey technique has been taken for the consideration and two questionnaire's in the well structure form is taken in which one for ELSS Investor category and another for Growth funds category (Appendix 1 and 2).

The complete sample size considered is of 395 financial backers of Hybrid or Growth Scheme and assessment investment funds plans u/s 80C of the Income Tax Act. This sample consists of two types of investors, those who had an investment experience in ELSS funds and those who invested in Hybrid or Growth funds

The quantity of respondents is 395 ELSS Investor classifications and one more for Growth supports class the testing technique utilized is purposive examining. Purposive examining is viewed as a non-likelihood inspecting utilized for getting subjective data, by choosing respondents (financial backers in ELSS assets and financial backers in other expense saving assets), for addressing the examination questions.

Net Asset Value or NAV of mutual funds are calculated in the following formulae

Mutual Fund NAV = Total Assets - Liabilities / Total number of shares or units

The assets of a mutual fund would consist of its investments and cash. The liabilities of a mutual fund include operating expenses.

4. DATA ANALYSIS

4.1 Investment Performance – Secondary Data Analysis and Discussion

This research study has been considering for the valuation the whole inhabitants of ELSS mutual funds that were in continuation with a pathway documentation of 3 years as at 31st August 2021. A total of 40 top performing mutual funds is considered for the evaluation in which 20 Direct plan growth ELSS funds has been taken for the consideration and remaining 20 Best Equity Mutual Funds has been taken for the evaluation. The sample set of 20 direct plan growth ELSS funds has been selected on the basis of highest Assets Under management (AUM) as on 31st August 2021. The main objective of growth mutual funds is to enhance the better return and capital appreciation for the long term investment plan.

4.1.1 TOP 10 LARGE CAP MUTUAL FUNDS FOR 2021

Table 4.01

Name of the mutual fund	Returns (in %)				
	1-Year	3-Year	5-Year	7-Year	10-Year
Mirae Asset Large Cap Fund	41.18	13.85	17.46	17.70	15.50
Axis Bluechip Fund	30.82	17.51	17.50	16.12	14.17
ICICI Prudential Bluechip Fund	43.63	12.60	15.77	14.87	13.20

SBI Bluechip Fund	45.94	13.03	14.58	16.24	14.43
Nippon India Large Cap Fund	38.32	10.10	14.51	15.12	12.83
Franklin Bluechip	48.63	11.93	13.16	13.52	11.37
IDFC Large Cap	37.10	12.50	14.32	12.01	10.37
HDFC Top 100	44.44	11.31	15.11	13.70	11.34
L&T India Large Cap	36.47	11.95	13.49	13.77	11.31
Invesco India Large cap	34.28	11.12	13.39	14.06	11.70
Benchmark Index (S&P BSE 100 TRI)	46.72	14.49	16.42	14.51	12.18

(Data as on March 9th, 2021 Source- Value Research)

4.1.2 List of sample ELSS Funds and Growth Mutual Funds

Historic Returns of ELSS & Equity mutual fund Performance Tracker with highest returns

Mutual funds with highest returns

Table 4.02

Sl. No	Name of the mutual fund scheme	CRISIL Ranking	Asset Under management(AuM) (Rs. Cr)	Year Till Date	1Year	2 Years	3 Years	5 Years	10 Years
ELSS Mutual funds									
1	Quant Tax Plan	5	368.44	56%	93%	57%	34%	24%	-
2	IDFC Tax Advantage (ELSS) Fund	5	#####	44%	78%	34%	20%	18%	-
3	Canara Robeco Equity Tax Saver	5	#####	34%	65%	36%	24%	20%	-
4	BOI AXA Tax Advantage Fund	5	512.07	41%	73%	43%	27%	21%	-
5	Mahindra Manulife ELSS KarBachat Yojana	4	409.09	40%	73%	31%	20%	-	-
	Growth Mutual Funds								
6	SBI Growth Contra Fund	5	2,823.38	45%	96%	38%	23%	16%	
7	BOI AXA Tax Advantage Growth ELSS Fund -	5	512.07	42%	79%	41%	29%	21%	
8	Canara Robeco Equity Tax Saver -	5	2,679.66	35%	71%	35%	25%	20%	
9	IDFC Tax Advantage (ELSS) Fund -	5	3,338.88	46%	87%	33%	21%	19%	
10	Quant Tax Plan -	5	368.44	58%	100%	57%	35%	25%	

(Source- Moneycontrol.com)

4.1.3 RISK RATIOS - ELSS FUND PERFORMANCE TRACKER (DIRECT PLAN – GROWTH)

Mutual funds with highest returns
Table 4-03

Sl. No	Name of the mutual fund scheme	Asset Under Management (AuM) (Rs.Cr)	Standard Deviation	Beta(Systematic Risk)	Sharpe Ratio	Jenson's Alpha	Treynor's Ratio
ELSS Funds							
1	IDFC Tax Advantage (ELSS) Fund	3338.88	20.51	0.93	0.68	2.06	0.15
2	Canara Robeco Equity Tax Saver	2679.66	19.68	0.88	0.88	6.33	0.20
3	BOI AXA Tax Advantage Fund	512.07	18.78	0.85	0.97	7.49	0.22
4	Quant Tax Plan	368.44	21.35	0.79	1.17	14.75	0.32
5	Kotak Tax Saver Scheme	2249.04	19.26	0.91	0.77	3.55	0.16

4.1.4 RISK RATIOS – GROWTH MUTUAL FUND PERFORMANCE TRACKER

Mutual funds with highest returns - Direct Plan - Growth
Table 4.04

Sl.No	Name of the mutual fund scheme	Asset Under Management (AuM) (Rs.Cr)	Standard Deviation	Beta(Systematic Risk)	Sharpe Ratio	Jensen's Alpha	Treynor's Ratio
	Direct Plan – Growth Funds						
1	SBI Large & Midcap Fund	5144.64	18.80	0.90	0.90	0.80	0.19
2	Mirae Asset Emerging Bluechip Fund	21263.17	20.60	0.99	1.15	5.66	0.24
3	Principal Emerging Bluechip Fund	3123.47	19.97	0.97	0.95	1.47	0.20
4	BOI AXA Large & Mid Cap Equity Fund	211.27	19.43	0.89	0.91	2.79	0.20
5	UTI Core Equity Fund	1195.86	20.18	0.96	0.81	-0.06	0.17

4.1.5 BEST GROWTH MUTUAL FUNDS TO INVEST IN INDIA.

Table 4.05

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investmen t	1 Yr (%)	3 yr (%)	5 Yr (%)	2020(%)
IDFC Infrastructure Growth Fund	23.44	655	100	99.2	17	18.8	6.3
L & T Emerging Business Fund	42.648	7284	500	93.5	21	18.2	15.5
DSP BlackRock Natural Resources and New Enrgy Funds	52.617	735	500	93.2	15	16.9	11.5
Franklin Build India Fund	63.89	1077	500	92.3	19	14.2	5.4
Aditya Birla Sun Life Samll cap Fund	54.51	2923	1000	79.7	17	11.6	19.8
Aditya Birla Sun Life banking and Financial Services Fund	39.36	2195	1000	77.9	16	12.5	1.1
IDFC Tax Advantage (ELSS) fund	94.39	3339	500	76	21	17.4	18.7
ICICI Prudential Banking and Financial Services Fund	85.99	5097	100	72.9	17	13.2	-5.5
SBI Small Cap Fund	99.28	9714	500	70.4	26	21.6	33.6
DSP BlackRock Equity Opportunities Fund	363.61	6956	500	66.4	21	15.4	14.2

(Source: fincash.com)

4.1.6 PERFORMANCE OF GROWTH MUTUAL FUNDS

1. IDFC Infrastructure Fund Growth

Table 4.09 (1)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
IDFC Infrastructure Fund Growth	23.44	655	100	99.2	17	18.8	6.3

The speculation objective of the plan is to look to create long haul capital development through a functioning broadened arrangement of prevalently value and value related instruments of organizations that are taking an interest in and profiting from development in Indian foundation and infrastructural related exercises. In any case, there can be no confirmation that the speculation objective of the plan will be figured it out.

IDFC Infrastructure Fund Growth.

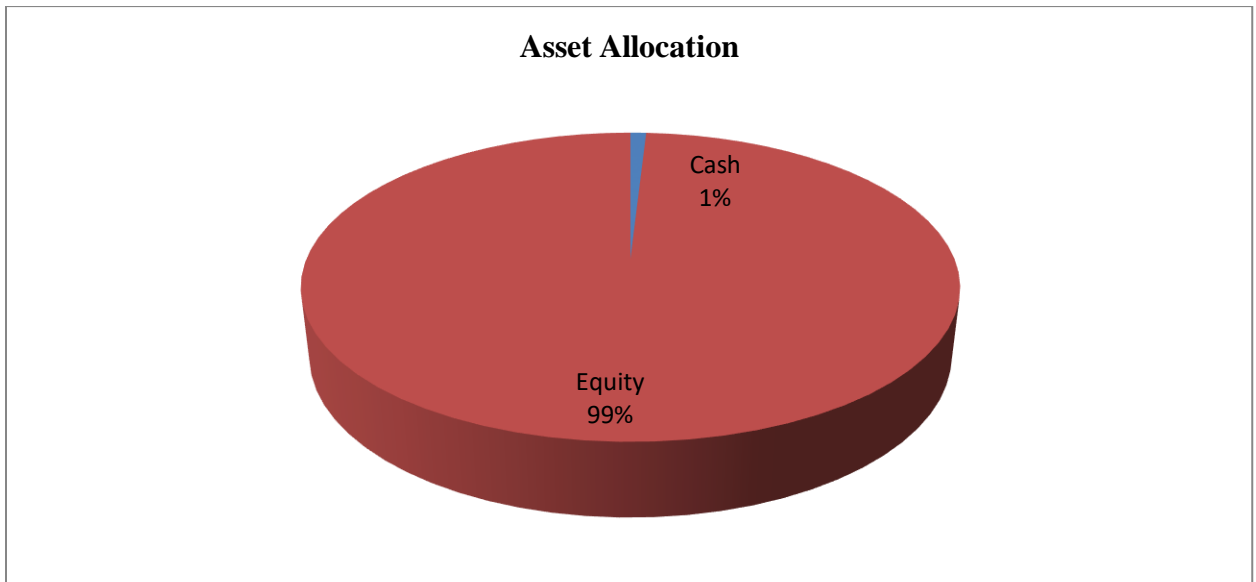
Table 4.09(2)

Launch date	8 th march 2011
Net Asset(in Rs. Cr.)	Rs. 659 as on 31 st Aug, 2021
Net Asset Value(NAV)	Rs.24.26
Assets Management Company (AMC)	IDFC Asset Management Company Limited.
Category	Equity - Sectoral.
Risk	High

Sharpe Ratio =(the portfolio return- risk-free return)	3.21
Expense ratio= (total fund costs/ total fund assets.	2.35
Alpha Ratio.= (End Price + DPS – Start Price)/Start Price	0
Information Ratio= (active return of a portfolio / the tracking error)	0
Minimum Investment.	5,000
Minimum SIP Investment.	100
Exit load	0-365 Days (1%), 365 Days and above(NIL).
Sub category	Sectorial

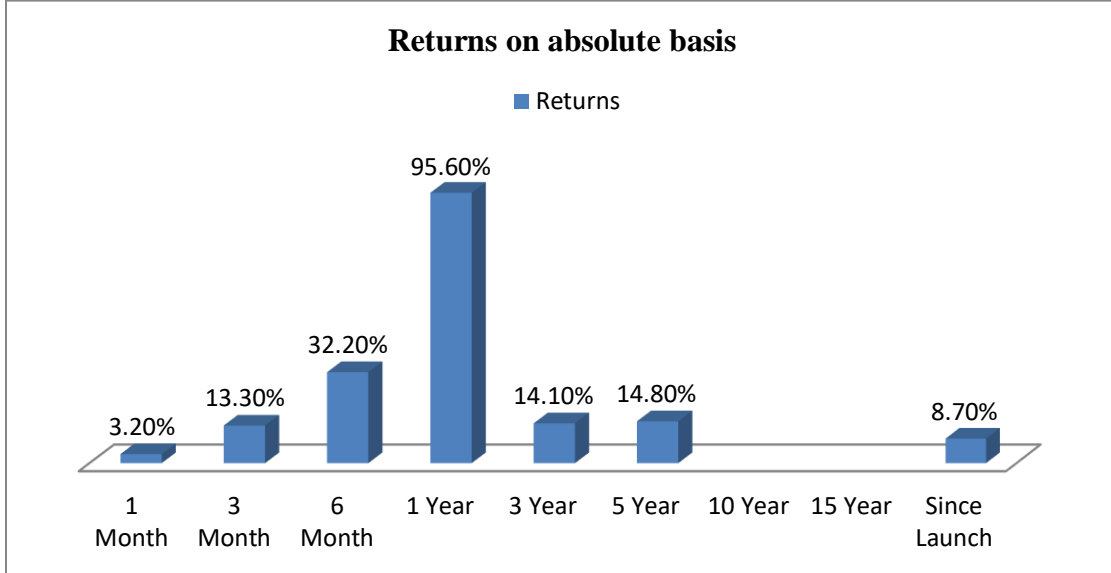
Asset Allocation – based on Assets Class and its value in percentage

Chart 4.09(1)



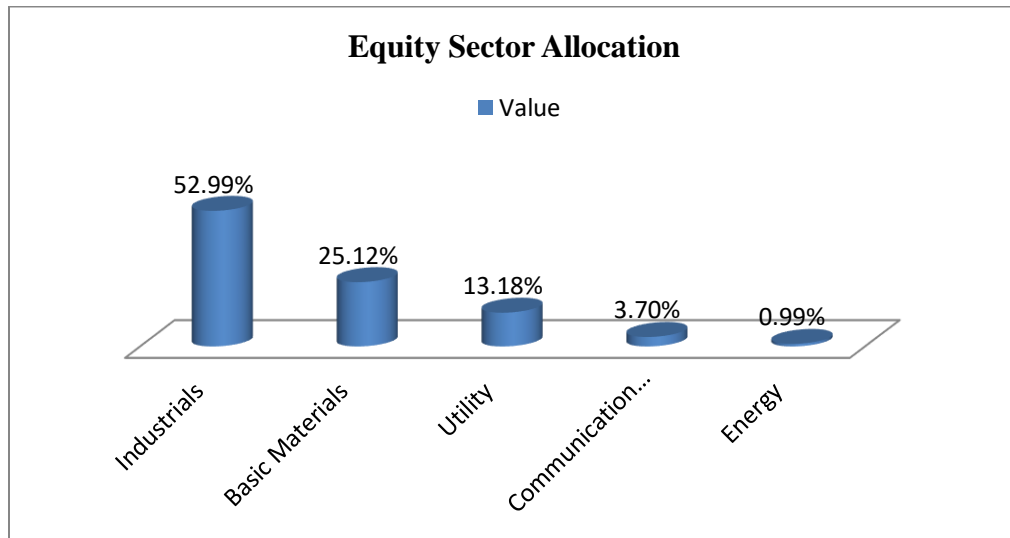
Returns for IDFC Infrastructure Fund Returns up to 1 year are on absolute basis & more than 1 year are on CAGR (Compound Annual Growth Rate) basis. as on 16 Sep 21.

Chart 4.09(2)



Equity Sector Allocation based on weight age (in percentage) of different sector

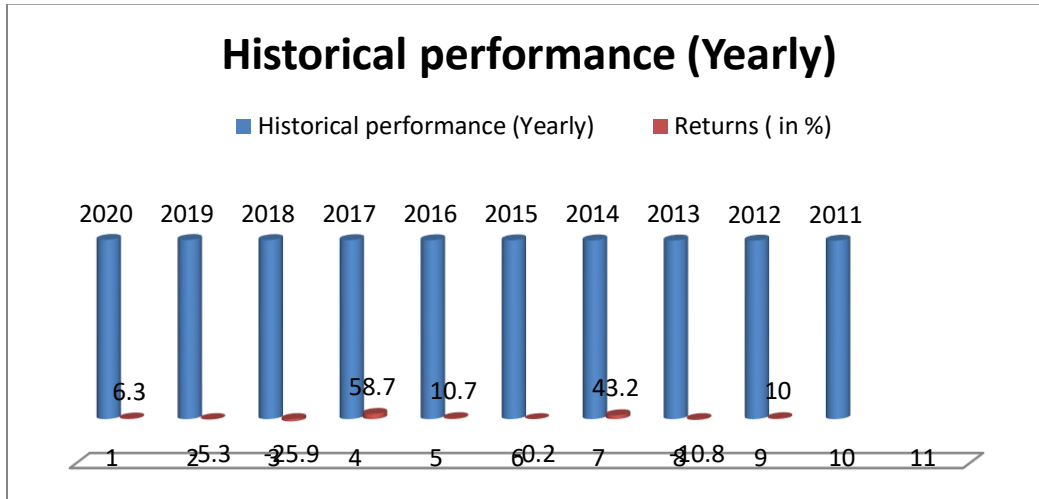
Chart 4.09(3)



(Equity Sector Allocation)

Historical performance (Yearly) on absolute basis and Returns (in %)

Chart 4.09(4)



4.1.7 RISK RATIOS - ELSS FUND PERFORMANCE TRACKER (DIRECT PLAN – GROWTH)

Mutual funds with highest returns

Table 4-03

Sl. No	Name of the mutual fund scheme	Asset Under Management (AuM) (Rs.Cr)	Standard Deviation	Beta(Systematic Risk)	Sharpe Ratio	Jenson's Alpha	Treynor's Ratio
ELSS Funds							
1	IDFC Tax Advantage (ELSS) Fund	3338.88	20.51	0.93	0.68	2.06	0.15

2	Canara Robeco Equity Tax Saver	2679.66	19.68	0.88	0.88	6.33	0.20
3	BOI AXA Tax Advantage Fund	512.07	18.78	0.85	0.97	7.49	0.22
4	Quant Tax Plan	368.44	21.35	0.79	1.17	14.75	0.32
5	Kotak Tax Saver Scheme	2249.04	19.26	0.91	0.77	3.55	0.16

(Source: miraeassetmf.co.in¹⁷⁵)

Quant Tax Plan had the most negligible beta value 0.79) among all Equity Linked Saving Scheme. It indicates that the Quant Tax Plan is less sensitized to market conditions than other schemes.

Overall, it can be concluded that Equity Linked Saving Scheme outperformed the benchmark Nifty 500 Index based on the risk-return profile. It suggested that investment in ELSS fund schemes can be the best avenue for investors who are concerned with ethics to allocate their resources to ethics-based stocks/funds.

4.2 PRIMARY DATA ANALYSIS AND FINDINGS

This study used a standard statistical software package, SPSS, to provide descriptive statistics for all years under examination. Specifically, this study provides the mean and standard deviations of the independent variables. A summary of the descriptive statistical results is provided. Aside from the descriptive statistics, this study presents the specified forms of the regression equations for all nine years. This study also performs chi-square test necessary to conclude statistical significance in the parameters and examine the R-squared and adjusted-R-squared in all of the regression equations. The data are presented in a tabular format. Since the population of mutual funds is finite, this

study elects to use the population of mutual funds in the database. All attempts have been made to use the entire population of mutual funds.

4.2.1 Data Analysis– Investor Perception

The research questions set out are the following

- (i) Is the investor perception towards expected returns of ELSS funds the same as Growth mutual funds?
- (ii) Do investors perceive a higher risk in investing in ELSS funds as compared to Growth mutual funds?
- (iii) Do investors have the same preference for ELSS funds as compared to other Tax saving investments?

4.2.2 Growth Mutual Funds- Primary data –Analysis: Correlation

Table 6.01

		Gender	Age	How long have you been investing in growth mutual funds	Monthly average saving	Educational qualification
Gender	Pearson's correlation	1	-0.30	-0.006	-0.039	0.21
	Sig (2 – tailed)		0.291	0.832	0.173	0.473
	N	1201	1201	1201	1201	1201
Age	Pearson's correlation	-0.30	1	0.087**	0.402**	0.011
	Sig (2 – tailed)	0.291		0.003	0	0.7
	N	1201	1201	1201	1201	1201
How long have you been investing in growth mutual	Pearson's correlation	-0.006	0.087**	1	0.091**	0.021
	Sig (2 – tailed)	0.832	0.003		0.002	0.464

funds	N	1201	1201	1201	1201	1201
Monthly average saving	Pearson's correlation	-0.039	0.402**	0.091**	1	0.024
	Sig (2 – tailed)	0.173	0	0.002		0.404
	N	1201	1201	1201	1201	1201
Educational qualification	Pearson's correlation	0.21	0.011	0.021	0.024	1
	Sig (2 – tailed)	0.473	0.7	0.464	0.404	
	N	1201	1201	1201	1201	1201

(Source: Author Own research: IBM SPSS Web Report)

Note: **Correlation is significant at the 0.01 level(2-tailed)

Correlation is significance at at the 0.01 level(2-tailed)

The above statistical data using SPSS shows that in term of Karl Pearson's coefficient of correlation, there is a very weak negative correlation (-0.030) between gender and age factors. In gender and time duration for investing in growth mutual funds, there is a very weak negative (-0.006) correlation between them and the variables move in the opposite direction/, The correlation. In the present situation young generation are more focusing in the investment in growth mutual funds by taking risk and looking for capital appreciation and as older age group people are not taking any risk by investing in growth mutual funds and looking for some alternative investment attributes during the COVID-19 situation due to the highly volatile nature of the Indian mutual funds industry.

Karl Pearson's coefficient of correlation between the variables X and Y is given by

$$R = \text{Cov}(X,Y) / [\text{STDEV}(X)*\text{STDEV}(Y)]$$

Karl Pearson's coefficient of correlation is not affected by change in scale or by change in location. Unlike covariance it can be used tp compare the relationship between two pairs of variable. It is a unit free measure of relationship between two variables and takes value in [-1,=1]. When r is close to +1 or -1, there is strong positive or negative relationship between the two variables.

4.2.3 ELSS FUNDS- PRIMARY DATA –ANALYSIS

IBM SPSS Web Report - Descriptive statistics of Part - A.spv

IBM SPSS Web Report - DESCRIPTIVE STATISTICS.spv

Descriptive - Active Dataset - ELSS Funds

Table 4.14(1)

Descriptive	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Gender	395	1	2	1.304	0.4605	0.857	0.123	-1.273	0.245
Age	395	2	5	2.137	0.405	3.552	0.123	15.568	0.245
Educational Qualification	395	1	4	2.815	0.9552	-0.501	0.123	-0.632	0.245
Monthly Average Savings	396	1	4	1.04	0.2992	7.953	0.123	65.684	0.245
which investment attributes has more weightage in ELSS funds. [Returns]	395	6	6	6	0	.	.	.	.
How long have you been investing in Equity Linked Savings Scheme (ELSS) ?	395	1	4	1.965	1.1101	0.943	0.123	-0.494	0.245
In Which ELSS Investment Plan Option do you plan to invest ?	395	1	3	1.4	0.6623	1.4	0.123	0.635	0.245

How much amount you are investing in ELSS Funds in a year ?	395	1	3	1.377	0.4905	0.573	0.123	-1.507	0.245
According to your point of view what is the risk factors while investing in ELSS Funds	394	1	5	3.079	1.0369	-0.475	0.123	-0.649	0.245
How do you rate your satisfaction with regard to the Returns performance of ELSS Funds ?	394	1	5	2.185	1.0282	0.921	0.123	0.927	0.245
Valid N (listwise)	394								
IBM SPSS Web Report									

IBM SPSS Web Report - Bivariate Pearsons Correlation Between Variables For ELSS.spv Correlations - ELSS Funds

Table 4.14(2)

		Gender	Age	Educational Qualification	Monthly Average Savings	Investment Preference in ELSS funds	How long have you been investing in (ELSS)	ELSS Investment Plan Option to invest	amount investing in ELSS Funds in a year	risk factors in ELSS Funds	satisfaction level in ELSS Funds
Gender	Pearson Correlation	1	-.033	0.047	-.016	. ^a	-.009	-.033	-.014	.104*	-.001
	Sig. (2-tailed)		0.517	0.35	0.754	.	0.864	0.509	0.778	0.039	0.98
	N	395	395	395	395	395	395	395	395	394	394
Age	Pearson Correlation	-.033	1	0.039	.477**	. ^a	0.045	0.061	-.005	-.006	-.018
	Sig. (2-tailed)	0.517		0.437	0	.	0.376	0.23	0.925	0.268	0.717
	N	395	395	395	395	395	395	395	395	394	394
Educational Qualification	Pearson Correlation	0.047	0.033	1	0.062	. ^a	0.054	-.003	0.008	-.006	-.066
	Sig. (2-tailed)	0.35	0.437		0.221	.	0.288	0.949	0.869	0.058	0.194

	N	395	395	395	395	395	395	395	395	394	394
Monthly Average Savings	Pearson Correlation	-0.016	.477**	0.062	1	. ^a	0.088	0.008	0.068	0.047	0
	Sig. (2-tailed)	0.754	0	0.221		.	0.08	0.879	0.174	0.352	0.995
	N	395	395	395	396	395	395	395	395	394	394
investment attributes has more weight in ELSS funds.	Pearson Correlation	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.
	N	395	395	395	395	395	395	395	395	394	394
How long have you been investing in ELSS	Pearson Correlation	-0.009	0.045	0.054	0.088	. ^a	1	-.347*	.123*	-0.068	.108*
	Sig. (2-tailed)	0.864	0.376	0.288	0.08	.		0	0.015	0.175	0.032
	N	395	395	395	395	395	395	395	395	394	394
Which ELSS Investment Plan Option do you invest	Pearson Correlation	-0.033	0.061	-0.003	0.008	. ^a	1	-.347**	-0.075	-0.02	-0.023
	Sig. (2-tailed)	0.509	0.23	0.949	0.879	.		0	0.137	0.691	0.643
	N	395	395	395	395	395	395	395	395	394	394

amount investing in ELSS Funds in a year	Pearson Correlation	-0.0145	-0.0005	0.008	0.068	. ^a	.123*	-0.075	1	0.086	0.022
	Sig. (2-tailed)	0.778	0.925	0.869	0.174	.	0.015	0.137		0.087	0.661
	N	395	395	395	395	395	395	395	395	394	394
risk factors while investing in ELSS Funds	Pearson Correlation	.104*	-0.0056	-0.096	0.047	. ^a	-0.068	-0.02	0.086	1	-0.04
	Sig. (2-tailed)	0.039	0.268	0.058	0.352	.	0.175	0.691	0.087		0.429
	N	394	394	394	394	394	394	394	394	394	394
satisfaction in Return performance of ELSS Funds	Pearson Correlation	-0.0018	-0.0018	-0.066	0	. ^a	.108*	-0.023	0.022	-0.04	1
	Sig. (2-tailed)	0.987	0.717	0.194	0.995	.	0.032	0.643	0.661	0.429	
	N	394	394	394	394	394	394	394	394	394	394

*Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

The above statistical data of ELSS mutual funds using SPSS shows that in term of Karl Pearson's coefficient of correlation, there is a weak negative correlation (-0.033)

between gender and age factors. In gender and time duration for investing in ELSS mutual funds, there is a very weak positive (0.009) correlation between them and the variables move in the same direction with low magnitude. The correlation. In the present situation new investors are more focusing in the investment in ELSS mutual funds for tax benefits up to 1.50 lakh u/s 80C of Income tax act, 1961. There is a negative correlation between Investment Plan Option and tax benefit opportunity of gender to invest in ELSS funds. Generally people are given more priority to Tax Saving while investing in ELSS funds and after that they are searching for capital appreciation and other long term goal in their investment .there is a very weak negative correlation between amount investing in ELSS Funds in a year and gender. Mostly people are investing for tax benefit in respect of gender bias and fulfill their future goal in the investment. There is a very weak negative correlation between gender and risk factors while investing in ELSS Funds.

Karl Pearson's coefficient of correlation between the variables X and Y is given by

$$R = \text{Cov}(X,Y) / [\text{STDEV}(X)*\text{STDEV}(Y)]$$

Karl Pearson's coefficient of correlation is not affected by change in scale or by change in location. Unlike covariance it can be used to compare the relationship between two pairs of variable. It is a unit free measure of relationship between two variables and takes value in[-1,=1]. When r is close to +1 or -1, there is strong positive or negative relationship between the two variables.

5. FINDINGS & RECOMMENDATION

One-way - ANOVA – Growth funds- Preference in Investment

(Table 5.06)

		Sum of Squares	df	Mean Square	F	Sig.
What is your preference while investing in Growth mutual funds scheme in India?	Between Groups	13.49	3	4.497	0.697	0.554
	Within Groups	7721.563	1197	6.451		
	Total	7735.052	1200			
	Within Groups	153.53	1197	0.128		
	Total	155.619	1200			

(Source: Author Own research: IBM SPSS Web Report)

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 13.49 whereas level of significance between groups is 0.554, which is less than the F value (0.697). This states that there is significance difference in the investment plan options of Growth mutual funds due to preference of the investor in capital appreciation by investing in aggressive funds for a longer period of time.

Mutual funds investment to risk factors due to open market operation as well as risk appetitive and goal of the investors to choose the different aggressive and highly risky funds for better return. By the way of diversification of funds , they minimize the risk factors involved in the investment of financial markets.

A lot of derivative factors which influence the final outcome of the financial investment and increase capital appreciation with the diversification of the funds according to the upward and downward market trends of the funds.

One-way - ANOVA – Growth funds- Risk factors in Investment

(Table 5.08)

		Sum of Squares	df	Mean Square	F	Sig.
According to your point of view what is the risk factors while investing in Growth mutual Funds	Between Groups	3.141	3	1.047	1.033	0.377
	Within Groups	1212.985	1197	1.013		
	Total	1216.127	1200			

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 3.141 whereas level of significance between groups is 0.377, which is less than the F value (1.033). This states that there is significance difference in the investment plan options of Growth mutual funds due to risk factors involved in tax saving funds

Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.

One-way - ANOVA – Time duration investing in Equity Linked Savings Scheme

(ELSS)

(Table 5.13)

		Sum of Squares	df	Mean Square	F	Sig.
How long have you been investing in	Betwe en Groups	9.709	3	3.236	2.659	0.048

Equity Linked Savings Scheme (ELSS)?	Within Groups	475.795	391	1.217		
	Total	485.504	394			

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 9.709 whereas level of significance between groups is 0.048, which is less than the $F(2.659)$, which states that there is significance difference in the investment of ELSS mutual funds due long term time duration.

A risk factors is involved in mutual funds investment, so that people prefers to invest for the longer period of tme with diversification of the funds to minimse the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.

One-way - ANOVA – ELSS Investment Plan Option prefer to invest

Table 5.14

		Sum of Squares	df	Mean Square	F	Sig.
In Which ELSS Investment Plan Option do you plan to invest?	Between Groups	3.524	3	1.175	2.713	0.045
	Within Groups	169.276	391	0.433		
	Total	172.8	394			

(Source: Author Own research: IBM SPSS Web Report)

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 3.524 whereas level of significance between groups is 0.045, which is less uthan the $F(2.713)$, which states that there is significance difference in the investment plan options of ELSS mutual funds due to preference of the investor in tax saving funds. Mutual funds investment to risk factors due to open market operation as well as risk apetitite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation alo with the diversification of the funds according to the upward and downward market trends of the funds.

6. CONCLUSION

6.1 ONE-WAY ANOVA – GROWTH MUTUAL FUNDS- IBM SPSS WEB REPORT

- (i) This states that there is an impact of gender in the investment in Growth mutual funds. Mutual funds investment to risk factors due to open market operation so that gender wise investment plays a vital role for the future investment.
- (ii) Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weight age in their future planning.
- (iii) Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weight age in their future planning in tax saving funds under section 80C of Income Tax Act
- (iv) Mutual funds investment to risk factors due to open market operation as well as risk appetite. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors. People are investing in 100% in equity funds for high returns and bearing more risky funds. Three years locking period is also considered as a risk factor during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.
- (v) A risk factor is involved in mutual funds investment, so that people prefer to invest for the longer period of time with diversification of the funds to minimize the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.
- (vi) Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different aggressive and highly risky funds for better return. By the way of diversification of funds, they minimize the risk factors involved in the investment of financial markets.
- (vii) A lot of derivative factors which influence the final outcome of the financial investment and increase capital appreciation with the diversification of the funds according to the upward and downward market trends of the funds.

- (viii) People invested a lump sum amount in Growth Mutual funds for capital appreciation purpose as well as high return also. If we saw the history of mutual funds return in India , we are getting more than 30% returned in long term investment plan and due to this reason people are investing huge amount in the growth saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.
- (ix) Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.
- (x) People are looking for very high return and investing in the aggressive funds. They are taking the high risk involved in the open markets .The performance of growth mutual funds and their return play a vital role for their trust and further investment in the growth mutual funds .People are doing a lot of research in term of fundamental and technical analysis of the particular sectors as well as funds also.

6.2 ONE WAY ANOVA – ELSS MUTUAL FUNDS-IBM SPSS WEB REPORT

- (i) Mutual funds investment to risk factors due to open market operation so that gender wise investment plays a vital role for the future investment.
- (ii) Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weight age in their future planning.
- (iii) Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weight age in their future planning in tax saving funds under section 80C of Income Tax Act
- (iv) A risk factors is involved in mutual funds investment, so that people prefers to invest for the longer period of time with diversification of the funds to minimise the risk

involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.

(v) Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation also with the diversification of the funds according to the upward and downward market trends of the funds.

(vi) People invested a lump sum amount in ELSS Mutual funds for tax saving purpose as well as capital appreciation also. If we saw the history of mutual funds retrun in India , more than 30% returned we are getting in long term investment plan and due to this reason people are investing huge amount in the tax saving mutal funds with the diversification of the funds according to the upward and downward market trends of the funds.

(vii) Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation also with the diversification of the funds according to the upward and downward market trends of the funds.

(viii) Mutual funds investment to risk factors due to open market operation as well as risk appetite. People are generally looking for tax saving instruments while investing in An equity-linked savings scheme or ELSS funds ELSS funds provides tax benefits to the investors up to 1.50 lakh in one assessment year under the section of income tax act, 1961.so, people are given first preference to tax benefits factors in ELSS mutual funds and after that looking for the others factors likes capital appreciation etc.

(ix) Net Inflow of Mutual Fund Schemes - Net Equity Inflows (Rs crore) (motilaloswal.com²¹⁸)

Net investments into such stock plans have been dwindling for months as investors reduce holdings amid worries that the worst impact of the corona virus may not have passed even as equities continue their ascent. Indian benchmarks have jumped more than 50% of their March low. The Nifty 50 gained 3% in August. All segments witnessed an outflow in August. Among schemes, investors pulled out the most

(x) Mutual Fund Investments – Geographical dispersion

Indian mutual fund industry have shown a net investment of Rs. 39,498 crore in financial stock from Jan 2020 to June 2020 which is more than 4 times from its base year (i.e. Previous year 2019) in the same period. As we know that mutual fund investors are very aggressive and this is one of reason to tremendous growth against a sharp decline due to COVID-19 pandemic situation. If we saw the Mutual fund movement in SEBI website, Rs. 30,000 crore was invested in March 2020 alone which show the huge potential and aggressive investors in mutual fund and perform upto to an remarkable growth in the equity mutual funds and portfolio management theory applied a continuously growth in the mutual fund against the any other investment in financial sectors. (thefinapolis.com/news²¹⁹)

(xi) Financial Analyst of Assets Management Company believed that the perception and investment behavior of potential investors find out the opportunity in the investment decision rather than taken as a thread in the present sitation of pandemic and better portfolio management reward them a high return in mutual funds . (personalfn.com²²⁰)

(xii) There is a net Rs. 1,384 crore was invested in the mutual fund industry during the Jan, 2020, in Feb, 2020 it was Rs. 9,863 crore and showing a remarkable high growth of Rs. 30, 285 crore in the month of march, 2021 which shown the Hugh potential interment market as compare to other investment avenue. But in the month of April 2020, major investor has taken out Rs. 7,065 crore due to the high risk factor involved in capital market worldwide due the COVID-19 and this pandemic affected the growth of mutual fund as well as world economy also. (.businessworld.in/article²²¹)

6.3 OTHERS RELEVANT CONCLUSION

- The huge population of the country moving towards the financial investment and looking for a better return. Inflation is one of the major factor in economy which insist us to do the investment to meet our future liabilities and Up to a certain level of inflation is good for the growth of economy and

beyond that make a negative impact in the economy and financial sector of the country. GDP growth rate and increase in per in per capita income of the income of the country is the primary factors for outflow of cash in the capital market.

- In the capital market, better portfolio management with diversify nature minimize the risk factor involves in the open market investment and increase the chance of higher return in long term investment plan in mutual fund. Market risk factors, business risk and interest risk is associated with the high return and in mutual fund investment risk and return factor showing the perfect positive correlation between them.
- In the international funds also a lot of risk factors like currency convertibility, hedging , arbitration and inflation associated with higher return and with the help of fundamental analysis and technical analysis , we are a better portfolio for a long term investment.
- Currency exchange rate with high risk of volatility is associated with foreign exchange market and to get information about the performance of international mutual fund are easy due to a lot of regulatory factors or international project appraisal involved in the capital investment and these markets also affected by political and economic change of these countries.(cafemutual.com/news²²⁵)
- Indian mutual fund industry shown a fast growth over the years .and mutual fund showing the fast growth year by year and best performing mutual fund is keep on changing year by year which is based on demand and supply principle of the capital market. Various rating agency likes CRISIL, ICRA, FITCH, Standards and Poor, CARE etc are actively participated in the capital market and ranking the mutual funds scheme on the basis of basis of their performance and NAV calculation.
- On the basis of Qualitative and quantitative factors involved in the better return, these agency give their judgment on the some parameters like standard deviation, Net assets value, asset size, Sharpe ratio, coefficient of determination etc. and with the help of these factors we makes a better

portfolio for the better investment and our investment will show the better return in the best performing mutual fund in India.(pwc.com/us/en/industries²²⁶)

- Indian investors have shown three times jump in the contribution to Asset under Management (AUM) in mutual funds over the last three to five years. Year 2017 has proved to be one of the highest grosser by reaching a total corpus of Rs. 17 trillion, despite the poor show by equity and capital markets due to the demonetization and global surge in oil prices. Around Rs. 3.71 trillion contributions came in the year 2017 only, the highest ever contribution till date.
- The Systematic Investment Plans (SIP) monthly contribution has hit a record high of Rs. 4,500 Crores, which is expected to rise even further high. ETFs have also seen a sharp rise in contribution by investors. Rs. 40,000 to Rs. 45,000 Crores were invested through the ETFs and arbitrage funds, which represents almost 10% of total contribution. Another reason for sharp rise in mutual fund contribution is scrapping of entry load from the mutual funds. With rising incomes and good economic policies, mutual funds industry saw a surge in mutual funds AUM and several fund houses were formed. One of the reasons for sudden rise in mutual fund contribution is technology. (valueresearchonline.com²²⁷)
- Technology has made it possible for the asset management companies to expand its territory to places, where it doesn't have any physical presence. People are now able to get information, suggestion and even they can invest in mutual funds without visiting the representative offices of the AMC. Mutual Fund industry has adapted itself to the changing technological environment in and around itself. And it has seen a positive response from the investors.
- Investors can now even get the e-KYC done online, without even the physical contact with any of the representatives of the mutual fund industry. Also, SEBI (Securities Exchange Board of India) the regulatory body of the MF industry has made necessary changes in the regulations, so that it can take proper

advantage of the new technologies into the mutual fund industry. Impact of technology on mutual funds and financial markets

- Artificial Intelligence has been into the mainstream news, as it is always making headlines, every time it's something new and remarkable. Stephen Hawkins's warning on the Artificial Intelligence cannot be ignored, whereas there are still people and government who can't stop working on Artificial Intelligence.
- AI has already created its space in the industry, with its applicability into many aspects. It has helped company to reduce inaccuracy and increase efficiency. It is already used in ECM (Enterprise Content Management) by mutual fund companies. AI does the job of processing large data, arranging, classifying, checking for error, and thus reducing the redundancy and duplication of data.(pubdocs.worldbank.org²²⁷)
- Computers is known for analyzing and processing huge amount of data within fraction of seconds, combined with intelligence, smart analyzing and interpretation of data could help fund managers to do the historical analysis of the stocks. With greater intelligence AI is utilized for making security analysis and arriving at an optimum portfolio with risk-reward ratio.
- It can also be used to customize the needs of the investors and suggest the best possible investment options. Here Robo-Advisors are being developed, which can work based on certain algorithms to understand individual customers, its needs, risk parameters, etc. and then can process the data to suggest right products for the investors. Since it will be automated, chances of inaccuracy are minimized.
- With next generation technology, entire investment process is now paperless, efficient and easy to invest. It has helped the fund houses to increase its efficiency in distribution channel; it is now possible to reach places, which was earlier difficult to reach. With e-commerce platforms, mutual funds would be under the reach of vast majority of the investors.

- Technology is transforming the asset management companies; it is now being reorganized and more centralized than before. Mobile, social media, cloud computing, Block chain mechanism, big-data, analytics and Fin Tech is now redefining the future of asset management. Since AI has the potential to enhance the efficiency of the information processing, thus reduces the asymmetries, application of AI.
- Artificial Intelligence may process large information for the investor and can come up with most probable recommendations, which may be helpful for the investor in taking investment decision. It can reduce the overall trading cost for the investors; can suggest most appropriate trading strategies for the investors according to the changing scenarios. AI can be used to target specific customer segment and come up with better recommendation. Regulatory considerations regarding use of artificial intelligence and machine learning.

CHAPTER I: INTRODUCTION

1.1. INTRODUCTION

The human life on globally highly infected by COVID-19 pandemic. As per the WHO, on 30th Jan' 2020, the first COVID -19 case was registered in Kerala in India. The Corona virus disease was originated from Buhan, China and continuously spread all overs the world. In India this infectious viral diseases was contiously spread in major part of the country in the beginning of the March 2020and the Government of India has decided for the complete lockdown from 25th March 2020 to control the pandemic situation. This was completely a new viral unknown diseases and challenges for Medical Science to overcome from this virus and save the life of the citizen by making the new antidote and still they are working on the medicine like Covidshield , Covaxin and many more to continuously save the humanity all over the world. According to the World Health organization , there are certain parameter to fight against pandemic including self-isolation, social distancing of 6 feet, wearing mask , shutting down the school , college & institutions, nationwide complete lockdown, minimum uses of transport.

These steps are very important to securing the life from the pandemic situation and to save our life from the new variant of this novel disease and still scientific research is going on to fight against this disease and 100 % protection against COVID-19 and its new unknown variants The covid-19 put a negative impact in the fincnail markets and a sysyematic risk factor involved in the capital market.Due to this national wide lockdown the growth of the economy continuously downward towards a negative slope and thousand of people lost their jobs and a drastic economic situation for the country and major business house facing challenge to maintain their output .

Due to COVID-19 Pandemic, the investment in the mutual funds is very challenging and highly risky. The impact of pandemic is decline the phase of econmy not only in mutal fund but also in the others sectors of invent and worldwide all the developed and developing country are facing the proble in their economy and GDP growth rate goes down to negative digits.

Franklin Templeton, explained in its latest report that there are a lot of fluctuation in the mutual funds industry in Inda due to COVID-19 pandemic and six major debt mutual funds in India are in decline phase and facing a big trouble for their in growth .It decline the India's credit situation and all the Non- banking financial

companies facing huge problem to maintain their liquidity position and major investors withdrawn their money from the mutual funds due to the fear factors of adverse situation of capital market in India and rest of the world also. This pandemic situation put mutual funds industry in big trouble and people are not investing in open market due to high volatile markets under the wings of Pandemic Worldwide.

1.2 IMPACT OF COVID-19 ON MUTUAL FUNDS

In India, return in the mutual fund drastically decline due to COVID-19 situation¹ The positive things here that if we see the capital market history in India , after a adverse situation its always come back by a sharp growth in coming future.. According to AMFI website, a huge amount Rs. 1,230 cores invested in the COVID-19 pandemic situation which shown the trust of the investors and top most credit rating believed that in future more and more investment will be done by the potential investors, in term of interment opportunities in mutual funds that will increase the GDP growth rate and maintain high liquidity in the capital markets.

Investment in mutual funds always based on the best portfolio theory² and this will support ours investment in the adverse market situation and minimize the risk factor in the open market. Inventors always try to put their interment in selected funds and scheme so that they will get good return in the future and meet their future liabilities and this research paper, we are trying the find out the impact of COVID-19 on the Indian Economy and fluacutsaion³ in mutual fund performance in the different sector and portfolio from the relevant sources annual reports of financial institutions(like AMFI, RBI,SEBI, NSE, BSE etc and credit rating agency (like CRISIL,ICRA, S&P, Moody's etc.) and business associations, bring out deliberate inference and recommend premeditated map for coating the mutual funds on escalation pathway in post-COVID-19 for the outstanding quarters of financial year 2020- 2021⁴.

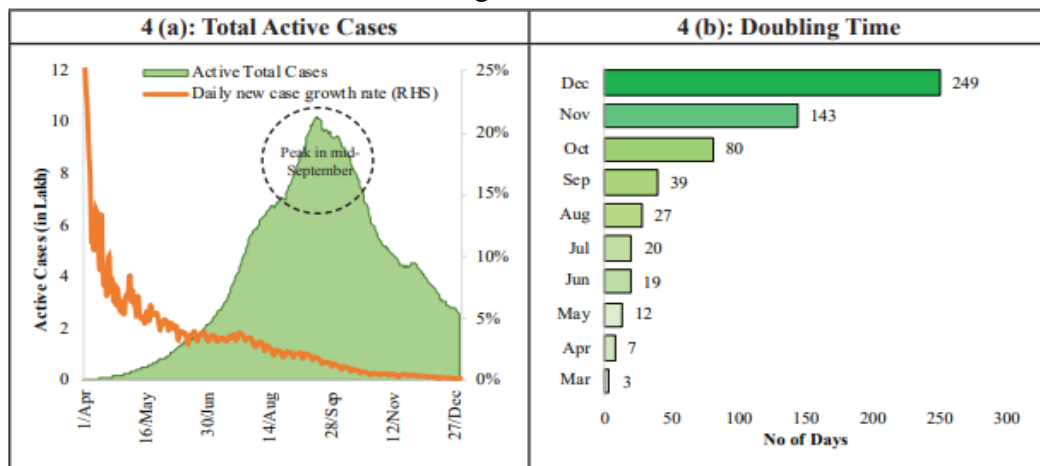
As per the latest report of Franklin Templeton mutual funds schemes⁵, six funds are showing at very high risk paprameter and other mutual funds schemes do not featuressalvation risks. The Association of Mutual Funds of India (AMFI) secure potential investors⁶ that it was a one-off incident and that it will have no infectivityresult on other credit-risk funds. In this situation the GDP growth rate and

India's credit position also decline sharply. Non-Banking Financial companies are facing huge problem to maintained their liquidity position⁷. All the major players withdrawn their invement from mutual funds industry and searching for some alternative finaical instruments to put their money in safer way.

1.2.1 Spread Of Covid-19 In India

Note: Doubling rate is defined as $\ln 2 / \ln (1 + r)$, where r is the average of last seven days of growth in cumulative cases

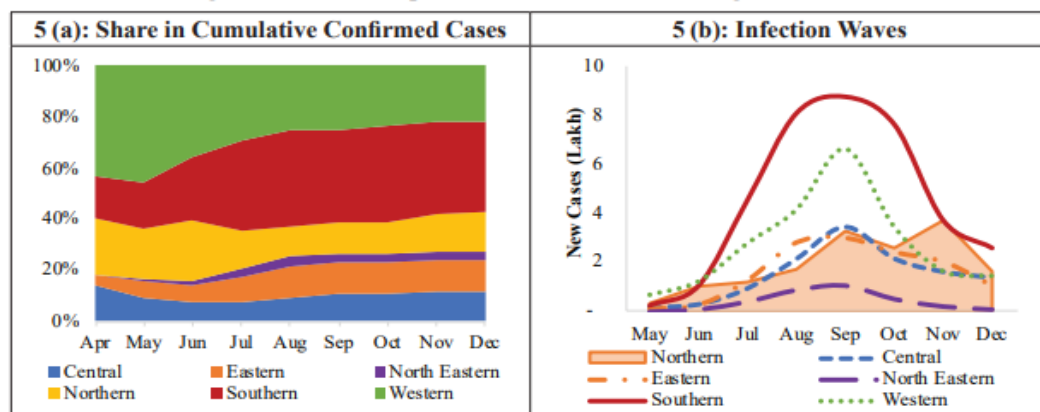
Figure 1.01



(Source: <https://www.covid19india.org/>, Ministry of Health and Family Welfare (MoH&FW)⁸

Trends in Spread of COVID-19 across Regions in India

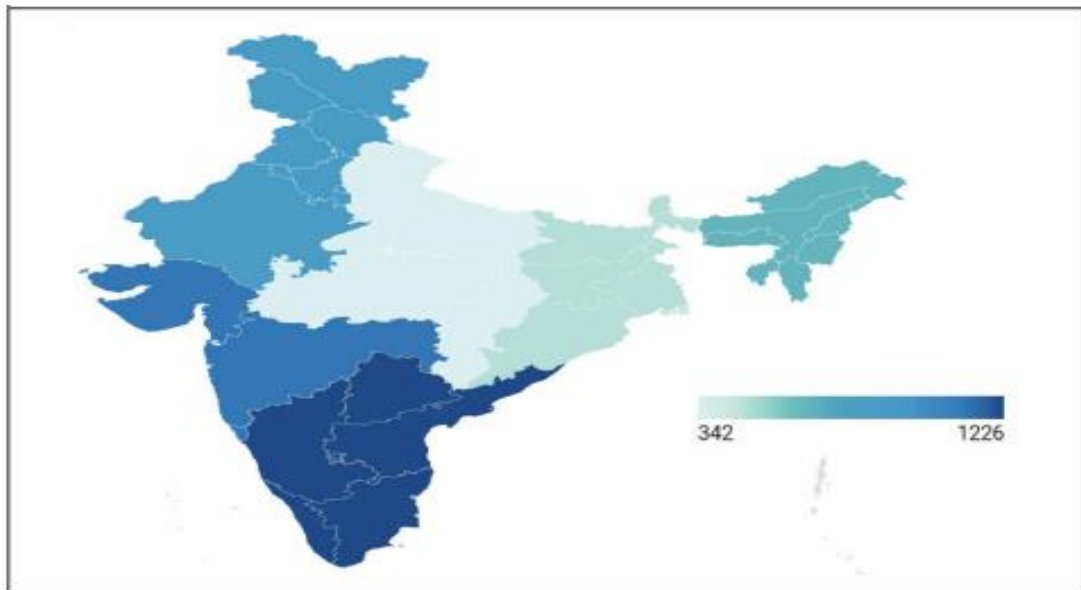
Figure 1.02



Source: <https://www.covid19india.org/>, Ministry of Health and Family Welfare (MoH&FW)⁹

Total no. of inveterate Cases per Lakh In India

Figure 1.03



Source: Data accessed from <https://www.Covid19india.org/>, MoH&FW (Data is as on 31st December, 2020)¹⁰

1.2.2 Reason for not investing in Mutual Funds Post COVID 19

Due to the global contagious COVID-19 disease¹¹, the stock markets facing a lot of negative faces in the growth of the economy after worldwide recession of 2008 and the investment in the mutual funds not only in India but all over the world was sharply negatively affected and this economic position of the country was decline by a major points and by the end of yer 2020 the GDP growth rate of Indian economy came down to -8.75%, this cause the most of the business houses facing challenges in terms of demand and supply equation of the economy and due to less demand in the market , these industries were not in the position to maintain their operating cycle and unable to pays their interest, debts and other liabilities related to banking and financial institutions due the less current assests in comparison to current liabilities and current ration became less than 1.

Based on the investment pattern, the mutal fund are classified in vious types such as Equity Mutual Funds ELSS Mutual Fund etc¹².A bigger portion of diversified funds are invested into equity related portfolio for maximizing the return against the more risk factor is term as Equity Mutual Funds, Index funds etc.and the potential invetors has the oportuinity to choose the best funds by analysing the past performamce of these funds in different situation of the capital maket.

Assets management company help the investor by analyzing the fundamenetal and technical analysis of different funds¹³ and their past return and expected return in the future and suggested investors to invst according to these factor in different portfolio and minimize the risk aptetite in the financial market.The investors has a option to choose the best fund and they have a right also to change teir fund as per the market performance of the funds and swap fronm one fund to another funds to minimize the risk and get better return .Invesor are benefited by investing in growth funds for s longer period of time and getting good return in long term investment plan in mutual fund and enhabce capital appreciation also.

A diversified equity fund invests in different companies in the capital market in spite of market capitalization and specific sector. It invest in the diversified fund in equity shares and related financial instruments of various blue-chip companies in different sectors and minimize the risk factos involes in the portfolio return.

When the investment is dine in equity shares of particular industry, it is known as Undiversified funds and business risk factors are high due to unavailability of diversification and they negatively affets long term performance of the funds and expected return in the investment.

If we see the latest growth in the Indian mutual fund industry.Assets Under Management (AUM) as on March 31, 2021 stood at Rs. 31,42,764 crore as compared to Rs. 12.33 trillion as on March 31, 2016and there is a growth of 2.5 times in a duration of 5 years.

(Source: economictimes)¹⁴

Government of India has passed a Securities and Exchange Board of **India** (SEBI) Act in the year 1992, The objectives of SEBI are to protect the interst of the investor in the financial market and make traparancy on the behalf of the investor to control the unfair means indisde the stock market as well as makes rules and regulation for the all the particiapnats in the stock market to fairly run the business and for this purpose SEBI notified regulations for mutual funds in 1993.

(Source : sebi)¹⁵

Investors are getting tax benefit under the Section 80C of the Income Tax Act 1961 Investments in Equity Linked Savings Schemes or ELSS mutual funds qualify

for deduction from one's taxable income under Section 80C and investor can get a tax benefit upto Rs. 1,50,000 for tax deduction.

In 1963 mutual fund of India was established by Government of India, to encourage the small investments from the individual investor into particular types of assets and also providing tax benefit to the investors under the section 80 C of Income Tax Act, 1961. In one financial year, the investor will get tax deduction benefit and by investing in ELSS funds they will be exempted from tax benefit up to Rs. 1.5 lakh per annum.

There are different kind of income slab is provided by the Central Government and according to that people can get tax benefit in tax deduction. In the certain tax free fund, people are benefited to reduce their tax burden and these kind of investment fulfill future need of the investors. Inflation is one of the major factor due to which there is rise in future price but as per our purchasing power parity not increases, Inflation is always increase with compound interest whereas our income increase with simple interest only and so that we invest in tax saving mutual funds to meet our future needs.

From the gross income of the investor, a deduction benefits are provided to them under the income tax act 1961 and thereby reducing the taxable income and remaining portion of tax payable. This implies that excluded speculation pay doesn't draw in any personal expense. Discount is one more type of duty impetus, which decreases the all out annual expense payable, by a specific amount, which typically is determined as a level of the qualified venture made during the year.

(Source : wealthbucket.in)¹⁶

Invest in ELSS Funds, also known as Equity Linked Savings Scheme and these are the best for tax saver funds with a lot of investment opportunities to get remarkable high return in the long term investment along with tax benefit also under section 80 C of Income tax Act, 1961

In term of financial planning for all the earning class, the tax-saving investment plan is one of the financial option to invest and claim tax deduction also to

minimize tax burden from their taxable income and tax benefit is the USP of the tax saving mutual fund which differentiate it from other kind of financial derivatives. .

In the financial instrument for remarkable return, mutual funds are one of the best options for perfect investment in capital market with a tremendous opportunities and better and better return in longer period of time. According to the SEBI guideline an Asset Management Company invested the pools of money taken by the individual investors and make a pools of money and invested in different kinds of growth funds and get maximum returns and divided among the investors in their investment proportion. A lot of Finance professional Manager having a highly qualification of Capital market, manage the mutual funds and always find out the better opportunity by portfolio management and gets better results and minimize the risk factors in investment.

By expert managed portfolio, a fund manager always working on the behalf of individual investor and making transparency in the investment. If we are taking about the mutual funds as one of the best investment option which gives a better return with a lot of exposure and investment portfolio managed by expert people of Financial Sectors. On the basis of Nrt asset value calculation one can understood the price of single unit of funds on daily basis. NAV in mutual fund scheme is the financial indicator of the capital investment by which one can do investment and secure capital gain from it. Mutual Fund is a financial instruments to do investment for better opportunity in future.

It is well managed by Financial Analyst by the Asset Management Company that manage our pools of investment form a lot of financial investors and perfectly invest in various financial instruments likes Equity Shares, Bonds and Debentures and money market instruments i.e Treasury Bills, certificate of Deposit, Commercial paper etc. and ETF Golds for capital appreciation.

Status of Mutual Funds Industry in India for the period April 1, 2021 to July 31, 2021

Table 1.01

Sr. No	Scheme Category	No. of Folios as on July 31, 2021	Funds mobilized for the period (Since April 01, 2021 to July 31, 2021) INR in crore	Repurchase/Redemption for the period (Since April 01, 2021 to July 31, 2021) INR in crore	Net Inflow (+ve)/Outflow (-ve) for the period (Since April 01, 2021 to July 31, 2021) INR in crore	Average Net Assets under Management for the July, 2021 INR in crore
(1)	(2)	(4)	(5)	(6)	(7)	(9)
A	Open ended Schemes					
I	Income/Debt Oriented Schemes					
i.	Overnight Fund	127165	1079808.43	1062496.77	17311.65	99098.94
ii.	Liquid Fund	2140748	979598.81	949720.43	29878.38	379152.48
iii.	Ultra Short Duration Fund	651504	82163.47	66104.97	16058.51	102772.33
iv.	Low Duration Fund	1161022	106021.82	74442.47	31579.36	163027.06
x.	Dynamic Bond Fund	256475	4708.79	6679.51	-1970.72	24572.64
xi.	Corporate Bond Fund	729435	24110.57	29996.67	-5886.10	158217.91
xii.	Credit Risk Fund	286609	2345.96	1706.80	639.15	26511.64
xiii.	Banking and PSU Fund	373690	15839.02	17086.46	-1247.43	120181.92
xiv.	Gilt Fund	197683	4889.27	5170.03	-280.75	16308.08
xv.	Gilt Fund with 10 year constant duration Fund	51180	154.43	230.41	-75.98	1468.68

xvi	Floater Fund	269200	41041.45	23820.71	17220.74	78499.79
	Sub total - I	7828089	2499362.95	2365711.04	133651.91	#####
II	Growth/Equity Oriented Schemes					
i.	Multi Cap Fund	1601883	4173.11	2002.48	2170.63	25153.58
ii.	Large Cap Fund	11046261	14538.72	12136.03	2402.69	197437.08
x.	ELSS	12815213	5122.69	6852.73	-1730.05	137543.94
xi.	Flexi Cap Fund	9331465	25713.71	11727.44	13986.28	185252.93
	Sub total - II	71077110	116722.72	74630.70	42092.02	#####
III	Hybrid Schemes					
i.	Conservative Hybrid Fund	459172	3010.55	1071.13	1939.43	15910.03
ii.	Balanced Hybrid Fund/ Aggressive Hybrid Fund	4807843	9331.86	9829.60	-497.74	133934.80
iii.	Dynamic Asset Allocation / Balanced Advantage Fund	2982734	15222.45	7648.72	7573.74	122265.90
iv.	Multi Asset Allocation Fund	732775	1572.82	1475.54	97.28	17082.47
v.	Arbitrage Fund	552026	54702.98	18952.95	35750.02	111049.02
vi.	Equity Savings Fund	300058	3096.10	1257.68	1838.42	12088.53
	Sub total - III	9834608	86936.76	40235.61	46701.14	412330.75
IV	Solution Oriented Schemes					
i.	Retirement Fund	2639949	713.96	551.85	162.11	14969.45
ii.	Childrens' Fund	2882059	288.83	150.83	138.00	11974.24

	Sub total - IV	5522008	1002.78	702.68	300.11	26943.69
V	Other Schemes					
i.	Index Funds	1432720	8280.91	3075.24	5205.66	25728.02
ii.	Gold ETFs	1913635	1947.66	681.50	1266.16	16579.71
iii.	Other ETFs	5857391	34161.25	16687.60	17473.64	311093.14
iv.	Fund of funds investing overseas	979540	7329.81	928.97	6400.84	18513.43
	Sub total - V	10183286	51719.62	21373.30	30346.32	371914.31
	Total A-Open ended Schemes	104445101	2755744.83	2502653.34	253091.50	#####
B	Close Ended Schemes					
I	Income/Debt Oriented Schemes					
i.	Fixed Term Plan	245255	1067.18	62587.73	-61520.55	65110.17
ii.	Capital Protection Oriented Schemes	32901	0.00	964.38	-964.38	1673.98
iii.	Infrastructure Debt Fund	80	0.00	319.00	-319.00	1985.78
iv.	Other Debt Scheme	718	0.00	681.49	-681.49	61.11
	Sub total	278954	1067.18	64552.60	-63485.41	68831.04
II	Growth/Equity Oriented Schemes					
i.	ELSS	407746	0.00	481.11	-481.11	4910.67
ii.	Other Equity Schemes	362698	0.00	5240.82	-5240.82	12184.00
	Sub total	770444	0.00	5721.93	-5721.93	17094.67
III	Other Schemes	0	0.00	0.00	0.00	0.00

	Total B -Close ended Schemes	1049398	1067.19	70274.53	- 69207.3 4	85925.71
C	Interval Schemes					
I	Income/Debt Oriented Schemes	3338	0.18	4.25	-4.07	148.24
II	Growth/Equity Oriented Schemes	0	0.00	0.00	0.00	0.00
III	Other Schemes	0	0.00	0.00	0.00	0.00
	Total C - Interval Schemes	3338	0.18	4.25	-4.07	148.24
	Grand Total	1054978 37	2756812. 20	2572932.1 2	183880. 08	#####
	Fund of Funds Scheme (Domestic)	1399549	8327.20	2186.40	6140.79	35209.47

(Source: sebi.gov.in¹⁷)

Table1.02
Status of Mutual Funds Industry in India for the oeriod April 1, 2020 to Nov 30, 2020 (INR in Crore)

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/ Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
A	Open ended Schemes					
I	Income/Debt Oriented Schemes					
1	Overnight Fund	116364	2104639.35	2128913.02	-24273.67	57514.60
2	Liquid Fund	2164701	2519811.65	2489861.98	29949.67	375646.63
3	Ultra Short Duration Fund	733257	126788.71	98375.85	28412.87	104930.96
4	Low Duration Fund	1134891	189117.05	125051.84	64065.21	150945.44
15	Gilt Fund with 10-year constant duration	57593	937.31	443.17	494.14	1525.16
16	Floater Fund	204728	47687.30	27199.59	20487.71	55707.62
	Sub total - I (1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16)	7801568	5519011.76	5218080.59	##### #	1387128.97
II	Growth/Equity Oriented Schemes					
31	Arbitrage Fund	397903	49915.58	35593.61	14321.98	62781.39
32	Equity Savings Fund	298466	759.54	3866.67	-3107.14	10032.17
	Sub total - III (27+28+29+30+31)	9389309	74227.75	84285.91	-10058.1	310572.18

	+32)				7	
IV	Solution Oriented Schemes					
33	Retirement Fund	2546069	1173.85	923.82	250.03	11407.90
34	Childrens' Fund	2890935	473.34	220.27	253.07	9866.12
	Sub total - IV (33+34)	5437004	1647.19	1144.10	503.10	21274.02
V	Other Schemes					
35	Index Funds	775616	6388.37	4785.86	1602.50	14301.14
36	GOLD ETFs	838149	5871.13	1161.52	4709.61	13239.88
37	Other ETFs	3248481	60521.21	39247.70	21273.50	233668.70
38	Fund of funds investing overseas	464020	4495.71	1123.34	3372.37	7641.97
	Sub total - V (35+36+37+38)	5326266	77276.41	46318.43	30957.99	268851.70
	Total A-Open ended Schemes	91504544	5790751.09	5479563.71	##### #	2845337.31
B	Close Ended Schemes					
I	Income/Debt Oriented Schemes					
I	Fixed Term Plan	521582	76.44	30110.07	- 30033.63	118458.77
ii	Capital Protection Oriented Schemes	59827	0.00	1867.84	-1867.84	2628.95
iii	Infrastructure Debt Fund	89	0.00	0.00	0.00	2328.01
iv	Other Debt	18947	0.00	2875.94	-2875.94	779.43
	Sub total (i+ii+iii+iv)	600445	76.44	34853.85	- 34777.41	124195.16
II	Growth/Equity Oriented Schemes					
I	ELSS	457228	0.00	150.49	-150.49	4438.92
ii	Others	1113484	0.00	3202.03	-3202.03	26547.92
	Sub total (i+ii)	1570712	0.00	3352.53	-3352.53	30986.84
III	Other Schemes	0	0.00	0.00	0.00	0.00

	Total B -Close ended Schemes	2171157	76.44	38206.38	-38129.93	155181.99
C	Interval Schemes					
I	Income/Debt Oriented Schemes	3632	3.61	43.75	-40.14	385.14
II	Growth/Equity Oriented Schemes	0	0.00	0.00	0.00	0.00
III	Other Schemes	0	0.00	0.00	0.00	0.00
	Total C -Interval Schemes	3632	3.61	43.75	-40.14	385.14
	Grand Total (A+B+C)	9367933	5790831.14	5517813.83	#####	3000904.44
	Fund of Funds Scheme (Domestic)	1015460	10253.76	3697.60	6556.16	21934.62

(Source: sebi.gov.in¹⁸)

The fund managers are the professionally qualified people who takes better investment decision including the portfolio management to minimize the risk factors in capital market. The optimum goal of these fund manager to maximize the shareholders wealth by maximizing the best possible return. This inhabitant of a country is a normal person who tries to maximize his wealth by small investment in different kind of investment. A normal people spend a portion of his income and wish to get a good return in his future prospect of investment by calculation risk and return factors in financial investment assets.

Indian financial market provides a number of investment opportunities, where people can get a good returns by investing in different kind of Portfolio. The better return is always associated with risk factor so that AMc makes a portfolio to minimize the risk factor in the future return. A variety of investment instrument based on the demand and supply concept, which enhance the capital formation, better return, in

between the risk-return factor in the financial sectors, mutual funds is one the best option for the potential financial investor who can enhance their capital formation and earn good return by investing in long term investment plan to fulfill their future projects of life.

In term of public investment portfolio¹⁹ , a mutual fund provides the best services and good return after adjusting all the risk factors in financial markets and investment portfolio is a bunch of financial assets for getting a long term remarkable return .Financial investment in the diversified securities are available across the capital market and financial industry And diversified funds perform better in perfect direction and magnitude by following the time value of money in compare to others funds. Mutual funds issue units to the financial investor in a proportion of their investment and provides better return also in their investment proportion by managing the fund by applying the fundamental and technical analysis and on the basis of Net assets value (NAV) investor get information about growth of their fund performance. Net assets value basically provide the information about the earnings per share and the current market value of a share NAV is outperform by dividing the total value of all the investment in a mutual fund portfolio and subtract and floatation charge by the outstanding shares hold by the investors at end the daily transaction period in the capital market.

In the mutual funds Industry, with a sharp growth of 21% in the year 2015, the Assets Under Management was stood at INR 13, 460 billion and mutual fund industry itself grown by year by year and after 2015 the retail segment shown the fastest growth in this capital markets and provide the better return in the long term investment plan and AUM growth shown parallel growth in the economy also.

In India people are looking for wealth maximization in place of profit maximization and they invested in capital market. Mutual funds industries provides the best diversified portfolio for better return. In the era of digitalization of mutual funds it's the core responsibility of financial service sector and AMC to provides a good opportunities and better portfolio to these new investors in the major part of the country.

Mutual fund industry has a lot of opportunity and challenges²⁰ to increase the annual turnover in the share markets and provides good tax saving investment plan and manage the money of the people in such a way that investors can get optimum return in their future earning, In this scenario mutual fund industry has to increase the financial product as well as financial services to the investors in the capital market. SEBI is working on the behalf of the investors and makes transparency between the retail investors and Company so that investors can get good return in the capital market after facing a lot of risk factors in the financial sectors. By using the financial leverage technology, the mutual funds always launch innovative products for the potential investors and increased their online financial distribution channels to get more and more investors in the Indian market.

1.2.3 Growth in Mutual Fund Assets 2020 - Assets Under management (in Rs.Crore) - Indian Stock market Outlook

The Indian stock market movement is always fluctuated during the pandemic²¹, recession and other adverse situation with a major downfall point and after that positive movement of economy and sentiments of investors .and trust of FII, FDI and others financial institution again boost the stock market with a new height. This is what has happened during the current bullish recoveries in Indian, US and European stock markets

As we know that National Stock Exchange touch 7500 level after a drastic downfall during the period of COVID-19 , if we saw the historical data , the Indian stock market perform amazing in the March 2021 and both NSE and BSE reached at a landmark point showing the continuous growth in Nifty and Sensex and boost the Indian economy with a reputed benchmark.so, there is always a fundamental issue with stock market and risk and return factors is solved by fundamental and technical analysis inside the stock exchange and portfolio management always play a big role to minimize the risk factor involved in the investment.

Countries across the world announced lockdowns. In India, the first lockdown was imposed on March 25. The lockdown had a severe impact on the first quarter of the Financial Year 2020-21, and it was projected that India will perform poorly in April-June and July-September quarter due to drop in manufacturing and service

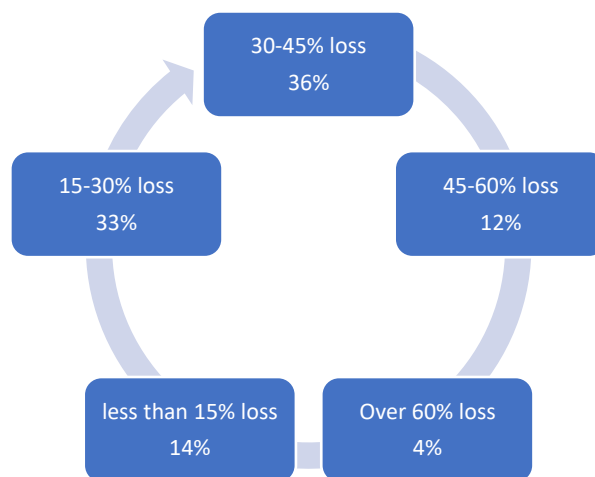
activities. However, what followed was completely ironical as Indian stock markets witnessed a rise. So was the case with Dow Jones, it moved towards V-shaped recovery at the back contracted GDP estimates, falling economic data and other KPI's.

1.2.4. Strategy over panic

In the current situation of the mutual funds industry²², a lot of major investors pull out their money and keep those money in safe side of the investment plan, but the expert believed that pull out money is not the right decision for the investors, they have to analyse the situation and make better portfolio for the investment in mutual funds. Pandemic condition is not forever and after some time in future situation will be normal and in favour of investors to overcome all their loss due to pandemic.

Corona virus impact on equity: buy, sell or stay
How much have equity investors lost in 2020

Figure 1.04



(Source: The Economics Times)²³

AMFI believe that the six major debt funds having best credit quality and reasonable liquidity also and there are sufficient liquidity is available in the capital market for the potential investors and investor have to keep their investment in diversified portfolio to minimize the risk factor involve in the mutual funds.

Table 1.03
Net Assets Value of best performing mutual funds in 2021

Scheme NAV Name	ISIN Div Payout	ISIN Div	Net Asset Value	Date
	/ ISIN Growth	Reinvestment		
UTI - Master Equity Plan Unit Scheme			159.5012	1-Oct-21
HDFC Index Fund Sensex Plus Plan-Direct Plan	INF179K01WO7		469.996	25-May-18
HDFC Index Fund-Sensex Plus(FV-Rs32.161)	INF179K01LB7		462.5623	25-May-18
ICICI Prudential Blended Plan A – Dividend	INF109K01DZ0	INF109K01AO0	13.5898	22-Apr-16
ICICI Prudential Blended Plan A - Direct Plan Bonus	INF109KA1B65		10.9152	12-Oct-15
ICICI Prudential Blended Plan A - Growth	INF109K01AP7		22.7587	22-Apr-16
ICICI Prudential Blended Plan A-Direct Plan - Dividend	INF109K013C6	INF109K014C4	13.6408	22-Apr-16
ICICI Prudential Blended Plan A-Direct Plan - Growth	INF109K015C1		23.0933	22-Apr-16
SBI MAGNUM NRI FLEXIASSET PLAN-DIVIDEND	INF200K01511	INF200K01529	30.3025	5-Oct-12
SBI MAGNUM NRI FLEXIASSET PLAN-GROWTH	INF200K01503		30.1918	5-Oct-12
SBI ONE INDIA FUND - DIVIDEND (PREVIOUSLY CLOSE ENDED UPTO 14/01/2010)	INF200K01CX4	INF200K01CY2	10.43	10-Aug-12
SBI ONE INDIA FUND - GROWTH (PREVIOUSLY CLOSE ENDED UPTO 14/01/2010)	INF200K01CW6		10.43	10-Aug-12
IIFL CAPITAL ENHANCER FUND SERIES 1-DIRECT PLAN-DIVIDEND PAYOUT	INF579M01AE1		9.9235	11-Oct-19
IIFL CAPITAL	INF579M01AD3		10.4201	11-Oct-

ENHANCER FUND SERIES 1-DIRECT PLAN-GROWTH				19
IIFL CAPITAL ENHANCER FUND SERIES 1- REGULAR PLAN- DIVIDEND PAYOUT	INF579M01AB7		9.9048	11-Oct- 19
IIFL CAPITAL ENHANCER FUND SERIES 1- REGULAR PLAN- GROWTH	INF579M01AC5		10.2799	11-Oct- 19
IDFC YS Interval Fund - Series II-Direct Plan-Growth	INF194K013E8		18.55082	8-Mar-21
IDFC YS Interval Fund - Series II- Regular Plan- Dividend	INF194K012E0		10.00756	8-Mar-21
IDFC YS Interval Fund - Series II- Regular Plan-Growth	INF194K011E2		18.35027	8-Mar-21
Kotak Monthly Interval Plan Series 4- Direct Plan- Dividend Reinvestment		INF174KA1DD0	10.00878	17-Apr- 19
Kotak Monthly Interval Plan Series 4- Direct Plan- Growth	INF174KA1DB4		0.0001	22-Apr- 19
Kotak Monthly Interval Plan Series 4- Regular Plan- Dividend Reinvestment		INF174KA1DC2	10.00872	17-Apr- 19
Kotak Monthly Interval Plan Series 4- Regular Plan- Growth	INF174KA1CZ5		10.07183	17-Apr- 19
Kotak Quarterly Interval Plan Series 12-Direct Plan- Growth	INF174KA1913		10.40029	5-May- 19
Kotak Quarterly Interval Plan Series 12-Regular Plan- Dividend Payout	INF174KA1863		10.01817	5-May- 19
Kotak Quarterly Interval Plan Series 12-Regular Plan-	INF174KA1889		10.39495	5-May- 19

Growth				
Kotak Quarterly Interval Plan Series13- Direct Plan- Dividend Payout	INF174KA1CI1		10.0036	30-May-19
Kotak Quarterly Interval Plan Series13- Direct Plan- Growth	INF174KA1CJ9		10.1855	30-May-19
Kotak Quarterly Interval Plan Series13- Regular Plan- Dividend Payout	INF174KA1CG5		10.0029	30-May-19
Kotak Quarterly Interval Plan Series13- Regular Plan- Growth	INF174KA1CH3		10.1862	30-May-19
Nippon India Annual Interval Fund - Series I - Direct Plan Growth Plan – Growth	INF204K01B81	-	21.6356	1-Oct-21
NIPPON INDIA ANNUAL INTERVAL FUND - SERIES I - IDCW Option	INF204K01ED4	INF204K01EE2	10.0771	1-Oct-21
NIPPON INDIA ANNUAL INTERVAL FUND - SERIES I - RETAIL Plan - IDCW Option	INF204K01EA0	INF204K01EB8	10.0771	1-Oct-21
Nippon India Interval Fund Annual Interval Fund Series-I- Growth Option	INF204K01EC6		21.4599	1-Oct-21
Nippon India Interval Fund Annual Interval Fund Series-I- Retail Plan Growth Option	INF204K01DZ9		28.9398	1-Oct-21
Nippon India Interval Fund V - Series 2 - Direct Plan - Dividend Payout Option	INF204KB1P74		10	19-Dec-19
Nippon India Interval Fund V - Series 2 - Direct Plan	INF204KB1P66		10.8556	19-Dec-19

- Growth Option				
Nippon India Interval Fund V - Series 2 - Dividend Payout Option	INF204KB1P58		10.0001	19-Dec-19
Nippon India Interval Fund V - Series 2 - Growth Option	INF204KB1P41		10.8332	19-Dec-19
Nippon India Interval Fund V- Series 1- Direct Plan- Dividend Option	INF204KB1M51		10	31-Oct-19
Nippon India Interval Fund V- Series 1- Direct Plan- Growth Option	INF204KB1M44		10.8758	31-Oct-19
Nippon India Interval Fund V- Series 1- Dividend Option	INF204KB1M36		10	31-Oct-19
Nippon India Interval Fund V- Series 1- Growth Option	INF204KB1M28		10.8539	31-Oct-19
Nippon India Interval Fund- Monthly Interval Fund-Series-I- Growth Option	INF204K01CV0		27.2408	1-Oct-21
Nippon India Interval Fund- Monthly Interval Fund-Series-I- Institutional Plan- Dividend Option	INF204K01CZ1	INF204K01DA2	10.0033	17-Sep-19
NIPPON INDIA MONTHLY INTERVAL FUND - SERIES I - Direct Plan - IDCW Option	INF204K01ZB3	INF204K01ZC1	10.0002	16-Jun-21
Nippon India Monthly Interval Fund - Series I - Direct Plan Growth Plan – Growth	INF204K01ZA5	-	27.4431	1-Oct-21
NIPPON INDIA MONTHLY INTERVAL FUND -	INF204K01CW8	INF204K01CX6	10.0163	1-Oct-21

SERIES I - IDCW Option				
Nippon India Interval Fund-Monthly Interval Fund-Series-II - Growth Option	INF204K01DB0		27.2242	1-Oct-21
Nippon India Interval Fund-Monthly Interval Fund-Series-II-Institutional Plan-Dividend Option	INF204K01DF1	INF204K01DG9	10.0291	17-Sep-19
NIPPON INDIA MONTHLY INTERVAL FUND - SERIES II - Direct Plan - IDCW Option	INF204K01ZE7	INF204K01ZF4	10.0026	1-Oct-21
Nippon India Monthly Interval Fund - Series II - Direct Plan Growth Plan – Growth	INF204K01ZD9	-	27.528	1-Oct-21
NIPPON INDIA MONTHLY INTERVAL FUND - SERIES II - IDCW Option	INF204K01DC8	INF204K01DD6	10.0026	1-Oct-21
Nippon India Interval Fund-Quarterly Interval Fund Serie-II-Institutional Plan - Dividend Option	INF204K01DR6	INF204K01DS4	10.0304	7-Nov-16
Nippon India Interval Fund-Quarterly Interval Fund Series-II-Growth Option	INF204K01DN5		28.637	1-Oct-21
NIPPON INDIA QUARTERLY INTERVAL FUND - SERIES II - Direct Plan - IDCW Option	INF204K01F46	INF204K01F53	10.0442	1-Oct-21
Nippon India Quarterly Interval Fund - Series II - Direct Plan Growth Plan – Growth	INF204K01F61	-	28.9855	1-Oct-21
NIPPON INDIA QUARTERLY INTERVAL FUND -	INF204K01DO3	INF204K01DP0	10.0413	1-Oct-21

SERIES II - IDCW Option				
NIPPON INDIA INTERVAL FUND - QUARTERLY PLAN - SERIES I - Direct Plan - IDCW Option	INF204K01XU8	INF204K01XV6	10.0212	3-Apr-20
Nippon India Interval Fund - Quarterly Plan - Series I - Direct Plan Growth Plan - Growth	INF204K01XT0	-	27.8415	1-Oct-21
NIPPON INDIA INTERVAL FUND - QUARTERLY PLAN - SERIES I - IDCW Option	INF204K01DI5	INF204K01DJ3	10.058	1-Oct-21
NIPPON INDIA INTERVAL FUND - QUARTERLY PLAN - SERIES I - INSTITUTIONAL IDCW Option	INF204K01DL9	INF204K01DM7	10.0542	1-Oct-21
Nippon India Interval Fund-Quarterly Interval Fund-Series-I - Growth Option	INF204K01DH7		27.5196	1-Oct-21
Nippon India Interval Fund-Quarterly Interval Fund-Series-III- Growth Option	INF204K01DT2		27.6041	1-Oct-21
Nippon India Interval Fund-Quarterly Interval Fund-Series-III-Institutional Plan-Growth Option	INF204K01DW6		17.933	1-Oct-21
NIPPON INDIA QUARTERLY INTERVAL FUND - SERIES III - Direct Plan - IDCW Option	INF204K01XX2	INF204K01XY0	10.016	1-Oct-21
Nippon India Quarterly Interval Fund - Series III - Direct Plan Growth Plan – Growth	INF204K01XW4	-	16.9644	1-Oct-21
NIPPON INDIA QUARTERLY INTERVAL FUND - SERIES III - IDCW	INF204K01DU0	INF204K01DV8	10.0145	1-Oct-21

Option				
NIPPON INDIA QUARTERLY INTERVAL FUND - SERIES III - INSTITUTIONAL IDCW Option	INF204K01DX4	INF204K01DY2	10.0201	1-Oct-21
Nippon India Yearly Interval Fund - Series 1 - Direct Plan - Dividend Plan - Dividend Option	INF204K01M47	INF204K01M54	10	23-Feb-21
Nippon India Yearly Interval Fund - Series 1 - Direct Plan - Growth Plan - Growth Option	INF204K01M39	-	18.4492	23-Feb-21
Nippon India Yearly Interval Fund - Series 1 - Dividend Plan - Dividend Option	INF204K01M13	INF204K01M21	10	23-Feb-21
Nippon India Yearly Interval Fund - Series 1 - Growth Plan - Growth Option	INF204K01M05	-	18.3223	23-Feb-21
Reliance Interval Fund -IV -Series 2 - Direct Plan - Dividend Payout Option	INF204KA12F4		12.9909	2-Jul-18
Reliance Interval Fund -IV -Series 2 - Direct Plan - Growth Option	INF204KA13F2		12.9909	2-Jul-18
Reliance Interval Fund -IV -Series 2 - Dividend Payout Option	INF204KA10F8		12.721	2-Jul-18
Reliance Interval Fund -IV -Series 2 - Growth Option	INF204KA11F6		12.721	2-Jul-18
Reliance Interval Fund IV- Series 3- Direct Plan-Dividend Payout Option	INF204KA14I4		12.6668	2-Jul-18
Reliance Interval Fund IV- Series 3- Direct Plan-Growth option	INF204KA15I1		12.6668	2-Jul-18

Reliance Interval Fund IV- Series 3- Dividend Payout Option	INF204KA12I8		12.4325	2-Jul-18
Reliance Interval Fund IV- Series 3- Growth option	INF204KA13I6		12.4325	2-Jul-18

(Source: amfiindia²⁴)

1.2.5 RBI's assurance

In the pandemic situation, the Reserve Bank of India (RBI)²⁵ also support to the investors to minimise their risk factor in mutual funds market and provided support stressed mutual funds with a highly liquidity window by putting Rs. 50,000crore in the capital market and assured investors for the panic situation and monitor the each and every pro and cons in the mutual funds to against any adverse situation. and give financial motivation and backbone to there industry to faces the challenge in the adverse market condition. Business analyst has suggested to new investor for putting their money in the portfolio based funds with diversification in the growth sectors funds to minimize the risk factor invoved in the financial markets. In his ways new investor will get better return in longer period of time as well as portfolio and switch over to better diversified portlier to sustain in the capital market. A Tax Deduction at Source (TDS) at 10% on the dividend income above Rs 5000 before it is distributed to the investors has been introduced in the Union Budget 2020

2.1.6 New tax regime: A positive sign for mutual fund investments

With effect from FY 20-21, a fresh tax system²⁶ has introduced in the union budget in which an advantage has been given to taxpayers from a lower slab rates by forgoing a preponderance of tax-deduction benefits to lower their tax burden. Taxpayers has a liberty in instruments and they are in the position to select the better fund to minimize the risk factors and they have an option to choose those funds, which are having high return without saving the tax.

In the existing tax regime, potential investor s has to invest in those tax saving fund only where they have to face the challenge of locking period, hidden charges, administrative expenses and these factors increase the time period of return on

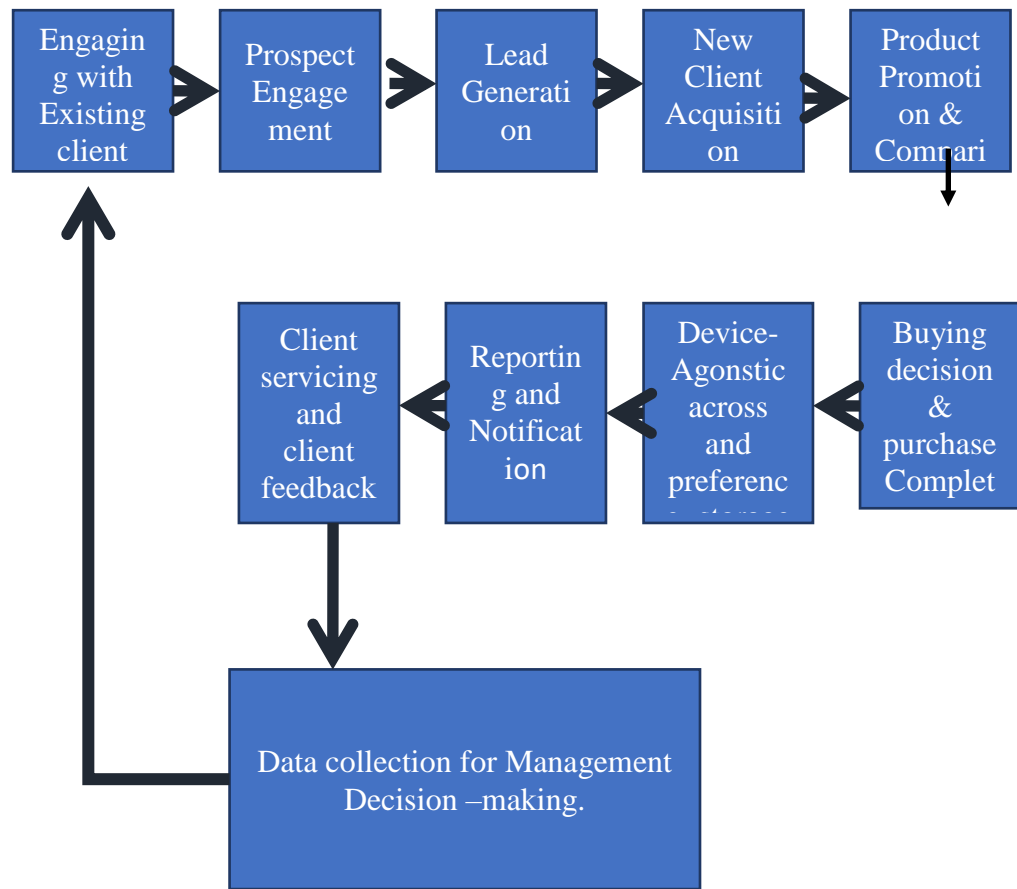
investment avenue also. Tax saver bound to invest on those kind of funds, in which high return is not hthere and sometimes these investment not associative d with their future planning of investment. Now as per the new tax regime, taxpayers can invest in wealth creation funds based on their capability of risk factors in the capital market and achieve their financial long term goal to meet their future liabilities and these investment create a liquidity also for the future prospect of life.

1.3 DIGITALIZATION IN MUTUAL FUNDS

As we know that the world is moving towards digitalization²⁷ and speed of communication increases day by day. At present there are around 300 million users over the internet. Google had done a research and within this, Google estimates that Indian users touch a benchmark of 100 million on online platforms in a time duration of 20 years, while the next 100 million took only 2 years and 1.3 years respectively. Google is expected that internet users in India become 600 million by 2020, with users across gender and age-groups. Comscore's financial report on Sept 2014 has given more relevant figures for financial markets and financial services. It estimates ~170 million males of age 25+ years visited financial websites. It stated that financial services are not dominated by gender bias and not related to male domain only but equality opportunity provided to both male and female and based on their future goal and outcome they are investing in the financial markets. Digitization has played an essential role in distribution of information and that as well in an appealing way foremost to better information and in rank about the developments in the mutual fund industry and capital market.

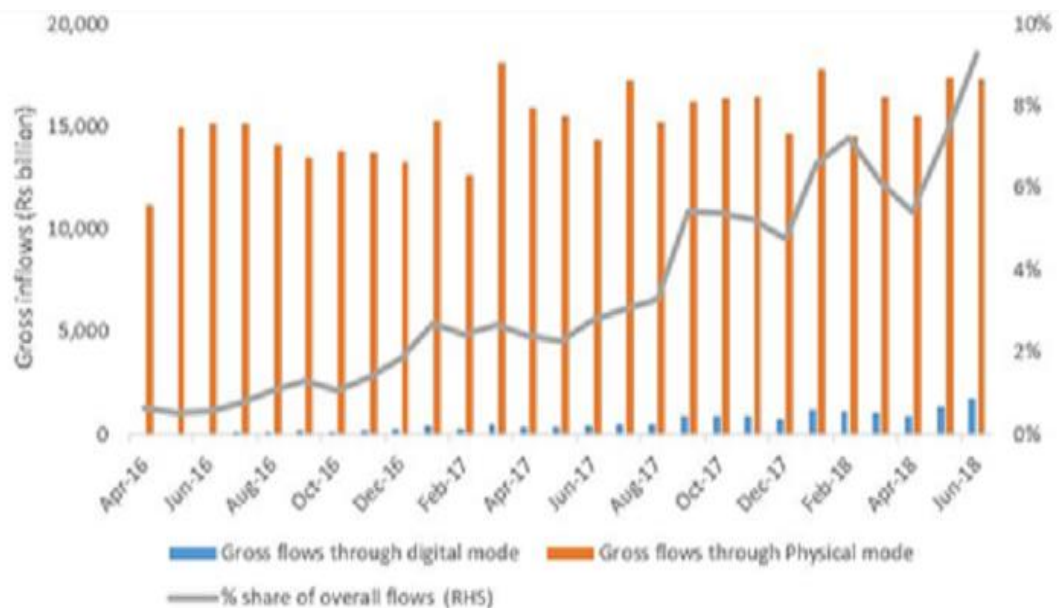
The following are the Activities where Digital is making impact in the Financial Services Value-Chain²⁸...

From Customer Engagement to Customer Fulfillment: Figure 1.04



(Source: pubdocs.worldbank.org)²⁹

Share of digital gross inflows during April 2016 to June 2018: Figure 1.06



(Source: AMFI &forbesindia.com³⁰)

Digital methods comprise corporation sites, outside portals, social-media, smartphone applications, web-chat, IVR phone facility, being there on web-aggregators, SMS, email, etc. These can be Own-Media, Paid-Media or Earned-Media. Own media means own sites.

In the era of digitilisation in mutual funds industry³¹, electronic devices likes IOS and Android smartphone is one of the biggest and fastest growing medium for the online investment in financial markets. Tablets are also growing. Computers are reducing in relevance. Digital methods is one of the best way to make awareness to the potential investors and comapnay easily engage and execute clients/prospects with their business and informed about the all the future propect of better return in their investment. In financial services, it has become an important distribution channel. The main purpose of mutual funds industries to minimize the cost of services and generate more and more revenue and achieve the goal of the organization.

In the latest report of AMFI India it was revealed that the Indian mutual funds industry growing with a benchmark and Assets Under Management (AAUM) was of 36,09,471 crore in August 2021. At the end of May 2021 the Indian mutual fund industirs exceed 10 crore folio and set a benchmark in the financial makets for the future prospect of business

(Source: visualcapitalist.com³²)

1.4 STATEMENT OF THE PROBLEM

The Government of India has introduced the ELSS mutual funds in the financial budget(1989-90)³³ aims to attract the small investor to invest in the mutual funds for tax saving purpose. In his speech the finance minister(1989-90) has emphasized much weight age in the capital market investment and suggested the small investors point view in the mutual funds was mainly into fixed interest bearing instruments. The requirement of capital from open market in relation to equity shares also increases as the industrial growth are there in the country. ELSS funds has given the facilities to the small investors to put their personal saving in the equity and mutual funds for tax saving purpose upto Rs. 1.5 lakh under the section 80 C of Income Tax Act, 1961. Central Government also given a clear picture in Union budget speech of 1991-92 regarding the investment in ELSS mutual funds that for small individual investor's mutual funds are more suitable investment vehicles rather than direct ownership of shares.

ELSS mutual funds is one of the best financial attributes for the long term investment for tax saving purpose with a deduction of upto Rs. 1,50,000 in a financial year(2021-22) under the section of 80 C of the income tax Act 1961 and salary person invested in the ELSS funds for capital appreciation also. In this point of view if we comparing the ELSS funds with others tax saving financial instruments then we can understand the importance of ELSS funds in Tax saving attributes and performance of the ELSS funds can be compare with other investment alternatives.

The main objective of growth mutual funds is to enhance the better return and capital appreciation for the long term investment plan. Mutual funds provided an average return of 16% in a duration of last 40 years history which is more than any other financial investment return in financial market. The major part of investment is done in equity funds and these investments are always facing the high risk challenges of open market operation and after the circle of globalization and liberalization, a lot of internal and external factors on world wide affect the expected return in capital market. A lot of financial derivatives like inflation, deflation, recession, real estate crisis, currency convertibility risk factors, hedging and arbitration highly affect the market return in equity funds. These equity funds are endowed with a lot of opportunity of financial instruments like Large cap funds, Mid cap funds, Small cap funds, Sector Mutual Funds, Equity Linked Savings Scheme (ELSS).

From the Literature Review it is clear that no much work has been emphasized on the open ended Equity Linked Savings Scheme (ELSS) of Mutual Funds. ELSS scheme offering multiple benefits to investors like short duration, high return than other tax saving schemes and dividend etc. Even though the investor has multiple benefits but their growth was not satisfactory. When they compare public sector banks mutual fund schemes and private sector banks mutual fund schemes the performance of private sector funds is better than public sector banks. Hence we would like to study the performance of public and private sector banks mutual fund open ended tax saving schemes. With the following objectives

1. To compare and evaluate the performance of various selected public and private sector banks open ended tax saving mutual fund schemes with Nifty 50 TRI.
2. To offer suggestions to decide where and when to invest in order to obtain tax advantages and high returns

1.5 SIGNIFICANCE OF THE STUDY

In the era digitalization of mutual funds industry in India³⁴, the equity mutual funds is one of the best investment option for the individual investor, as they wish to invest small saving in the mutual funds by pooling the investment in different portfolio by allowing diversification to minimize the business risk factor and sensitivity of market return. In growth mutual funds, investors are getting diversification of their investment portfolio and balance the risk factors involved in the long term return on the portfolio and enhance the capital appreciation. Now, mutual funds industry provides a lot of transparent information regarding the investment plan. In the year 1989-90 the central government introduced the ELSS mutual funds which provides a Tax saving benefits upto 1.5 Lakh and capital appreciation in long term investment plan. Technology is disrupting and it is positively impacting the mutual fund industry.

It has enormous reimbursement, chiefly for the investors, along with the AMCs and the distributors. Digitisation and the growth of allotment are where the aggressive benefit will be in the next to future of the mutual fund industry. A lot of distributors are implementing these changes and with them to cultivate their business too. In fact, with internet connectivity improving in B30 towns, usage of digital interfaces has enhanced considerably. The next step would be to educate the customers concerning the expediency of by means of digital intermediate and serving them experiences it.

Common assets have ended up being a fundamental speculation choice in present occasions. As of now, there are various speculation roads (counting common assets) accessible for financial backers in India. Financial backers ought to choose their speculations dependent on investigation of resource the executives organizations as far as basics can imagine monetary situation, industry/area, asset's venture objective, and so on. Financial backers are confronting difficulties in choosing reasonable assets as far as hazard and return. Consequently, this review would assist financial backers with choosing resource the board organizations as indicated by the exhibition of their assets. It guides financial backers to contribute their assets to get appealing returns by taking lower chances.

Retail financial backers like to put their reserve funds in shared assets. Among the plans accessible, Equity Linked Saving Schemes (ELSS) empower³⁵ them to get sensible returns, yet in addition diminish their available pay to the degree of Rs. 1,50,000 each monetary year. This makes ELSS one of the promising assets for financial backers. With the advancement of the capital business sectors, financial backers presently incline toward shared assets over fixed stores. This makes it basic for financial backers to acquire information on shared assets to settle on solid speculation choices. Explicitly regarding ELSS assets, there is a hole in research, which should be tended to.

This review assesses the presentation of the Top 5 Equity Linked Saving Schemes (ELSS) of Mutual Funds³⁶. The Indian common asset industry has seen critical fast development, with a more than two-crease increase in AUM to Rs. 24.51 lakh crore as on September 30, 2019. Also, there exists 8.68 crore folios, which shows the colossal trust that Indian financial backers have on the shared asset industry. Appealing execution insights portrayed by a common asset guarantees appropriate liquidity and higher benefit of a firm. Legitimate arranging and settlement of expenses are fundamental for any citizen. Value Linked Saving Schemes (ELSS) presented by common supports offers financial backers a decrease in available pay to the degree of Rs. 1,50,000 each monetary year. A regular value plot allots at least 65% of its all out resources into value and value related monetary instruments. Then again, ELSS reserves will in general dispense resources in the scope of 80% to value in this way making them a more forceful choice. ELSS reserves take on BSE 200 TRI Index as their benchmark

1.6 SCOPE OF THE STUDY

The exploration concentrates on attempts to assess Growth asset and ELSS store venture execution and both asset financial backer insight. Venture execution³⁷ is assessed for a time of a long time from Years 2011-12 to 2020-21. To assess the venture execution of Growth asset and ELSS reserve the whole populace of both the assets, comprising of 45 assets (with a base history of 3 years) is thought of.

As the review manages the speculation execution of the asset, just Hybrid assets and ELSS Growth³⁸ choice plans are thought of. For looking at the Growth asset and ELSS store execution. The Indian monetary framework depends on four fundamental parts like monetary market, monetary establishments, monetary help and monetary instruments. All assume a significant part for smooth exercises for the exchange of the assets and distribution of the assets. The primary point of an Indian monetary framework is to demonstrate the productive administrations to Indian capital market. Before, a huge extent of expanded saving has gone into bank stores and little saving plans. At present the expansion in reserve funds have been in shares, land and common assets. The increment in reserve funds is relied upon to stream more into common assets, because of its expanded return and the new expense motivating forces presented by the public authority. As per Gokarn (2011), Mutual Funds assume a significant part in the improvement of the monetary framework. To begin with, they pool the assets of little financial backers together, expanding their cooperation in monetary business sectors, which helps both consideration and the productive working of business sectors

Current review depends on Performance Evaluation of Mutual Funds where open finished Mutual Funds plans in India have been processed with their patterns and other critical proportions. An open-finished asset or plan is one that is accessible for membership and repurchase consistently. These plans don't have a decent development period. Financial backers can helpfully purchase and sell units at Net Asset Value (NAV) related costs which are pronounced consistently. However there are many plans accessible on the lookout yet to keep the review on target, formed and

zeroed in just Income (fluid, Debt.), Growth (ELSS, Equity) and Balanced plans of the open finished classification were thought about for the examination

1.7 PURPOSE OF STUDY

As we see the history of mutual funds in India³⁹ and since inception the initial goals for a potential investors was earn a saving and diversified the portfolio to minimize the risk factors in their investment but later most of the mutual funds company developed the their investment wings as Assets management company and provides more information to the investors with a lot of benefits in their investment for capital appreciation and tax benefits also. Mutual funds provide several important benefits to small investors: diversification, professional management, strategy, low cost, access to specific markets and ease of investing. Now a day mutual funds is popular among the younger for their tax saving purpose. The Digital interruption has made its way to the mutual fund industry and the tax function is in a position to lead the way.

Adopting a digital strategy can help mutual fund⁴⁰ companies address the concerns of today, while remaining agile enough to outpace the changes of tomorrow and Finance scholars, Tax consultant and practitioners start examine the benefits of mutual funds in long term investment plan and guiding potential investors to investment in mutual funds by showing the eronmous growth and remarkable return in the mutual funds. Now a day after the COVID-19 pandamic the sharp growth in financial market make a trust in the mind of potential investor to invest in mutual funds for getting better return by taking risk factors.

The Study would examine opinion of people towards putting resources into values through Mutual Funds, while endeavoring to set up a relationship between's development of MF industry and Indian securities exchanges. Methodology: Primary information assortment - poll glided to people of various sex, age, sexual orientation, schooling, and so forth, to survey their monetary proficiency and the variables that have added to expanded interest in MFs. Auxiliary exploration - information from AMFI/MFs sites, breaking down the increase in AUM of Equity MFs throughout the most recent twenty years' opposite Market Capitalisation, utilizing connection. On the

essential arrangement of data, a t-test was directed and Pearson's connection was applied on the optional information.

A rate investigation was accomplished for opinion analysis. The Study would help in measuring monetary proficiency of people, and furthermore develop our comprehension of interest in securities exchanges through MFs. Innovation: There have been a couple of concentrates on monetarily educated financial backer's inclination for direct venture over contributing through Mutual Funds, however very few on financial backer opinion towards securities exchanges overall and Mutual Funds specifically

1.8 ORGANISATION OF THESIS

The Research thesis is explained in a well organized structure way. In chapter 1, we explained about the impact of COVUD-19 pandemic and its negative impact in the mutual fund s industry in India and capital markets declined shaply with a huge margin.Then we have discussed the digitalization of mutual funds industry and its positive impact for the new potential investors with more transparanecy in online investment opportunity.Then we dicussed about the history of Indian mutual funds since inception and studied about the purpose of the study with research gap and evaluate the performance analysis of growth mutal fund for capital appreciation and Equity Linked Sacing Scheme(ELSS) for tax saving purpose upto 1.50 Lakh under the section 80C of Income tax Act, 1961.

This theory is coordinated in an organized configuration. At first in Chapter 1 we presented the insights regarding the Mutual Fund Industry in India and how it began. Then, at that point, we continued on to clarifying the reason for the review and why credits like Financial Factors, Brandname, Service Quality and Customer Satisfaction influences deals of a Mutual Funds in India. In Chapter 2 we talk about the writing survey and how past scientists has attempted to gauge monetary variables, consumer loyalty, administration quality, IT Enabled administrations and other region resembles CRM. In Chapter 3 we have recognized what are the examination holes and how would we span those holes through the flow research.

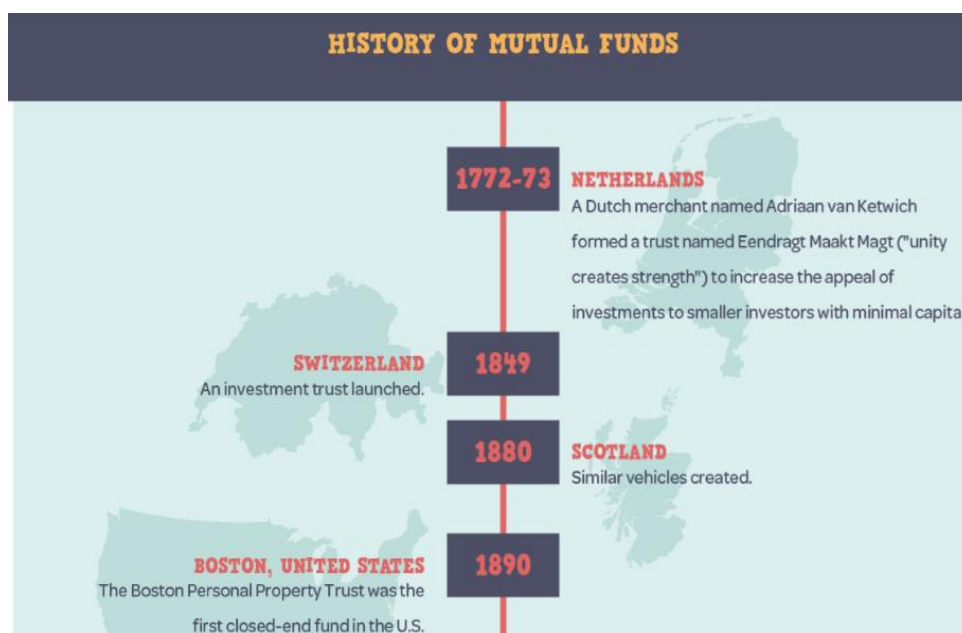
We likewise have examined the examination procedure wherein we have talked about what the inspecting technique utilized, why it is utilized, what are inclinations in example and how would we manage it. In Chapter 4 we have talked about the how information should be broke down and regardless of whether the finding are in sink with what we expect to accomplish. We have shown what are the distinctive factual apparatuses utilized by us and its separate yield of 35 SPSS. In Chapter 5 we have examined the end and discoveries of our review. In Chapter 6 we have added the impediment and future extent of exploration. At long last we have survey followed by annexure and reference inde

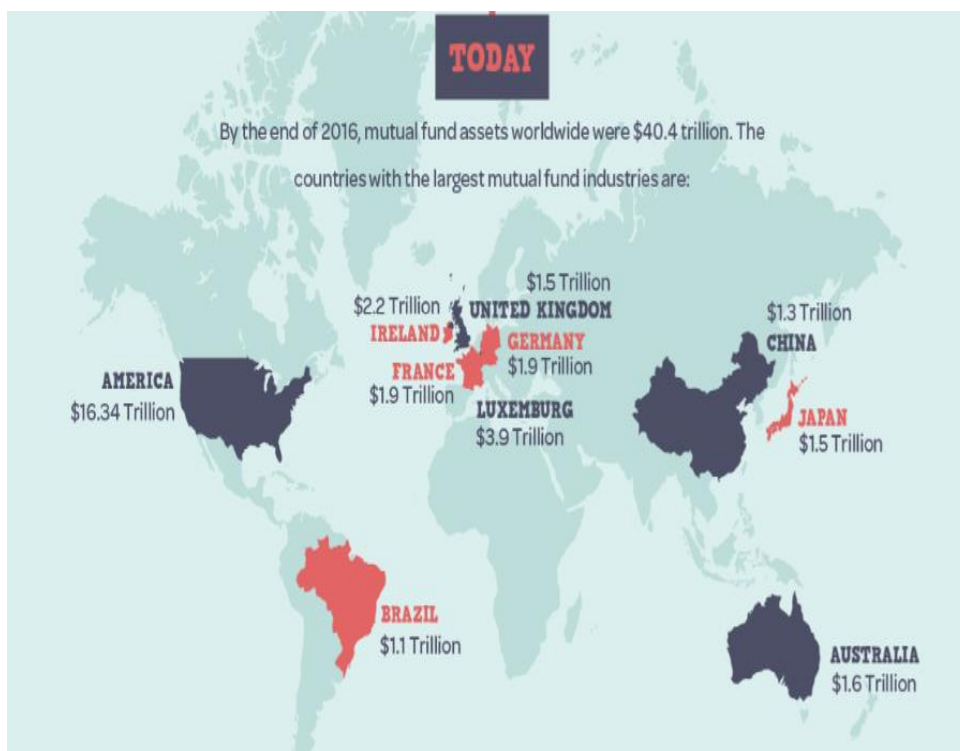
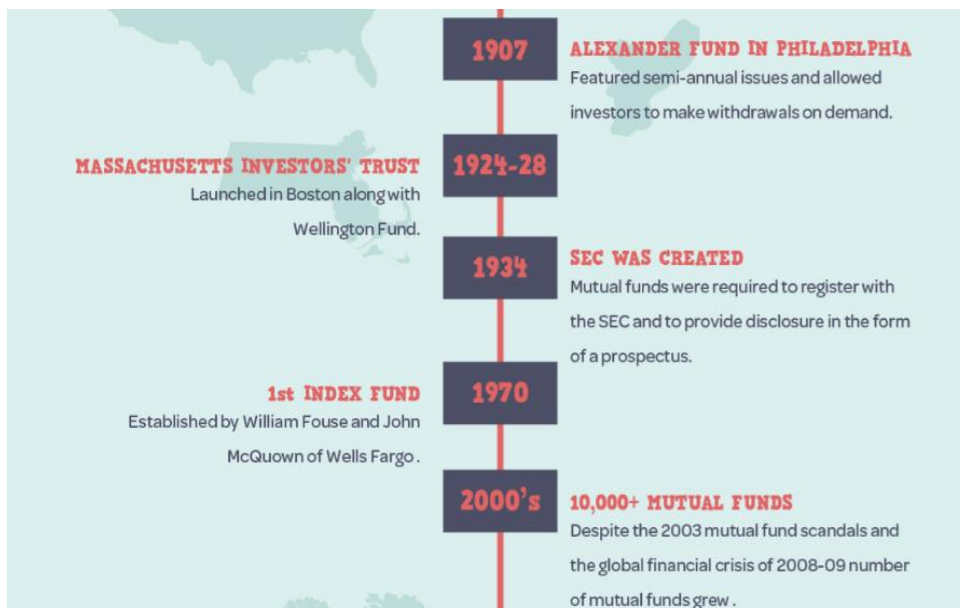
1.9 AN OVERVIEW OF MUTUAL FUNDS IN INDIA

Unit trust of India⁴¹ was formed in the year 1963 through the parliament under UTI Act 1963, The main objectives was attract the small investors to investment in mutual funds in India. So, that people can think about saving out of their limited income and investment those saving in different kinds of mutual funds to meet their future liabilities. In India, inflation is one of the major factors due to which rise in the price with compound interest but our income is not increase in that ratio and our purchasing power parity (PPP) decreases and we are unable to meet our future liability. Mutual funds gives a better option to invest in different kind of portfolio to minimize the risk factors involves in investment and provides a better return in the future. Unit Scheme (US-64) was te first mutual funds scheme was launched by Unit Trust of India was an open ended scheme and investor gets income , liquidity and tax benefits by investing in this funds. Till 1987 , UTI was the single public setor oanisation to provide facility to invest in mutual funds and the assets under management(AUM) stood at Rs. 6700 crores at the edn of 1987.

1.9.1 THE HISTORY OF MUTUAL FUNDS

Figure 1.07





(Source: visualcapitalist.com⁴²)

1.9.2 Difference between ELSS and Equity mutual fund

An ELSS mutual funds provides a tax benefits upto Rs. 1.50 lakh in one assessment year under Section 80C of the Income Tax Act, 1961. Whereas growth or equity mutual funds doesn't provides any tax benefit to the investors..For novice financial backers, Equity connected investment funds conspire (ELSS) and Equity Mutual assets can be befuddling on occasion.

As a financial backer, one of your essential objectives is set up an expanded speculation portfolio. It assists you with moderating the market hazard as well as assist you with getting steady returns. Furthermore, probably the most ideal way of having an expanded portfolio is to put resources into a common asset conspire, which additionally gives capital increases to the financial backers.

Inside a shared asset conspire, there are various kinds of assets like value reserves, obligation store, half breed reserves, and so forth .Among different sorts of value connected common assets, two of the most well known assets is the Equity shared asset and ELSS. We should find out about these assets. Since we know what ELSS and Equity Mutual Funds are, let us comprehend the contrasts between the two dependent on various variables:

i. Returns acquired

the profits might differ dependent available condition. The Equity common assets, then again, are known to give somewhat more significant yields than ELSS reserves. In any case, recollect with value assets, there is additionally high danger.

ii. Lock-in period

ELSS reserves have a lock-in time of three years. Though, the value shared assets, have no lock-in period. In this way, on the off chance that you think ELSS has an inconvenience; you should realize that it has a most brief residency. In any case, in case you are searching for a speculation choice that gives you simple liquidity choice, you can consider putting resources into value shared assets; you can pay the leave load, and reclaim your venture whenever you need.

iii. Tax ramifications

Investors are getting a benefit of Rs. 1.50 lakh for the investment in Tax Saving mutual funds under the Section 80C of Income Tax Act, 1961. This assessment allowance isn't accessible in the Equity Mutual Fund.

(Source : India Infoline⁴³)

1.9.3 Benefits of Mutual Funds

i. Risk Diversification:

Mutual funds have their share of risks as their performance⁴⁴ is based on the market movement. Hence, the fund manager always invests in more than one asset class (equities, debt, money market Instruments, etc.). To spread the risks. It is called diversification. By this methods of diversified portfolio average return in long terms compensate the loss making funds and with the high performance of others funds, on average investors are getting good returns. Operated by Professional Managers: A mutual fund is favoured because it doesn't require the investors to do the research and asset allocation. In the Assets Management Company, a fund manager taken the whole responsibility and working on the behalf of investors and manage their money for a better return by the ways of portfolio management. He/she decides whether to invest in equities or **debt**. He/she also decide on whether to hold them or not and for how long. Your fund manager's reputation in fund management should be an essential criterion for you to choose a mutual fund for this reason. The expense ratio (which cannot be more than 1.05% of the **AUM** guidelines as per SEBI) includes the fee of the manager too.

(i) Passive Investment Style:

You must have noticed how price drops with increased volume when you buy any product. For instance, if 100g toothpaste cost Rs. 10, you might get a 250g pack for, say, Rs. 20. The Same logic applies to the mutual fund units as well. It is beneficial to the the investors, the processing fees will be less due to less administrative chre if they buy multiples units at a time and paying more when they purchase one unit at a time. By investing in smaller denominations (SIP) , you get exposed to the entire stock (or any other asset class). This reduces the average transaction expenses- you benefit from the market lows and highs. Regular (monthly or quarterly) investments, as opposed to lump sum investments, give you the benefit of rupee costs averaging.

1.10 Types of Mutual Funds:-

A. Based on the maturity period⁴⁵:

(i) Open ended funds:

These funds buy and sell units on a continuous basis and, hence, allow investors to enter and exit as per their convenience. The units can be purchased and sold even after the initial offering (NFO) period (in case of new funds). The units are bought and sold at the net asset value (NAV) declared by the fund., The number of outstanding units goes up or down every time the fund house sells or repurchases the existing units. This is the reason that the unit capital of an open-ended mutual fund keeps varying. The fund expands in size when the fund house sells more units than it repurchases as more money is flowing in.

(ii) Closed ended mutual funds:

Securities and Exchange board of India working as a regulator in securities market a new fund offer is financial tools through which a mutual funds launches in the securities market for a maximum duration of 30 days. And mutual funds are functioning in the open market just as shares and people can put their application for the purchase of these funds in the specified period. On the basis of NAV these funds are traded in the securities market. Investors can redeemed these units after the maturity period which is generally 3 to 7 years.

B. Based on investment objectives:

Equity/Growth Funds:

A growth fund is a mutual funds which invests in the stocks of the companies which are expected to grow at a rate faster than the overall stock market. The primary goal of growth funds is capital appreciation. Investors are not willing to invest on those companies which have high-dividend payouts (this is the prime focus of dividend-yield funds). Nor do they go after value stocks – companies which have relatively undiscovered potential.

In general, the growth funds are providing high return to the investors in the bullish or upward market and providing low return in the bearest market situation. However, growth funds may result in losses during bearish market conditions. Thus, growth funds come with a relatively high amount of risk.

1.11 ELSS MUTUAL FUNDS SCHEME

ELSS funds is a kind of diversified equity mutual fund schemes⁴⁶ which provides a good return and minimize the risk factor in the investment avenue, but actually there is a lot of differentiated between the ELSS schemes and diversified mutual fund schemes.

When we are thinking about the investment in different sectors like Banking, automobile, information technology, manufacturing, infrastructure development, Pharmaceutical, Oil and gases etc. and we can invest in any sector without restriction

An expanded asset puts resources into values and value related instruments independent of their market capitalization or sectoral alliance. An enhanced asset has the adaptability to increment or diminishing its openness to huge covers, mid-covers, and little cap speculations relying upon the asset supervisor's impression of the economic situations and future market assumptions.

ELSS is a plan presented by shared assets, which puts a greater part of its corpus in value and value related instruments. Interest in ELSS accompanies a lock-in period and has tax cuts appended to it. It is reasonable for financial backers having a high danger profile as returns in ELSS vary contingent on the value market and there are no proper returns. ELSS plans are open finished, that is, these plans stay in presence in unendingness and financial backers can prefer the asset on any work day. NAV or the cost of the asset is announced on each work day. It has a lock in time of 3 years dissimilar to different sorts of shared assets.

Duty arranging methodologies are significant for citizens whose point is to decrease their expense outgo on different kinds of pay and capital increases. Segment 80C of Income Tax Act, 1961 empowers us to save charges by putting resources into qualified venture instruments which incorporate Equity Linked Saving Schemes (ELSS). Area 80C empowers a citizen to lessen his/her available pay to the degree of Rs.1,50,000 each monetary year by putting resources into these qualified speculations. An ELSS store puts resources into value across various areas and market capitalization to accomplish alluring returns. Being a value store, returns are reliant

upon value moves of stocks put resources into and the general business sectors. ELSS reserves have a lock-in time of a long time from the date of venture

1.11.1 Choices while making an interest in an ELSS⁴⁷

a. Development choice – In development choice, pay procured by the asset isn't appropriated to unit holders. Financial backers don't procure any profit; all things being equal, pay/benefit acquired by the asset reflects in the NAV (the NAV increments). At whatever point the financial backer sells his possessions, he will acknowledge long haul capital increase/misfortune.

b. Profit choice – In this choice, the asset conveys pay procured by the asset to the financial backers as profits. The date of conveyance is announced by the asset; but in the event that the asset has negative pay, it won't appropriate any profit. Any profit got by the financial backer isn't at risk for charge in the possession of financial backers.

c. Profit reinvestment choice – If the financial backers pick this choice, the profits announced by the asset are reinvested once more into the asset for the financial backer

1.12 GROWTH MUTUAL FUNDS SCHEME

In Growth reserve, financial backers are putting resources into the forceful assets for capital appreciation⁴⁸ and friends vows to gives a superior returns in longer time of time. Retun puts resources into loads of organizations which deal promising returns. Financial backers put resources into the asset with the main objective of accomplishing capital appreciation. Alongside exceptional yields, the dangers are additionally high. While contributing, the asset house disposes of the supplies of organizations with high profit payouts. This kind of asset experience significant yields when the market is bullish (condition when the stocks market is rising or expected to rise)

Components of Growth Fund⁴⁹:

- (i) Risk factor: The asset is exceptionally unsafe, and it is just appropriate for financial backers who have a high-hazard hunger. In any case, when you put resources into it, the profits are promising
- (ii) Volatile reserve: If you are putting resources into development stocks, you ought to be prepared to confront market unpredictability. Stocks will in general ascent and drop as they are market-connected monetary instruments
- (iii) Reinvestment: Many financial backers⁵⁰ lean toward development assets rather than the profit reserve in light of the fact that the cash is again reinvested in the plan as opposed to being returned so they can procure more

1.13 ADVANTAGES OF MUTUAL FUNDS

- (i) **Professional Management** - A mutual fund offers investors access to full-time, professional money managers who have the expertise, experience and resources to actively buy, sell, and monitor investments.
- (ii) **Diversification** — Mutual funds enable you to hold a wide variety of securities at a much lower cost than you could on your own. If one investment decreases in value, another investment in the portfolio may increase. By holding shares in various types of funds, you can take advantage of opportunities in many asset classes across changing market environments.
- (iii) **Affordability** — Mutual funds enable even small investors to take advantage of professional asset management and diversification with low investment minimums. Compared to most funds, it would require a larger investment, and incur greater costs, to purchase directly all of the individual securities held by a single mutual fund.
- (iv) **Liquidity and convenience** — Most mutual funds allow investors to buy and sell shares on any business day. Many funds enable you to set up a regular, automatic purchase program to help you build a nest egg. They also allow you to automatically reinvest interest, dividends, and capital gains in order to buy even more shares.

(Source : franklin templeton⁵¹)

1.14 INDUSTRY TRENDS

It shouldn't be a surprise that Industry 4.0 and related topics are dominating current industry trends right now. IoT and Industry 4.0 are being compared to the industrial revolution and Henry Ford's mass production because they are changing the industry so drastically.

Householder's reserve funds and venture assumes a vital part in capital arrangement and modern advancement of an economy. India, throughout the long term, has been an economy with better than expected householder's reserve funds. the normal Indian householder gross reserve funds as a level of GDP throughout the years 2000 to 2013 has been 29 rate when contrasted with the world normal of 23 rate.

As new retail investors are coming up, Systematic investment plan have a steady uptrend despite market volatility. There are almost 32 Million SIP accounts as of May 2020.

1.14.1 Distribution of Mutual Funds in India

Common assets are monetary items. Similarly as with any item, promoting assumes a significant part in its effectively arriving at the shoppers. Monetary items are the same. Shared assets are elevated or made accessible to the financial backers, through different appropriation channels.

Increase in Total Assets (in Rs. Trillion) from July 2020 to July 2021

Total Assets (in Rs. Trillion)

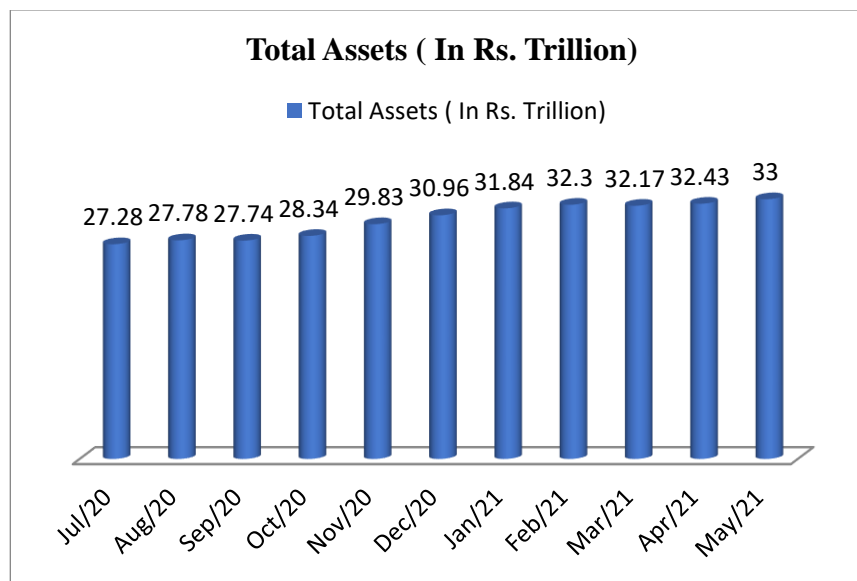
Table 1.04

Month & Year	Total Assets (In Rs. Trillion)
July 2020	27.28
Aug 2020	27.78
Sept 2020	27.74
Oct 2020	28.34
Nov 2020	29.83
Dec 2020	30.96

Jan 2021	31.84
Feb 2021	32.30
March 2021	32.17
April 2021	32.43
May 2021	33.00
June 2021	34.10

(Source: amfiindia⁵²)

Increase in Total Assets (in Rs. Trillion) from July 2020 to July 2021
Figure 1.08

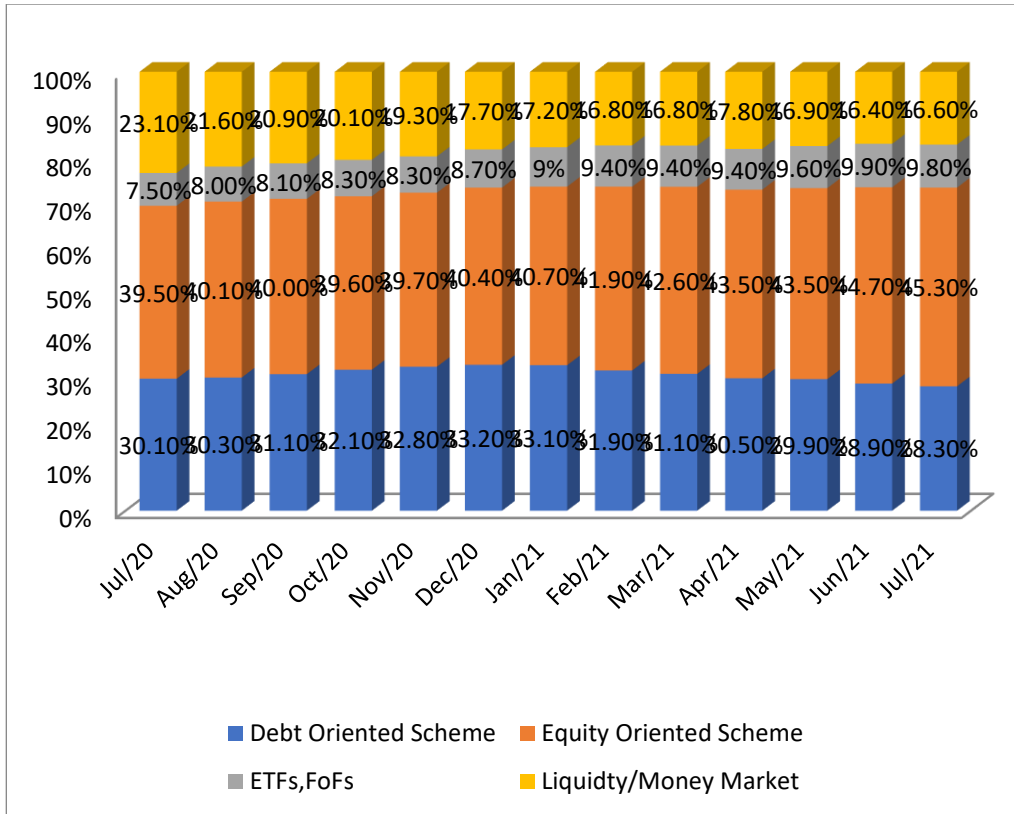


(Source: amfiindia⁵³)

In the latest report of Association of Mutual funds of India, Total Assets (in Rs. Trillion) has reached to Rs. 35.15 trillion in July 2021 in compare to Rs. 27.28 trillion in July 2020 and shown a growth of 28,83%

Plan insightful Composition of Assets (in Rs. Trillion) from July 2020 to July 2021

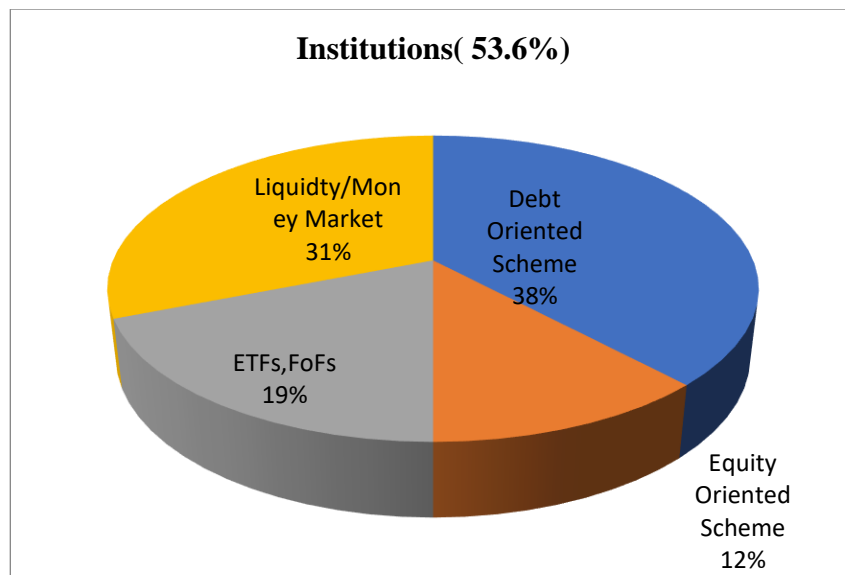
Figure 1.09

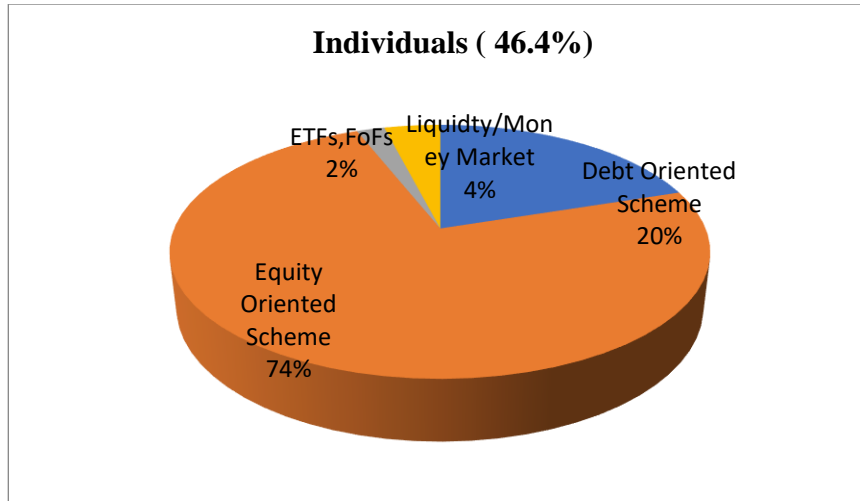


(Source: amfiindia.com⁵⁴)

Financial backer Type-wise Composition of Mutual Fund Assets (in Rs. Trillion) from July 2020 to July 2021

Figure 1.10

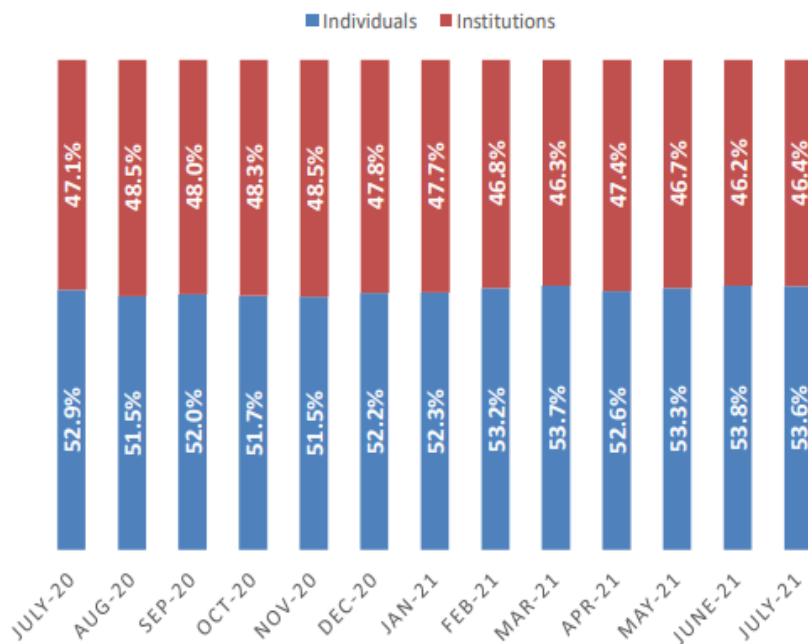




(Source: amfiindia.com⁵⁵)

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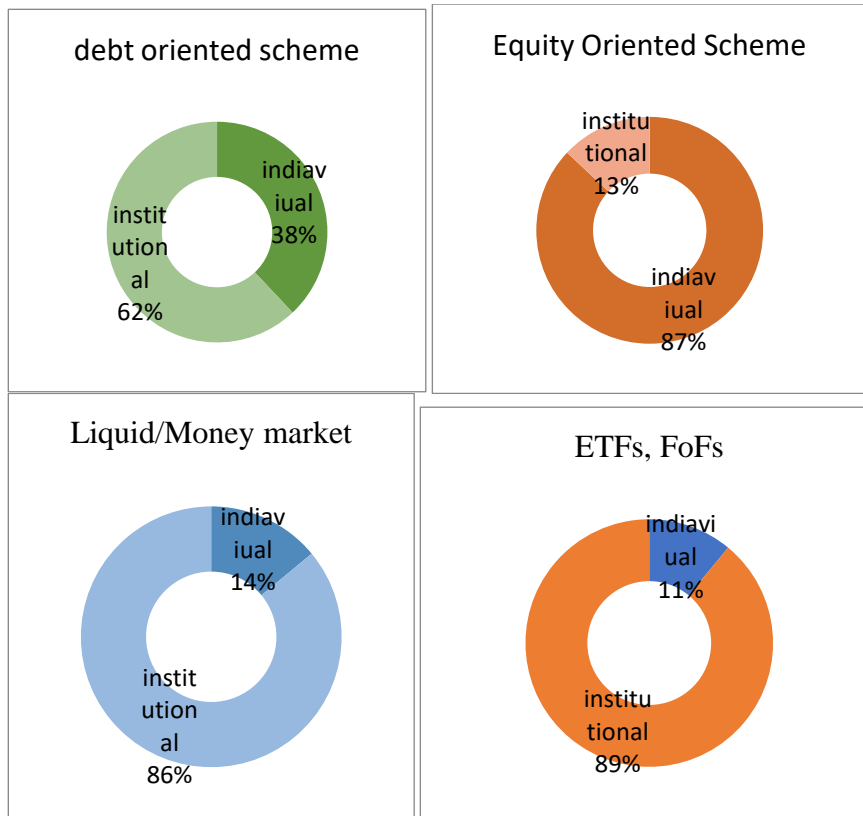
Figure 1.11



(Source: amfiindia.com⁵⁶)

Investor Categories Across Scheme Types

Figure 1.12



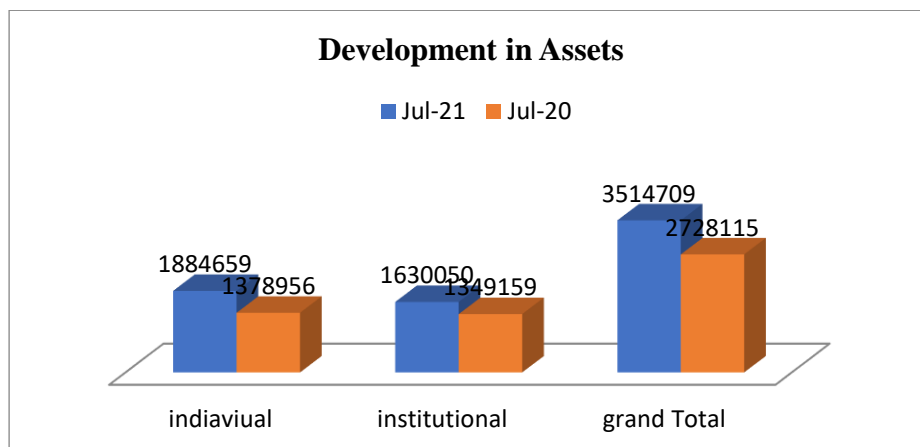
(Source: amfiindia.com⁵⁷)

Organization of Investors' Holdings

Foundations incorporate homegrown and unfamiliar establishments and banks. People incorporate HNIs or financial backers who contribute with a ticket size of Rs. 2 lakhs or above. Value arranged plans incorporate value and adjusted assets.

Development in Assets from July 2020 to July 2021

Figure 1.13



(Source : amfiindia.com⁵⁸)

The worth of Institutional resources has expanded from Rs.13.49 lac cr in July 2020 to Rs.16.30 lac cr in July 2021 an expansion of 20.82%.

Organizations incorporate homegrown and unfamiliar establishments and banks. Rs. lac cr is comparable to Rs. Trillion.

Total Net Assets of Worldwide Regulated Open- Ended Funds Rose to \$63.1 Trillion in 2020(Trillion of US Dollars by the type of funds, year-end)

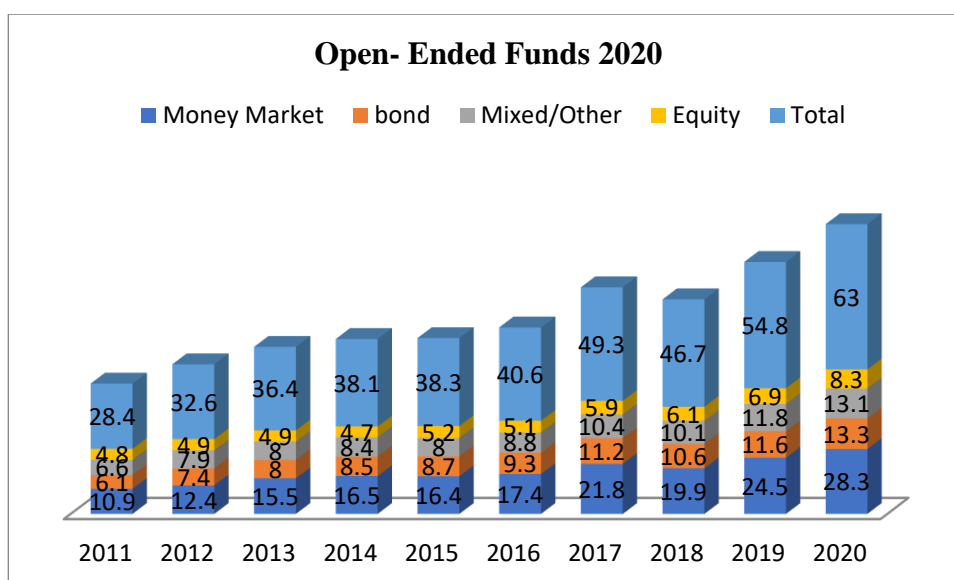
Table 1.05

Funds	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Money Market	10.9	12.4	15.5	16.5	16.4	17.4	21.8	19.9	24.5	28.3
bond	6.1	7.4	8	8.5	8.7	9.3	11.2	10.6	11.6	13.3
Mixed/Other	6.6	7.9	8	8.4	8	8.8	10.4	10.1	11.8	13.1
Equity	4.8	4.9	4.9	4.7	5.2	5.1	5.9	6.1	6.9	8.3
Total	28.4	32.6	36.4	38.1	38.3	40.6	49.3	46.7	54.8	63

. (Source: ici.org⁵⁹)

Total Net Assets of Worldwide Regulated Open- Ended Funds Rose to \$63.1 Trillion in 2020(Trillion of US Dollars by the type of funds, year-end)

Figure 1.14

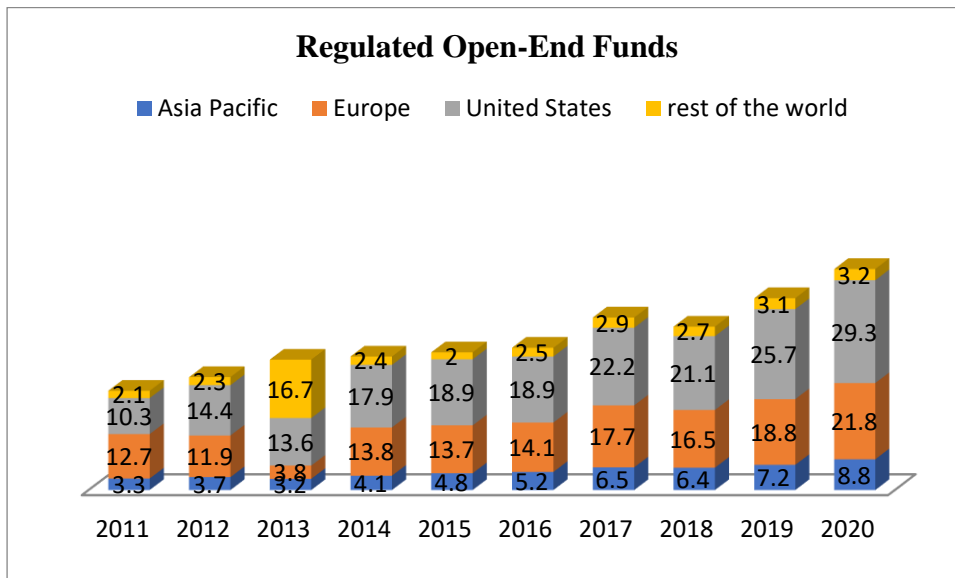


. (Source: ici.org⁶⁰)

Source: International Investment Funds Association

The United States Has the Largest Share of Total Net Assets of Worldwide Regulated Open-End Funds Trillions of US dollars by district, year-end

Figure 1.15



(Source: ici.org⁶¹)

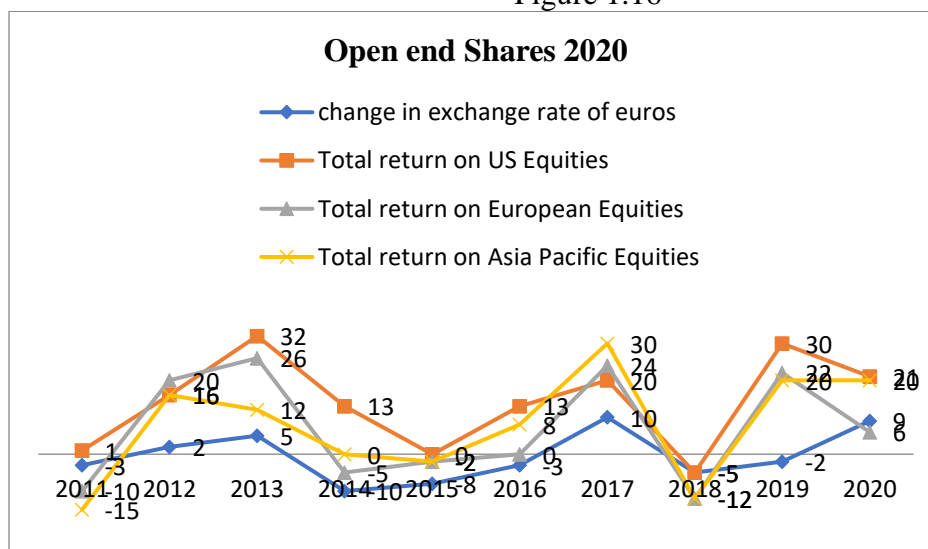
Note: Regulated open-end funds include mutual funds, ETFs, and institutional funds.

Source: International Investment Funds Association

Note: Regulated open-end reserves incorporate shared assets, ETFs, and institutional assets. Source: International Investment Funds Association

Financial exchange Returns Around the World Were Generally Positive in 2020 (inPercent)

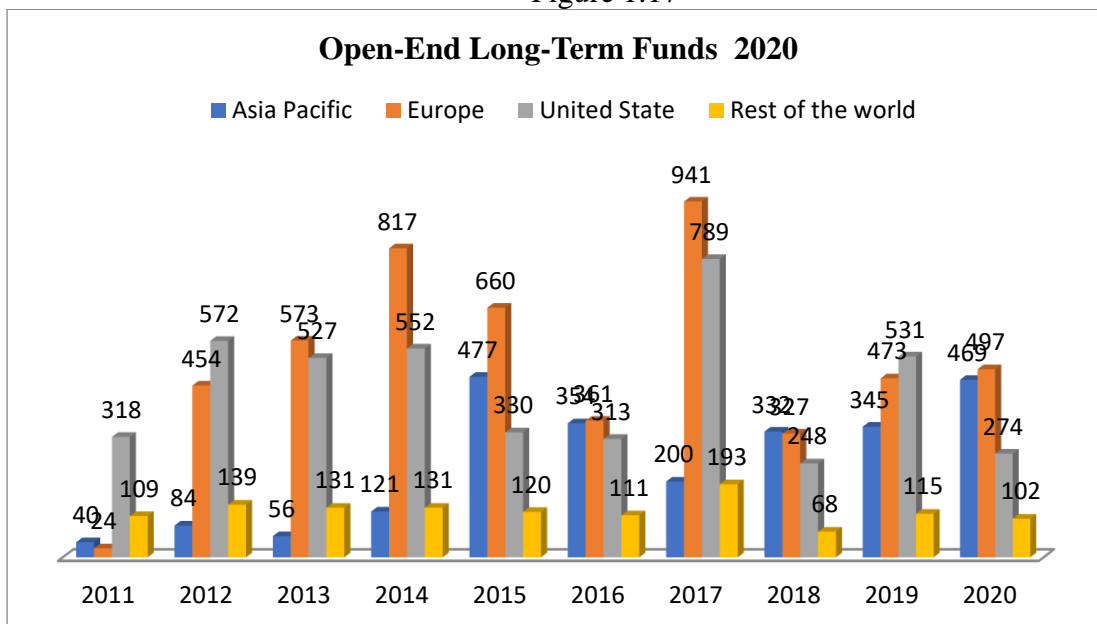
Figure 1.16



Sources: Bloomberg and MSCI⁶²

Net Sales of Regulated Open-End Long-Term Funds Decreased in 2020
 Billions of US dollars by locale, yearly

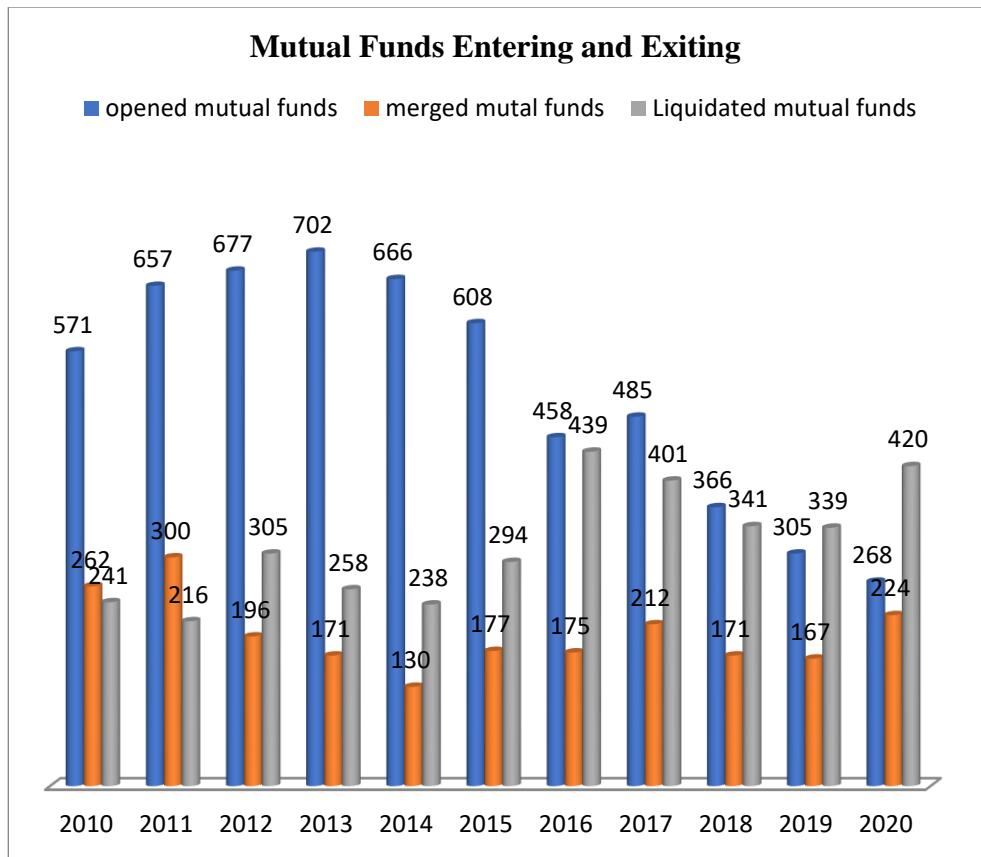
Figure 1.17



(Source: International Investment Funds Association⁶³)

Note: Regulated open-end reserves incorporate common assets, ETFs, and institutional assets. Long haul reserves incorporate value reserves, blended/different assets (adjusted/blended, ensured/secured, land, and different assets), and security reserves, however avoid currency market reserves.

Number of Mutual Funds Entering and Exiting the Industry
 Figure 1.18

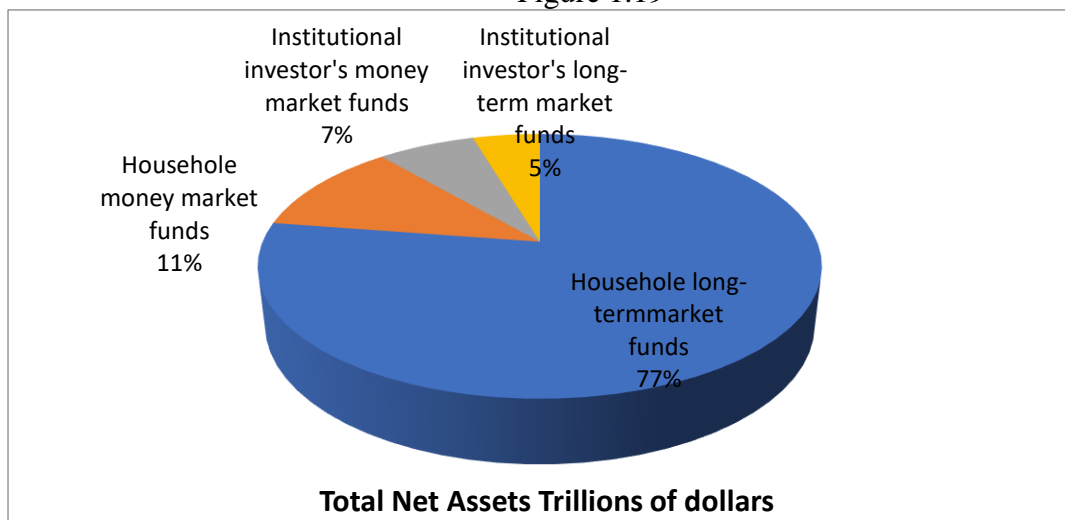


(Source: International Investment Funds Association⁶⁴)

Note: Data incorporate shared assets that don't report factual data to the Investment Company Institute and common subsidiaries that put basically in other shared assets.

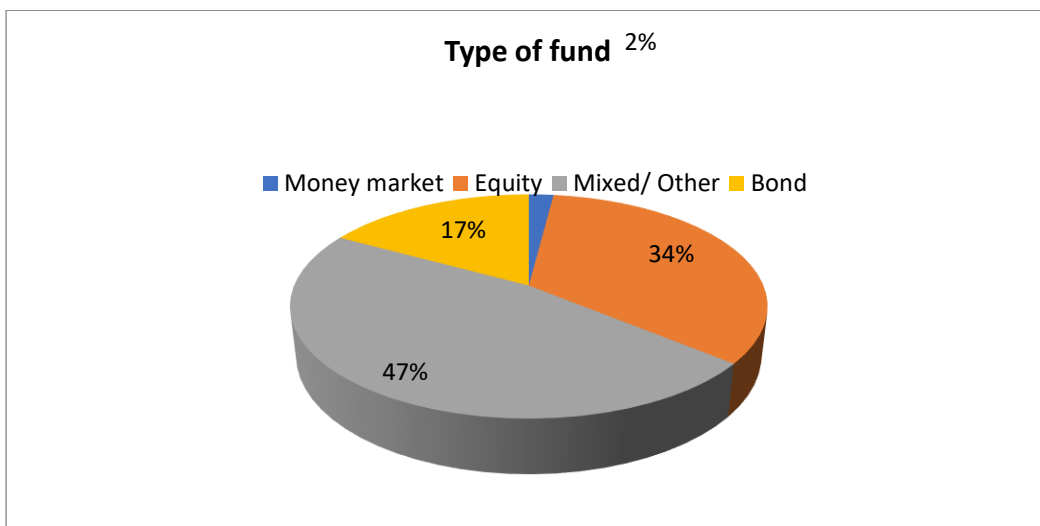
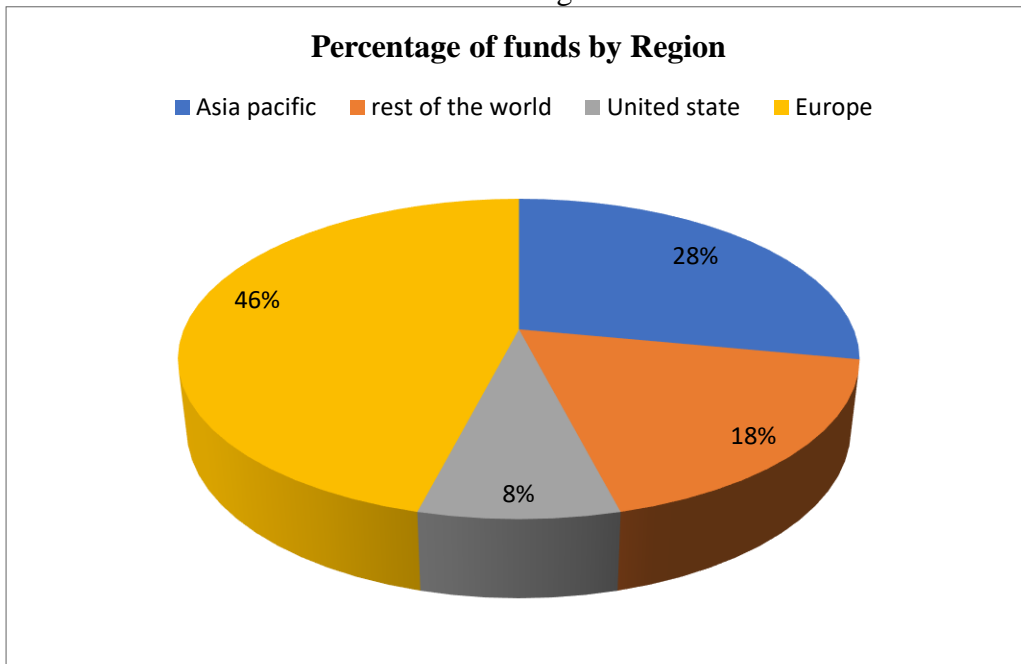
Families Held 89 Percent of Mutual Fund Total Net Assets Trillions of dollars, year-end 2020

Figure 1.19



(Source: International Investment Funds Association & 20:ici.org⁶⁵)
Number of Worldwide Regulated Open-End Funds

Percentage of funds by region or type of fund, year-end 2020
 Figure 1.20



Number of worldwide regulated open-end funds: 126,457
 (Source: International Investment Funds Association & 20:ici.org⁶⁶)

1.14.2 Mutual Fund Industry – Latest information

A portion of the significant drives are as per the following:

Item Labeling⁶²

Direct Plans Mutual assets here to were appropriated by store wholesalers. Asset merchants were boosted by the AMC as introductory commission and

preliminary commission. The degree of commissions paid relied on the kind of asset being value, obligation or fluid asset.

Posting of Mutual Funds on Stock Exchanges SEBI to build the entrance of shared assets the nation over, gave a roundabout on thirteenth November 2009, To empower exchanging through trade stage, common asset units are presented in dematerialized mode. Customers could put orders, by opening records with the individuals from stock trades. According to the Budget proposition made in 2013-14, SEBI as of late has permitted the AMFI enrolled Independent Financial Advisors (Ifa's) getting a restricted participation of these trades for empowering putting in of common asset requests of their customers. This permits the IFA's to put orders for the benefit of their customers straightforwardly without directing it through a stock agent. This drive should work on the geological entrance of asset conveyance. SEBI has ordered all AMCs to use .02 rate on day by day net resources inside the greatest indicated complete cost proportion, to meet costs towards financial backer instruction and mindfulness drives. Common assets are needed to make revelations to SEBI of such drives attempted on a half yearly premise.

1.15 CONCLUSION

According to RBI's reexamined gauges for the year 2012-13, just 2.5 level of the gross monetary reserve funds of the Indian family area is put into common assets. The lower investment funds designation to common assets combined with the retail financial backer organization in store plans and geological infiltration of assets plainly mirror that shared assets have an enormous market in front of them, which should be entered in light of a legitimate concern for the financial backer, industry and the economy.

[(Source: www2.deloitte.com)⁶³]

1.15.1 BUDGETING PLAN 2020 AND MUTUAL FUNDS TAXATION RULES

As DDT won't be paid by the organizations, profit pay hereafter (from April 2020) will be burdened and paid by financial backer, at appropriate individual duty chunk rates. Accordingly, the TDS on benefit pay is 7.5% from 14-05-2020 to 31-03-2021.) (Source: The Finance Bill 2020).

The LTCG tax rate on non-equity funds is 20% (*with* Indexation benefit)

Table 1.06

Mutual Funds- Capital Gains tax rates : FY 2020-21(AY 2021-22)		
Resident indian		
Types of Mutual Funds Scheme	Short Term capital gains(STCG Tax rate)	Long term capital Gain(LTCG Tax Rate)
Equity Funds	15%	10%
(STCG- Units held for less than 1 year		
LTCG- units held for more than 1 year)		
Non-Equity funds	As per individual income tax bracket	20% (with indexation)
(STCG- Units held for less than 3 year		
LTCG- units held for more than 3 year)		

(Source: relakhs.com)⁶⁷

(10% (without indexation benefit)on long term capital gain exceeding Rs. 1 lakh

Table 1.07 Mutual Fund Taxation rules – Resident Indian – FY 2020-21

Mutual Funds- Capital Gains tax rates : FY 2020-21(AY 2021-22)		
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Types of Mutual Funds Scheme	Short Term capital gains(STCG Tax Rate)	Long term capital Gain(LTCG Tax Rate)
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(STCG- Units held for less than 3 year		
LTCG- units held for more than 3 year)		

(Source: adityabirlacapital.com)⁶⁸

(10% (without indexation benefit)on long term capital gain exceeding Rs. 1 lakh

Table 1.08- Non Resident Indian (NRI) Mutual Fund Investments & TDS Rate

Mutual Funds Redemption by NRIs and TDS rate: FY 2020-21(AY 2021-22)		
Resident indian		
Types of Mutual Funds Scheme	STCG T& TDS rate	LTCG T& TDS rate
Equity oriented Mutual Funds	15%	10% *
Debt oriented Mutual Funds	30% ^	On listed funds- 20% (with indexation)
		On unlisted funds- 10% (with indexation)

(Source: livemint.com)⁶⁹

*(10% (without indexation benefit)on long haul capital increase surpassing Rs. 1 lakh)

Assuming the financial backer falls into most noteworthy expense section

Short term and long term capital gain charge(alongside pertinent additional charge and" Health and Education Cess") will be deducted at the hour of redemption of the unit in the event of NRI Investors

1.15.2 Mutual Funds Capital Gains Taxation for FY 2019-2020

In the mutual fund industry , a capital gain⁶⁷ indicates the difference between the ask rate and bid rate in their investment and difference of selling price and buying price after paying the brokerage charge shows the actual benefit to the potential investor in the mutual fund.

For instance, Mr. Y has invested Rs. 5 Lakh in the equity funds on April 1, 2017 and due to better portfolio, its value become Rs. 7 lakh on April 1, 2020. In this condition his capital gain is Rs. 2, 00,000

The mutual funds capital gains taxation depends on the type of mutual fund scheme and the investment tenure. On the basis of investment tenure, there are two types of capital gains tax – Short Term Capital Gains Tax (STCG) and Long Term Capital Gains Tax (LTCG).

Tabel 1.09

Type of Schemes	Particulars	Short Term capital gains tax	Long term capital gain tax
Equity oriented Schemes	Holding Period	Up to 12 months	More than 12 months
	Tax rate	15 %	10%
Non-Equity oriented Schemes	Holding Period	Up to 36 months	More than 36 months
	Tax rate	Income tax Slab rate of investor	

(Source: amfiindia.com⁷⁰)

In long term capital gain, Rs. 1 lakh per annum is exempted from the investment of equity mutual funds and above this figure only came in the bracket of taxable income

For example, if Mr. X long-term capital gain in FY 2019-20 is Rs 1.7 lakh, only Rs. 70,000 will be taxable as LTCG.

(i) Mutual Funds Dividends Taxation for FY 2020-2021

Dividend is a part of the profit that a company earns and distributes amongst its investors. Dividend Distribution Tax is a liability that a company must pay to the government according to the dividend paid to the company's investors.

As of FY 2019-20, DDT is payable to the government not by the investor but by the fund house managing the mutual fund. In most schemes, DDT rate is around 30%. However, according to the recent budget for FY 2020-21, Dividend is taxable at the hands of the investor and not the fund house. Hence, as it stands DDT has been abolished under the new tax regime.

(ii) Tax Benefit of Mutual Funds

An ELSS comes with a lock-in period of 3 years which means an investment made in it cannot be withdrawn before 3 years.

(iii) Securities Transaction Tax (STT)

A Securities Transaction Tax (STT) is applicable at the rate of 0.001% on equity oriented mutual funds at the time of redemption of units. An investor is not required to pay STT separately as it is deducted from the mutual fund returns.

Table 1.10 List of Top tax Saving (ELSS) Mutual Funds for FY 2020

Fund name	3 years return	5 years return
Inversco India Tax plan	15.52%	11.98%
DSP tax saving Fund	15.25%	12.08%
Aditya Birla sun life tax relief 96	14.83%	11.54%
Kotak tax saver	14.57%	11.03%

(Source: amfiindia.com⁷¹)

Table 1.11 Dividend Distribution Tax (DDT) in the hand of mutual fund investors

Investors	Resident /Individual/HUF	Domestic Company	NRI

Dividend			
All Schemes	Tax Free in the hands of Investors		
Tax on distributed income (payable by the scheme) rates			
Equity oriented scheme	10%+12% Surcharge + 4% Cess	10%+12% Surcharge + 4% Cess	10%+12% Surcharge+ 4% Cess
	11.65%	11.65%	11.65%
Infrastructure debt funds	25%+12% Surcharge +4% Cess	30%+12% Surcharge +4% Cess	5%+12% Surcharge+4% Cess
	29.12%	34.94%	5.82%

Other than equity oriented scheme and IDF	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	25%+12% Surcharge+4% Cess
	29.12%	34.944%	29.12%

(Source: mutualfundssahihai.com⁷²)

1.15.3 Mutual Funds Capital Gains Taxation for FY 2019-2020

In the mutual fund industry, a capital gain indicates the difference between the ask rate and bid rate in their investment and difference of selling price and buying price after paying the brokerage charge shows the actual benefit to the potential investor in the mutual fund.

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	Tax rate	Income tax Slab rate of investor	

(Source: sbimf.com⁷³)

In long term capital gain, Rs. 1 lakh per annum is exempted from the investment of equity mutual funds and above this figure only came in the bracket of taxable income. For example, if Mr. X long-term capital gain in FY 2019-20 is Rs 1.7 lakh, only Rs. 70,000 will be taxable as LTCG.

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b. Securities Transaction Tax (STT)

A Securities Transaction Tax (STT) is applicable at the rate of 0.001% on equity oriented mutual funds at the time of redemption of units. An investor is not required to pay STT separately as it is deducted from the mutual fund returns.

1.1 Analysis of Mutual Fund Investments in Nov 2019 and Nov 2020

Net AUMs as on November 30, 2020, increased for both, debt funds and equity funds. The inflows for debt mutual funds nearly halved in November 2020 from the previous month while outflows from equity funds continue to

Plan shrewd piece of Mutual Fund Assets

Total Assets (Rs. Trillion) in November 2020
Table 1.13

Months- (COVID-19 effects)	Total Assets (Rs. Trillion)
Nov'19	26.94
Dec'19	27.26
Jan'20	28.19
Feb'20	28.29
Mar'20	24.71
April'20	23.53
May'20	24.28
June.20	26.07
July'20	27.28
Aug'20	27.28
Sept'20	27.74
Oct'20	28.34
Nov'20	29.83

(Source: crisil.com⁷⁴)

Scheme wise Composition of Assets

Table 1.14

Months	Debt oriented scheme (in %)	Equity oriented scheme (in %)	ETFs & FoFs (In %)	Liquid/Money market (in %)
Nov'19	28.4	42.5	6	22.7
Dec'19	28.8	42.3	6	22.5
Jan'20	28.6	42.0	7	22.8
Feb'20	29.0	42.1	7	22.0
Mar'20	31.7	39.7	7	21.8
April'20	31.0	38.8	7	23.3
May'20	29.3	38.9	7	24.9
June.20	28.5	39.4	7	25.0
July'20	30.1	39.3	7	23.1
Aug'20	30.3	40.1	8	21.6
Sept'20	31.0	40.0	8	20.9
Oct'20	32.1	39.6	8	20.1
Nov'20	32.8	39.7	8	19.3

(Source rbidocs.rbi.org.in⁷⁵)

The proportionate portion of value situated plans is currently 39.7% of the business resources in November 2020, down from 42.5% in November 2019. The proportionate portion of obligation arranged plans is 32.8% of industry resources in November 2020, up from 28.4% in November 2019

Financial backer Type-wise Composition of Mutual Fund Assets

Table 1.15

Months	Individuals (in %)	Institutions (in %)
Nov'19	53.7	46.3
Dec'19	53.4	46.6
Jan'20	52.7	47.3
Feb'20	53.7	47.3
Mar'20	52.2	47.8
April'20	52.1	47.9
May'20	50.7	49.3
June.20	50/5	49.5
July'20	52.9	47.1
Aug'20	51,5	48.5
Sept'20	52.0	48.0
Oct'20	51.7	48.3
Nov'20	51.5	48.5

(Source:sebi.gov.in⁷⁶)

Establishments incorporate homegrown and unfamiliar organizations and banks. HNIs are financial backers who contribute with a ticket size of Rs.2 lakhs or above.

1.15.4 Development in Assets

The worth of resources held by individual financial backers in common assets expanded from Rs.14.47 lakh cr in November 2019 to Rs. 15.37 lakh cr in November 2020, an expansion of 6.21%. The worth of Institutional resources has expanded from Rs.12.47 lakh cr in November 2019 to Rs.14.46 lakh cr in November 2020, an expansion of 15.97%.

Table 1.16

Months	Individuals(Rs. Cr.)	Institutions(Rs. Cr.)	Grand Total(Rs. Cr.)
Nov'19	14,47,198	12,47,087	26,94,385
Nov'20	15,37,124	14,46,296	29,83,420

(Institutions include domestic and foreign institutions and banks. Rs. Lakh cr is equivalent to Rs. Trillion)

(Source Association of Mutual Funds of India-AMFI⁷⁷)

CHAPTER 2- REVIEW OF LITERATURE

REVIEW OF LITERATURE

2.1 INTRODUCTION AND STRUCTURE

The main reason of the research to find out the correlation between the mutual funds attributes and its affects on the performance of mutual funds. In the previous chapter we have discussed the distinct features of in the field of invement in mutual funds with a lot of pro and cons of its risk facors and better returns and I will frame a hypothesis to find out the optimum result from the testing it.i am discussing a lot of things in this literature review which provides a silver line for the further research in the field of mutual funds industry in India.

The reason for the review is to decide if common asset credits influence shared reserve execution. The past part talked about the different quandaries in this field what's more, expressed the speculations to be tried in this review. This part presents the writing audit and shows that further exploration is required. In the writing audit, the disconnected discoveries of different scientists are introduced. Traits, for example, the board residency, costs, NAV , and size are analyzed and the unique positions are cited from the writing. Finally, this part sums up why further research is justified in this field.

Equity Mutual Funds are one of the important means of pooling risk capital from small investors. In order to encourage such investment culture, the Govt. of India in the year 1992 introduced the Equity Linked Savings Scheme (ELSS) mutual funds. Investments into the scheme qualify for tax benefit. The tax benefit comes with certain regulatory provisions. These regulatory provisions make the ELSS funds distinct from Diversified Equity Funds. Tax Saving Mutual Fund is one of the financial instruments in capital market, here the study is based upon the ELSS of public sector and private sector Mutual Funds, main purpose of the study is to compare the ELSS scheme of public sector and private sector and analyse the market timing abilities of fund managers of ELSS. A mutual fund is a financial intermediary that pools the savings of small investors for collective investment in a diversified portfolio of securities. Indian mutual fund industry is playing a significant role in the development of capital market and in the growth of Indian economy. Mutual fund

investment is quite popular among small investors for seeking tax incentives. Tax-saving mutual fund schemes or the equity-linked savings schemes (ELSS) offers tax deduction benefits to investors. Thus, this study is carried out to fulfill the objectives of the investors

2.1.1 AUDIT OF LITERATURE

A writing audit has been completed to assemble information and data about the past research work directed around here of study. The changes in the monetary area are pointed toward working on the working of banks and monetary foundations and reinforcing of the currency market and capital market. The monetary area changes attempted by the Govt. now and again are planned to eliminate obstacles to development and to upgrade straightforwardness, market proficiency and advance self-guideline. Measures were likewise acquainted with forestall market disappointment and fortify the system of financial backer assurance. The changes in the corporate protections market have changed the example of asset designation, and with the presentation of screen-based internet exchanging and quick track settlements the market infiltration has stretched out past its past geological limits. A few measures have been presented in the public authority protections market also, to fortify the market structure. These have advanced the development of an auxiliary market and energized the rise of a few creative items in the market which incorporate shared assets, prospects, choices and other imaginative items working in the Indian market.

2.1.2 STRATEGY OVER PANIC

In the current situation of the mutual funds industry, a lot of major investors pull out their money and keeping those money in safe side of the investment plan, but the expert believed that pull out money is not the right decision for the investors, they have to analyse the situation and make better portfolio for the investment in mutual funds. Pandemic condition is not forever and after some time in future situation will be normal and in favour of investors to overcome all their loss due to pandemic. AMFI believe that the six major debt funds having best credit quality and reasonable liquidity also and there are sufficient liquidity is available in the capital market for the potential

investors and investor have to keep their investment in diversified portfolio to minimize the risk factor involve in the mutual funds

2.1.3 RBI'S ASSURANCE

In the pandemic situation, the Reserve Bank of India (RBI) also support to the investors to minisie their risk factor in mutual funds market and provided support stressed mutual funds with a highly liquidity window by putting Rs. 50,000crore in the capital market and assured investors for the panic situation and monitor the each and every pro and cons in the mutual funds to against any adverse situation. and will maintain the liquidity position in the market Major mutual fund houses facing liquidity problem in this present situation of COVID-19 and RBI support funds will definitely give financial motivation and backbone to there industry to faces the challenge in the adverse market condition. Industry experts has given the suggestion to new investors to put their money in portfolio based scheme to minimize the risk factors and already invested are required to maintain portfolio and swit6ch over to better diversified portlier to sustain in the capital market.

2.2 MUTUAL FUND INVESTMENT: HOW BUDGET 2020 WILL IMPACT MUTUAL FUND INVESTORS

A Tax Deduction at Source (TDS)⁷⁸ at 10% on the dividend income above Rs 5000 before it is distributed to the investors has been introduced in the Union Budget 2020 , which shown the following implication on the mutual funds investment.

New tax regime: A positive sign for mutual fund investments

With effect from FY 20-21, a fresh tax system has introduced in the union budget in which an advantage has been given to taxpayers from a lower slab rates by forgoing a preponderance of tax-deduction benefits to lower their tax burden. Taxpayers will also have the alternative to carry on with the obtainable tax system. Taxpayers has a liberty in instruments and they are in the position to select the better fund to minimize the risk factors and they have an option to choose those funds, which are having high return without saving the tax.

In the existing tax regime, potential investor s has to invest in those tax saving fund only where they have to face the challenge of locking period, hidden charges, administrative expenses nd these factors increase the time period of return on Investment Avenue also.

Tax saver bound to invest on those kind of funds, in which high return is not hthere and sometimes these investment not associative d with their future planning of investment.

Now as per the new tax regime, taxpayers can invest in wealth creation funds based on their capability of risk factors in the capital market and achieve their financial long term goal to meet their future liabilities and these investment create a liquidity also for the future prospect of life.

2.3 COVID-19 Pandemic

Due to COVID 19 Pandemic⁷⁹, the investments in the mutual funds are very challenging and highly risky. The impact of pandemic is decline the phase of economy not only in mutual fund but also in the others sectors of invest and worldwide all the developed and developing country are facing the problem in their economy and GDP growth rate goes down to negative digits.

In the latest report of Franklin Templeton, six major debt mutual funds facing problem due to COVID-19 and their growth decline sharply. It decline the India's credit situation and all the Non- banking financial companies facing huge problem to maintain their liquidity position and major investors withdrawn their money from the mutual funds due to the fearfactors of adverse situation of capital market in India and rest of the world also. This pandemic situation put mutual funds industry in big trouble and people are not investing in open market due to high volatile markets under the wings of Pandemic. Worldwide.

Experts say that the six Franklin Templeton mutual funds schemes, which were closed were high-risk funds and other MF schemes do not face redemption risks. The Association of Mutual Funds of India (AMFI) assured investors that it was a one-off incident and that it will have no contagion effect on other credit-risk funds.

2.4 DEMOGRAPHIC FACTORS AFFECTING MUTUAL FUND INVESTMENT DECISIONS

Tadashi Endo. (2020)⁸⁰ from The Nikko Securities co. Ltd. Tokyo, Japan explained precisely in their book titled “The Indian Securities Market- A Guide for Foreign and Domestic Investors”. The Indian capital markets appear mysterious and puzzling to many foreign investors and even to domestic Indian investors. He explained that, there is no current information materials which comprehensively addresses investors’ concerns about this rapidly-growing market. He has tried to do is shed some light on practices and rules in the Indian market, including the problematic ones, so that foreign as well as Indian investors can look at market more rationally for their portfolio investments in Indian securities.

The Indian Financial system is regulated and supervised by two government agencies under the Ministry of Finance.

- (i) The Reserve bank of India, India’s Central bank, and
- (ii) The Securities Exchange Board of India, the Country’s capital market regulators

He explained that all parts of the system are interconnected with one another, and the jurisdictions of the central bank and the capital market regulator overlap in some fields of Indian financial activities. This book focuses on the capital markets of India under the later, and primarily covers the areas involving the regulator and the market participants, as highlighted in the chart.

The Indian capital markets change amazingly quickly. Indian people in the securities industry attribute the lack of comprehensive information materials about their market to the rapid and incessant changing of rules and regulations. Yet, he believes that investors, foreign and Indian alike, need something like a benchmark from which they can develop their knowledge and understanding of this market.

Pratyashi Tamuly and Samaresh Nandy (2020)⁸¹ explained in “investors behavior and mutual funds - a review on available literature” in International Journal of Management (IJM) Volume 11, Issue 10, October 2020, pp. 617-625, Article ID: IJM_11_10_058 expressed that The motivation behind the review is to do an investigation of the collection of writing in International friend survey diaries,

distributions, class and gathering procedures on Investors Behavior and Mutual assets. All out 30 examination papers are audited. This review put experiences into the conduct of the financial backer towards Mutual Fund Investment. From the audit of the accessible writing the paper gives an intensive investigation of a wide arrangement of studies that covers factors invigorating putting resources into common finances like speculation goals, length of venture, kinds of assets, nature of venture, stock return, market instability, financial backers opinions and then some, and components which are limiting the interest in Mutual Funds. Shared asset venture requires profundity information on various asset portfolios and plans.

In the cutting edge lifestyle, individuals have accepted to finance speculation as a method of investment funds giving high pace of profits. In any case, for speculation the financial backer needs to comprehend the diverse multidimensional components which can affect the progression of assets in the asset market. Financial backers need to explore the boundaries whereupon the buying choice can be depended on. Venture choices like financial backers hazard, anticipated returns, wellbeing and security, sorts of assets and so forth assumes a critical part in the conduct of the financial backers purchasing choice. The current review investigations the financial backers assessment and conduct in common asset venture. The review put stresses on the elements influencing the financial backer's conduct and furthermore the elements which go about as a restriction. The review uncovered that efficient method of money growth strategies is favored instead of contributing on arbitrary assets plans.

Taste is the methodical speculation made by the financial backers on an orderly premise every once in a while. The financial backers had the choice of various types of assets speculation like SBI Magnum, Reliance, ICICI, KOTAK, HDFC and so on Further the discoveries featured the components which limit the progression of assets from the financial backers. The most widely recognized variables remembered the absence of data of asset speculation for the piece of the financial backers, absence of information on reserves, absence of admittance to records of the organizations, low attention to the asset plans and so on In this manner it is the obligation of the portfolio directors to acquire the trust of the planned financial backers by upgrading the assets includes and giving data

2.5 FACTORS INFLUENCING INDIVIDUAL INVESTOR BEHAVIOR

Gormsen & Kojien (2020)⁸² have considered the use of information from the accumulated equity market and dividend futures to compute how investors' anticipation about economic progress beyond boundaries emerge as a reaction to the coronavirus outbreak and subsequent policy feedback. It has been observed by authors that change in investor perception drives the willingness to trade and take risks. This is mainly due to the poor performance of the stock market during the financial crisis. Other variables impacting investor behaviour include ability of investors to buy shares; tax implications; dividend expectations; risks involved; and capital gains.

CMA Panigrahi et. al (2020)⁸³ studied an analysis of ten equities linked saving scheme mutual funds. Using financial ratios and tools for analysis including the average return, coefficient of determination (R²), S.D, Beta, Sharpe ratio, Jensen alpha. They found a more attractive return in ELSS mutual funds and also takes a tax benefit of 1.5 lakh. S TRIPATHI, DRGP JAPEE (2020) researched fifteen equity mutual funds of different categories based on the market capitalization of companies. Used different financial ratios for the evaluation of funds. They found the majority of equity mutual funds are performing well, but when a sharp fall in NIFTY 50 in 2019 is affecting the return of the mutual fund.

Syed Kumail Abbas Rizvi, Nawazish Mirza, Bushra Naqvi and Birjees Rahat (2020)⁸⁴ survey the exhibition and venture styles of resource the board organizations in EU during the pandemic. According to the analyst, the asset directors have been floating from high danger choice to okay as far as size and speculation technique. Additionally, there has been a change from high danger to moderately less touchy areas and a progress of speculation from nations with higher to those with lower number of cases.

2.6 INDIVIDUAL INVESTOR PERCEPTION DURING THE FINANCIAL CRISIS

Forbes (2020)⁸⁵ inspects the effect of emergencies on various ages and expresses that twenty to thirty year olds saw three occasions: 9/11, during which practically every one of them were under the time of 18; the Great Recession (2008), when a couple of them were either starting their professions or about to finish their schooling; and presently, the COVID-19 episode. Twenty to thirty year olds are named 'jobbaggers' who worth reason driven work. Saving has never been high on their plan, yet with this pandemic, they will likely move their need to saving and soundness. Laborers with no conventional business contracts face work and pay weakness, and don't appreciate wellbeing or annuity benefits, consequently, they are bound to be adversely influenced by emergencies like the current one (Dev and Sengupta, 2020)⁸⁶ There has been an increment in joblessness due to diminished creation. Further, spending saw a critical ascent towards hospitalization, care, and treatment of COVID - 19 patients (OECD Interim Economic Assessment, 2 March 2020).

2.7 Effect of COVID-19 on Household Income

Family pay in India was impressively affected by the lockdown forced in reaction to the COVID-19 episode . Decrease in family pay expanded from around nine percent in late February to 45.7 percent in mid-April 2020 (statista.com, 2020)⁸⁵. E. Effect of COVID-19 on Financial Markets The abrupt accident in worldwide business sectors prompted a huge descending pattern in the Indian monetary market; with unfamiliar financial backers (FPIs) moving to dollar-upheld resources, the Indian stock market saw a fall. S&P BSE Sensex⁸⁶ which remained at 42273 focuses on 20 January 2020, dropped to 29894 focuses on 08 April 2020 (outlook.com)⁸⁹. Clever 50 additionally fell by 38% .

The financial exchange reflected financial backer (unfamiliar and homegrown)⁹⁰ feeling considering the pandemic. These advancements affected associations also. Organizations diminished activities, cutbacks expanded, also, worker compensation saw significant cuts during the period. Without a doubt, explicit areas, for example, neighborliness, the travel industry, and diversion were impressively affected and supplies of organizations in these areas fell by more than 40%. (BW Businessworld)⁹¹. Figures 3 and 4 show the unpredictability in Sensex furthermore, Nifty separately for the year May 2019 - June 2020⁹².

Albert (2020)⁹³ evaluated Coronavirus transmission by total cases, new cases, total passings, and new passings. The review thought about 6 most noticeably terrible hit nations (as indicated by the quantity of aggregate cases) day by day from March 1, 2020 to April 10, 2020. Results demonstrated that securities exchange returns had all the earmarks of being defenseless to the complete number of Coronavirus cases instead of the number of day by day passings, and to Coronavirus total pointers more than new ones.

E-gold is accepted to be a solid speculation choice in the midst of political and monetary unconventionality. It is viewed as a fence against swelling and cash corruption. It tends to acquire from broad improvement methods (Economic Times, June 25, 2020)⁹⁴. Gold is a resource that is by all accounts ready to fill in esteem even in the midst of unsure and troublesome occasions. With homegrown gold costs at high

record, examiners check out the vertical development going on for the yellow metal. During the Covid-19 episode, the BSE Sensex tumbled to 25,981 focuses in March 2020 from its pinnacle of 42,320 focuses. While BSE has since recuperated extensively, it is still shy of its past high. Gold, nonetheless, has outperformed any remaining resource classes, having risen very nearly 20% from the lows in Walk, and 50 percent over the most recent one year to contact a memorable high of Rs. 49,000 in the homegrown market (ET Markets)⁹⁵.

Prasada Rao et al. (2018)⁹⁶ explained about the latest digital technology involved in the mutual funds industry In their research explained that Blockchain technology is a digital network that provides a quick information with a lot transparency to the potential investors allows companies and people to maintain and transfer information instantly. While blockchain is widely associated with cryptocurrencies like Bitcoins, it is not the same as a crypto asset. It is the technology that enables the existence of cryptocurrency.

The technology is used in areas such as cryptocurrency mining hardware, technology operations, financial services and payment systems among others can assist the entire the stakeholders in the mutual funds industry with its intelligibility, devolution, tamper-resistance, answerability and solitude. With amplified lucidity, the self-confidence level in the middle of the investors will enlarge; as well it will show the way to augmented effectiveness of work, with minor paper-work through digitalization.

Daniel O'Keefe et al. (2016)⁹⁷ from KPMG surveyed fifteen hundred bank clients about their consciousness of and attention in digital prosperity management. Their unearthing was astonishing, consciousness concerning robo-advisory was 8 to 15 percent, but it was uniformly amazing that 51.8% of the investors were conscious of intelligent portfolio management, and 48% of the investors were aware of Personal Advisor Services. They moreover quoted an amplified swing in new and accessible investors towards robo-advisory, according to their research, robo-advisory could be worth \$2.2 trillion by the year 2020. The financial services business is customer-facing, competitive, distribution-sensitive and turnaround-time sensitive. If the company's target universe is increasingly going digital, it makes sense to adopt digital as the Backbone, rather than a Support.

This may give it a ‘first-mover advantage’⁹⁸, which can have bearing on its success in a market like India, which is still evolving in terms of sophisticated financial products. It also depends on the industry it is in. For example: it can be a support in insurance but it is a must in broking. But first-mover advantage need not always translate into brand stickiness. For that, digital methods⁹⁹ need to provide a great experience to clients across usability, content and access. Today, customers are not so fixated with brands, as much as with convenience and value. Firms also have to go to the next-level by creating features that compel repeat-visits and client stickiness.

Gangwar, M., and Singh, S. (2017)¹⁰⁰ has explained in “A Study on Investor Behavior for Investment in Mutual Funds in Allahabad” that Global Advanced Research Journal in Science, Engineering and Technology, 266-271.- Mutual Fund associations ought to teach financial backers to put resources into common assets through Internet and Mobile App when contrasted with actual means since it saves time, cash, paper work and intricacies. Shared asset venture following is additionally extremely simple by utilizing Internet and Mobile App. Direct connection with value can give exceptional yield yet additionally hazardous for little and medium pay bunch. In direct communication while putting resources into value market can be hazardous for designers. Shared assets give the straightforwardness to financial backers to get the backhanded openness of value market.

According to the exhibition of shared assets, it very well may be better choices when contrasted with bank reserve funds. In this examination, Primary information gathered through survey and auxiliary information gathered from different written works and from web. The outcomes show that the majority of the financial backers think about common assets yet not putting resources into shared asset because of absence of information in regards to interest in shared asset. This examination additionally explore financial backers disposition for shared assets interest in future for accomplishing venture objective. This exploration suggestion will be valuable for common asset working associations and government to start the mindfulness programs for financial backers, so they become more proficient and furthermore run preparing programs for shared assets guides for creating trust in common asset financial backers

Robert G. Hangstrom (2014)¹⁰¹ explained precisely in his book titled “The Warren Buffett way” that despite the avalanche of information available to today’s investor, many still struggle to earn a profit. But far above the market madness stands the insights and experience of Warren Buffett. In this latest edition of the Warren Buffett Way, Hangstrom puts the “Oracle of Omaha’s” investment philosophy in perspective, while revealing how you can incorporate this effective approach into your own endeavours. He explained that Buffett’s unique view on risk also drives his portfolio diversification strategy; here, too, his thinking is the polar opposite of modern portfolio theory. According to the theory, the primary benefit of a broadly diversified portfolio is to mitigate the price volatility of the individual stocks. But if one is unconcerned with short-term price volatility, as Buffett is, then you will see portfolio diversification in a different light. “Diversification serves as a protection against ignorance.” In any way, modern portfolio theory protects investors who have limited knowledge and understanding of how to value a business.

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K. Venkata Rami Reddy, Prof. A. Sreeram. (2020)¹⁰³ in his study, Public Sector Mutual Funds reported much better performance than Private Sector Mutual Funds, mainly due to better fund allocation, better management and efficient performance of portfolio managers.

Suchitra, M. K., & Prashanta, A. (2017)¹⁰⁴ in their study, the Indian Mutual Funds scenario covers the gross mobilisation, gross redemption and net inflows of mutual funds, the number of mutual funds and assets under management (AUM) over the study period and the performance assessment of

selected companies. There was also a year wise and sector wise analysis of mutual funds in India. Percentages, Averages, CAGR, and Standard Deviation are the instruments used for the analysis of the data. The assessment of performance was carried out by applying the Sharpe ratio. Compared to public sector mutual funds, the performance of the majority of private sector mutual funds is better. Thakuria, A., & Kashyap, S. (2017)¹⁰⁵ their paper seeks to highlight the comparative performance of mutual funds in the public and private sectors, as well as to shed light on the scope of the fund market's existing potential in the face of traditional investor risk aversion and the enormous increase in financial assets.

It has been noted that mutual funds in the private sector are taking more risks and have also been able to achieve higher returns on average. Although many of them have not been able to achieve better results over the long-term horizon, some of them have done well in risk-return analysis, such as the Reliance, Birla and Tata systems.

Bhagyasree, N., & Kishori, B. (2016)¹⁰⁶ 14 out of 30 mutual fund schemes in his research exceeded the benchmark return. The results also showed that some of the schemes has failed, these schemes were facing the problem of diversification. In the study, for all schemes which showed that returns greater than the risk-free rate were provided by funds, the Sharpe ratio was positive. The Jensen measure results showed that 19 of 30 schemes showed positive alpha, indicating superior performance of the scheme.

Daniel O'Keefe et al. (2016)¹⁰⁷ from KPMG surveyed fifteen hundred bank clients about their consciousness of and attention in digital prosperity management. Their unearthing was astonishing, consciousness concerning robo-advisory was 8 to 15 percent, but it was uniformly amazing that 51.8% of the investors were conscious of intelligent portfolio management, and 48% of the investors were aware of Personal Advisor Services. They moreover quoted an amplified swing in new and accessible investors towards robo-advisory, according to their research, robo-advisory could be worth \$2.2 trillion by the year 2020.

The financial services business is customer-facing, competitive, distribution-sensitive and turnaround-time sensitive. If the company's target universe is increasingly going digital, it makes sense to adopt digital as the Backbone, rather than a Support. This may give it a 'first-mover advantage', which can have bearing on its success in a market like India, which is still evolving in terms of sophisticated financial products. It also depends on the industry it is in. For example: it can be a support in insurance but it is a must in broking. But first-mover advantage need not always translate into brand stickiness. For that, digital methods need to provide a great experience to clients across usability, content and access.

Today, customers are not so fixated with brands, as much as with convenience and value. Firms also have to go to the next-level by creating features that compel repeat-visits and client stickiness. He advised in his research work that digitalisation of mutual funds industry and Blockchain technology provides a new online platform to the stakeholders in the mutual funds industry with the help of artificial intelligence transparency, decentralization, tamper-resistance, accountability and seclusion.. By adopting the latest digitalization technology, the confidence level of the potential investors increases with augmented eloquence as well it will show the way to augmented effectiveness of work, with minor paper-work through digitalization.

(Jana Hili, Desmond Pace and Simon Grima, 2016)¹⁰⁸, In their review they zeroed in on two significant things initially giving critical commitments to the writing and second was the down to earth point of view of the research. Needless to say that analysts and the scholarly world have focused their endeavors on assessing the conduct of asset directors domiciled basically in created and more productive financial matters, leaving the arising area exceptionally uncovered in this respect. (Rao, 2015), The review utilizes the compelled quadratic streamlining factor model over the period January 2011–April 2015.

To survey the powerful float in the style of an asset, a rolling-period openness style examination of the assets has been completed by utilizing a three year rolling-period window. The consequences of the review show that the asset chiefs display some degree of dynamic administration and a decent determination capability, This research review has been done for April 1997 to April 2012 (15 years) with the

Primary focal point of this examination was on to the presentation investigation of 45 value shared assets plans given by two public sectors Company and two private possession companies. For the exhibition examination CAPM model has been utilized focused on hazard return relationship. (BHATT, 2015)¹⁰⁹,

Mane, P. (2016)¹¹⁰ explained about the investors viewpoint while investing in the mutual funds for better returns along with capital appreciation in the longer period of time. In the article “A Study of Investors Perception towards Mutual Funds in the City of Aurangabad” explained that mutual funds investment is associated with risk and return factors and people are looking for better returns with minimum risk of the financial market and awareness of latest trend of mutual funds help the investor to minimize the risk factors.

Adhav, M. S. M., & Chauhan, P. M. (2015)¹¹¹ their study concluded that equity, debt and hybrid mutual funds performed better than their benchmarks during the years 2009-10 to 2013-14 and generated sustainable returns for investors in equity mutual funds compared to other schemes.

Dr. Hemendra Gupta (2015)¹¹² from this research of “Study on Performance of Sensex and evaluation of investing lump sum or regular investment in equity in risk and return for investors has shown that there is no substantial difference between Risk and Return but SIP is a very good way of investment. It is proved right that savings is equal to income deducted from expenses. The observation is to have a good income you should spend time in the market.

S.M. Adhav and P Chauhan (2015)¹¹³ evaluated the presentation of shared asset plans of chosen Indian organizations as far as hazard return relationship to think about the exhibition of common asset plans of chosen Indian organizations dependent on benchmark file and inferred that during the most recent long term the presentation of common asset of chosen Indian organizations is predominant.

S. Sharma et al. (2014)¹¹⁴ analyzed the presentation of different common asset plans dependent on benchmark list to draw out the plan is beating or failing to meet expectations the benchmark and presumed that as India has a creating economy,

pretty much every area is probably going to inside a gigantic development going ahead.

Sehdev R and Ranjan P (2014)¹¹⁵ in the article “A study on Investor’s perception towards mutual fund investment” from Scholars Journal of Economics, Business and Management explained that most of investor are believing in balanced funds and debt funds. Investors believed that mutual funds markets is volatile in nature and balanced funds provide a good balance between the equity and debt funds as per the risk appetite factors of the potential investors. are given the second preference to equity diversified and sector funds due the highly risky factors due to volatility of market fluctuation. Investors are invested in mutual funds as a investment option and looking for transparency in their return, maturity period in the long term investment plan and maintain liquidity in cashflow and watching the activity of Institutional Investor’s and getting information from Internet is the more reliable than any other media for future investment plan

Kandpal, V., & Kavidayal, P. C. (2014)¹¹⁶ compared to the Public Sector Mutual Funds in his study, the Private Sector Mutual Funds reported much better performance, primarily due to better fund allocation, better management and efficient performance of the portfolio manager. This outcome was achieved after calculating and comparing the Sharpe, Treynor, beta and Jensen ratios.

R. Kaur (2014)¹¹⁷ analyzed that the danger and return part among these common asset plans and the connection among NAV and market portfolio get back with the assistance of different measures like standard deviation, beta, R-square, Sharpe, Treynor, Fama's action and track down that open-finished obligation shared asset not performed better compared to the benchmark marker.

Iqbal N (2013)¹¹⁸ explained in his article title, “Market Penetration and Investment Pattern of Mutual Fund Industry” from International Journal of Advanced Research in Management and Social Sciences that in the urban area most of the potential investors are willing to invest in mutual funds for tax saving purpose as well as for capital appreciation but in the modern ways the mutual funds industries are moving towards the rural area also with a lot of new varieties of product

Sharma N. furthermore, Ravikumar R (2013)¹¹⁹ in an article "Examination of the Risk and Return relationship of Equity based Mutual Fund in India" from International Diary of Advancements in Research and Technology have referenced that their study examined the presentation of Equity based shared asset plans utilizing Capital Asset Pricing Model (CAPM). Over the long haul private and public area shared assets have performed well. Be that as it may, while looking at the exhibition over most recent 15 years it is tracked down that private area shared assets have beaten the Public Sector shared assets. The plans of private area shared assets not just performed better compared to those of public area common assets but on the other hand were found to be safer.

Divya K. (2012)¹²⁰ explained about the investment strategy of investment managers in the article "A Comparative study on evaluation of Selected Mutual Funds in India" published in International Journal of Marketing and Technology. She explained that investment managers, who performing below index benchmark should analysis himself regarding the investment strategy and assets allocations while investing in the different investments products for the capital appreciation in the future. Redigning process in the financial investment should be adopted by viewing the upward or downward market trend of the price of shares, so that people can get better return in their investment portfolio.

The evaluation of best performing manager on the basis of diversification of portfolio and time management should be awarded by variable fee funds and these fees should be linked with fund performance. SEBI, the regulator of Mutual funds in India, should allow the use of derivatives by fund managers, the major gain of using derivatives on a customary equity/debt portfolio is the prospect to tie the downside by hedging. To increase the efficiency and popularity of mutual funds, the regulator should the investment managers whose performance is below benchmark index should have a relook at their investment strategy and asset allocation. Investing styles should be redesigned according to up & down swings of the market to generate superior performance. To increase the efficiency and popularity of mutual funds, the regulator should set the standard criteria of benchmarks which will be helpful to asset management companies.

A review to assess and look at the presentation of value broadened plans relating to choose reserve houses, comparative with the market was finished by Prajapati and Patel (2012)¹²¹. Top 5 asset houses were chosen of which five supports plans were thought of. The review related to the period 2007 to 2011. The asset assessment depended on mean returns, standard deviation, beta, Sharpe proportion, Treynor proportion, Jensens alpha and Fama esteem. The concentrate on presumed that HDFC and Reliance shared assets have beaten the benchmark. ICICI and UTI finances had lower level of hazard contrasted with HDFC and Reliance reserves. HDFC reserves had the most elevated Sharpe proportion. Treynor proportion of HDFC and Reliance were better contrasted with ICICI, UTI and Birla Sun Life common assets.

Desiana and Isnurhadi (2012)¹²² explain the difference between the performance of conventional equity mutual funds and sharia equity mutual funds , when they had done conducted a research in the Indonesia stock exchange bu using the portfolio management methods using sharpe ratio ,Treynor ratio and Jenson measures regarding the performance of conventional equity mutual funds and sharia equity mutual funds and the financial performance of conventional equity mutual funds are better than sharia equity funds in term of investment avenue, performance and future results.

David H. Bailey and Marcos M. López de Prado (2012)¹²³ assess the likelihood that an expected Sharpe proportion surpasses a given limit in presence of non-ordinary returns.

Sharpe, W F (1975)¹²⁴ gives a significant measure to quantify the exhibition that changes the danger part. This action has been utilized by different researchers when there is instability and subsequently turns into a significant measure to use in our review.

Rao and Daita (2012)¹²⁵ examined the. factors affecting the interests in Mutual supports utilizing Economy, Industry and Company Approach by taking Reliance Capital resource Management Limited (RCAML) into thought. Relationship test, ADF Unit root test and Granger Causality test were utilized for the reason examination. The review uncovered that the entire shared asset industry is

overwhelmed by a couple of organizations and furthermore tracked down that the macroeconomic factors don't assume a huge part in affecting the common finances market.

Suminder Kaur Bawa and Smiti Brar (2011)¹²⁶ directed "Performance Evaluation of Income Schemes of Mutual Assets in India – A Public and Private Comparison". This review dissected from April 01, 2000 to March 31, 2010. Public area pay plans are more capricious while evaluating the profits. The review infers that private area drives the race.

2.8 IMPACTS OF SIZE (ASSET UNDER MANAGEMENT)

An endeavor was made in this segment to audit the previous examination done in the space of shared assets overall and its exhibition assessment specifically.

Hundal, B and Grover, D (2011)¹²⁷ have done perceptual investigation of Systematic Investment Plan (SIP). A contextual analysis of administration class. Efficient Investment Plan (SIP) is an arranged method of contributing, where you make consistent ventures presenting to a set timetable you make. Orderly contributing is a reliable discipline that makes it simple to contribute naturally. This paper is a work to inspect the familiarity with administration class individuals set out toward deliberate money growth strategies. Factor examination and group investigation have been utilized to concentrate on something very similar and begin that assistance classes have an eager methodology towards interest in these plans.

Jank S (2010)¹²⁸ has explain in his Paper on “Are there disadvantaged clieneles in mutual funds?” that past performance of the mutal funds are not positive correlation with the present or future expectation return eventhough investor following the past performance record of the particular sectors. This factors indiacates that the investors are willing to invest on those funds only which had given high return in past . The investors are immdeiatey withdrawn their money as soon as maket goes down or market is not performing well as per their expectation and this kind of investor behavior shows irrationality in the investment procedure. Sophisticated investors rationally chase past performance, because high past performance is a signal for managerial ability. No significant difference was found between investor composition of the worst performing funds and those with average performance.

N Geetha & M Ramesh – (2012)¹²⁹ has suggested the certain variable like open edn and close end scheme, Net assets value of per unit of mutual funds at the time of investment, , highly risk and return factors involed in the mutual funds due to open market operation. Flucatuation in the price of share on the basi of NAV dure to market volatility, different sources through which investor are getting information about their invement preference and some sourxes are base d on speculation in place of fundamental analysis and technical analysi to get better retuns by understanding the

systematic risk of the market volatility about the investment preference in the sector of mutual funds industry in India.

Shollapur and Kuchanur (2008)¹²⁹ in their review clarified in regards to the financial backer's discernment identifying with speculation plans presented by well known organizations. The review was led in north Karnataka. The review uncovered that the financial backers unequivocally concur on the discernments in the event of bank stores (80%) and disaster protection strategies (65%). Likewise a review led by the Associated Chambers of Commerce and Industry of India (Assocham) uncovers that the financial backers in future would favor shared assets when contrasted with putting resources into securities exchanges on account of more secure returns and lesser danger when contrasted with the immediate interest in the financial exchange. (The Hindu Online version, 2006).

Ande (2008)¹³⁰ attempted to decide the factors affecting the presentation of open finished value plans in India. The review was attempted for the period July 2004 to June 2007 for which the essential information was utilized. Information investigation was finished utilizing 6 focuses rating scale in which rating size of 1 addressed the most un-significant factor and 6 addressed the main factor influencing the exhibition of common asset plans. The examination recognized Risk the board, stock choice and timing, Existing returns of the plan and overabundance returns over the benchmark as the critical variables that affected the exhibition of open finished value plans.

Tyson E (2007)¹³¹ in his book "Mutual Funds for DUMMIES" (7th edition) has expalned about the practical techniques to invest in mutual funds as well as profitable techniques which gives better returns to the investors for a longer period of time.

With the help of diversified portfolio investors will get good return in a long term investment plan and the fund mnagers invest on the behalf of the investors to meet the financial goals of the investors.. Investors can spend their time doing the activities in life that they enjoy and are best at. Investment in mutual funds provides a better return and improve the social life of the investors also by meeting their long

term financial goals. This book suggests investors how to avoid mutual fund investing pitfalls and maximizing the return and getting probability of success. The financial objectives and individual investor situation play a vital role in the buying and selling decision of the investors.

Desigan et al. (2006)¹³² explain the attitude of women regarding the interment in mutual funds. Women are not much familiar with investment in mutual funds and looking for some alternative option for investments. He states that there is a lot of reasons like lack of knowledge of financial markets and its proper instruments, market volatility, risk factors in investment and uncertainty in return etc., and men are more confidence in taking risk in financial markets and invest regularly in comparison to women.

Jain (2005)¹³³ endeavored to analyze the speculation execution of common asset plans as far as hazard and return and furthermore made their correlation with the benchmark lists. The outcomes showed that the greater part of the plans failed to meet expectations the benchmark records upto the year 1997-98 (aside from 1994-95) however post that period a large portion of them beat the CNX clever and BSE Sensex Index according to the Sharpe and Treynor measures.

Gremillion L (2005)¹³⁴ in his book “Mutual Fund Industry Handbook – A Comprehensive Guide for Investment Professionals” explained in details about the working of mutual funds and explained about the different kinds of challenges faced by the various professional due to highly volatile markets and risk and returns are somehow positive correlated with each others. In this book a comprehensive knowledge and information is given for the better investment in mutual funds industry and this kind of information will help a lot to those person who are willing to investment in the mutual funds for a good return in a longer period of time.

Pratap, S. & Gautam, K. (2020). (2020)¹³⁵ study drew out those values had a decent possibility of appreciation in future. The concentrate so the view, financial backers ought to effectively pass judgment on their speculation objective and hazard longing prior to picking plans, differentiated value reserves are normally more secure than undiversified and file reserves are the best when market developments are

unsure. The review shows Systematic Withdrawal Plan with development choice is more appropriate for financial backers needing customary money inflows.

Sindhu, K. P., & Rajitha Kumar, S. (2013).¹³⁶ Studied on Factors Influencing the Mutual Fund Scheme Selection by Retail Investors have communicated that common asset is a retail item intended to target little financial backers, salaried individuals and other people who are not threatened by the secrets of securities exchange in any case, in any case, as to receive the rewards of financial exchange contributing. At the retail level, financial backers are special and are an exceptionally heterogeneous gathering. Henceforth, their asset/conspire determination likewise generally contrasts Martin P. furthermore,

McCann B. (2005)¹³⁷ in their book named "The Investor's Guide to Devotion Funds – Winning Strategies for Mutual Fund Investing" have pleasantly directed financial backers in regards to issues related with common asset contributing. Like some other speculation, it is fundamental to foster a methodology for choosing which assets to purchase and sell – and when. These choices ought not be left to the feelings or to risk The discussion doesn't end with the executives residency. This part analyzes the impacts of common asset size on shared asset execution.

This passage from Gregoriou and Fabrice's (2001)¹³⁸ study epitomizes the reasoning of size influencing execution: "Studies researching this relationship among common assets have yielded blended ends". Among scholastics, reserve size is often cited as a hindrance to execution upgrade, particularly when a generous measure of money is 42 persistently infused into the asset" (Gregoriou and Fabrice, 2001).

There are two focuses to note from this assertion:

- (1) The connection between common asset size and execution is blended;
- (2) One can surmise from Gregoriou and Fabrice's (2001) articulation over that bigger shared assets struggle finding advantageous speculation openings as the inflow of resources increments.

Despite the fact that they don't look at the whole scope of common assets (they explicitly analyzed just flexible investments in the review), they reach the inference

that asset size has no bearing on presentation. In any case, Gregoriou and Fabrice (2001) accept that the connection between the two isn't straight, and they present the idea of an ideally estimated portfolio. They recommend that little common assets can't take care of the expenses of gaining and exchanging data, so the net re-visitations of a financial backer on this little common asset may just be negligible. Then again, very huge common assets, for example, George Soros' Quantum store, additionally experience horrible showing on account of the executives issues because of size. Besides, the contention for diseconomies of scale, where the executives has a more troublesome time coordinating and carrying out venture procedure, is acknowledged with bigger assets (Gregoriou and Fabrice, 2001).

The brings about their review express that shared asset size doesn't impact execution. Nonetheless, they propose that the relationship could be negative and measurably huge if the certainty level were brought down (Gregoriou and Fabrice, 2001). In addition, whenever brought down, this would add to the writing proposing that bigger shared reserves display the executive's issues, for example, not having the option to sell out of or get tied up with various positions rapidly.

In this book they put some light on the allocation of different sectors of the global economy whenever investors are looking for a better return against their investment and this financial strategy will give a return more than the average market return in their investment. In association with this approach of inherent diversification in mutual funds investment , it become one of the powerful investment vehicle which provides a better return in the securities market and individual investors can confidentially traded in this market. By combining this approach with the safety provided by mutual funds' inherent diversification, mutual funds become an investment vehicle with all the advantages of trading individual securities and none of the disadvantages.

Like any other investment, it is essential to develop a strategy for selecting which funds to buy and sell – and when. These decisions should not be left to the emotions or to chance. Stock market forecasting can be an exercise in futility, because unpredictable political developments at home or abroad can overwhelm the normal functioning of the economy. Furthermore, the future must be clouded in uncertainty,

or it would already be reflected in market prices. There will always be plausible scenarios for both the bulls and the bears. The bears have pointed to the record duration of the bull market which began in 1982, but the boom-and-bust cycles of the past may be extinct. The United States economy is now dominated by service industries rather than manufacturing, so inventory problems—a major driving force in the business cycle—have much less effect on the economy as a whole. Better inventory management techniques, including the use of computers and "just-in-time" strategies, have also helped. The bulls also point to the continuing globalization of the economy. This provides diversification that reduces the effects of domestic business cycles.

Fidelity is a broadly diversified financial services company, and space does not permit in-depth coverage of all its products and services. Our goal is to deal comprehensively with matters of interest to mutual fund investors. Statistical data in this book are current as of December 31, 1988. Information on Fidelity products and services has been updated through March 15, 1989. As researchers into mutual fund investment strategies, we have first-hand experience of what Fidelity investors do right, and what they do wrong. By sharing these insights with you, we hope to put you on the path to financial security. In writing this book we assumed that many investors share our concerns: How do we make a substantial amount of money without exposing ourselves to unreasonable risk? How can we devise a decisionmaking approach that eliminates emotional reaction to random events in the marketplace? How do we construct a system that is easy to operate and absolutely clear in terms of what to do? Finally, how do we determine whether the system will continue to work in the future?

Gupta, A. K., & Govindarajan, V. (1986)¹³⁸ assessed execution of shared asset industry by isolating in to a few sub gatherings by their expansive venture objectives and targets for the period 1962-1971. The outcomes uncovered that presentation models prompted indistinguishable outcomes. The assets having higher unpredictability shown prevalent execution than others. It has additionally shown that all asset types beat the market regardless of decision of market file and execution measure.

Fama, E.F. (1972)¹⁴⁰ recommended elective techniques for assessing venture execution with fairly better breakdowns of execution on the stock choice, market timing, expansion and hazard bearing. It conceived component for isolating piece of a noticed speculation return because of supervisor's capacity to get the best protections at a given degree of hazard (selectivity) from the part that is because of the expectation of general market value developments (timing).

Jensen (1968)¹⁴¹ fostered a composite portfolio execution assessment strategy for assessing the prescient capacity of asset troughs through effective expectation of safety costs. The review presumed that store directors in general couldn't foresee security costs alright to beat a purchase market and hold strategy .It discovered little proof that singular asset had the option to show improvement over that normal from an irregular possibility.

Treynor and Mazuy (1966)¹⁴² contrived a trial of capacity of the speculation administrators to expect market developments. The review utilized the speculation execution results of 57 venture chiefs to discover proof of market timing capacities and tracked down no measurable proof that the speculation administrators of any of the example store had effectively outsmarted the market. The review displayed that the venture supervisors had no capacity to outsmart the market overall however they could recognize under valued protections.

2.9 WRITING REVIEW AND CHALLENGES IN FRONT OF MUTUAL FUND INDUSTRY

The writing accessible¹⁴³ is generally as articles and sections. The examination papers on digitization and banking are accessible yet with regards to digitization and MF, nothing concrete is accessible. To distinguish the variable for concentrate on the scientists have utilized the foundation of Quora and technique for centered gathering. Factors and ensuing inquiries in the survey for 3 partners depend on the sources of info assembled as above.

The survey of writing has brought following issues or difficulties looked by the MF business in digitized world.

1) The pace of development of MF industry isn't adequately adequate to guarantee adequate pie from investible excess. Conventional speculations actually lead the count. The MF showcasing blend should be worked out to take the flood from current 3% of investible family excess.

2) Majority of interest in MF is coming from top 5 urban communities and non-retail financial backers. The entrance in level 1 and 2 urban communities is a test and country India is a far off dream.

3) Only hardly any MF items are famous.

In this way the financial backer investment is slanted towards not many asset classifications as it were. The bleeding edge deals people are not exceptionally clear with regards to the best attack of item and financial backer requirements. The greater part of the MF items are wrongly sold.

4) Distribution directs in the current structure are ruling the market. Other creative channels are not accessible even after digitization. Portable based stages like CAMS are not yet well known.

5) Most of the financial backers avoid shared assets believing it to be like value. Making mindfulness about minimal expense obligation assets for first time financial backers can be an answer.

6) The merchants are compensated for amount of AUM produced and not on the Quality of exhortation. A computerized stage can be utilized to assemble the reactions on the quality part of the warning (Source: citigroup.com¹⁴³)

2.10 DIGITISATION: AN UNQUESTIONABLE REQUIREMENT FOR MORE PROFOUND ENTRENCHMENT OF MUTUAL FUNDS

It has been a long time since we started tasks in common assets and we have made considerable progress in becoming one of the biggest monetary administrations players in India, persevering through a few market high points and low points all the while. Trust isn't only our establishment, yet additionally our money, and has helped us arrive at where we stand today.

As of now, the business sectors are confronting difficulties both on the homegrown and the worldwide front. To be specific, rising pressures welcomed on by the US-China exchange struggle, constriction in worldwide exchange volume and a more slow worldwide just as Indian development rate. This monetary situation combined with the host of changes that SEBI had presented for the common asset Industry has welcomed on an undeniable uniqueness among development and development potential for the Industry. Procuring new customers and expanding wallet share from the current ones should be the main goal for the MF business. Heaps of drives have been taken, by SEBI, AMFI yet additionally by individual organizations to satisfy this plan.

Given the tight edge system that all partners work in, the attention should be on building dispersion (empowering and showing the business freedoms to existing huge potential arrangements like PSU Banks, making new ARN holders while teaming up with legislatures through expertise improvement programs and making work. Computerized interface is the future which should be embraced by all current partners and ought to turn into a fundamental piece of the excursion for anybody participating in at this point.

Since common assets are regularly sold and not purchased, wholesalers assume a vital part in channelizing cash Over the years, the merchants and IFAs have assumed a significant part in the multiplication of shared asset plans as an ideal speculation road among primarily, the retail financial backers, which thusly has

brought about a huge commitment by them in the general AUM gathered by the common asset industry.

While the expanding dispersion power is a solid sign, the business needs to do significantly more to take into account India's tremendous populace, particularly to contact individuals who are not carefully adroit. We can gain from our nearby partners in the monetary administrations industry (Life Insurance), the manner in which they have expanded conveyance impressions across the hinterland and utilized the current Banking system/foundation through bancassurance channel. One of the biggest public life coverage organizations has finished 63 years of tasks in India in 2018 and has roughly 11 lakhs specialists. Coming to even half of this enormous circulation power can go far in growing the span of shared assets among families.

Innovation is problematic and it is emphatically affecting the shared asset industry. It has colossal advantages, essentially for the financial backers, alongside the AMCs and the merchants. Digitisation and the development of dissemination are the place where the upper hand will be soon of the common asset industry. Numerous merchants are accepting these progressions and utilizing them to develop their business as well. Truth be told, with web availability working on in B30 towns, use of advanced interfaces has improved altogether. The subsequent stage is teach the customers about the accommodation of utilizing computerized medium and assisting them with encountering it.

The innovative advancements are relied upon to give expanded productivity and a 'client joy' factor among our financial backers while expanding the effectiveness. This will, I accept go to be a surprisingly beneficial turn of events for us as the AMC, and the merchants in making us move towards being a more client driven industry.

(Source: mutualfund.adityabirlacapital¹⁴⁴)

2.11 DIGITAL TRANSFORMATION THE INDIAN MUTUAL FUNDS INDUSTRY

Empowering complete first of its sort public monetary dissemination foundation for financial backers, IFAs and Fund Houses to further develop retail infiltration

- (i) Over 20,000 simultaneous associations across 25,000 Distributors, 50,000 Investors, 45 Fund Houses, numerous retail location focuses, every significant bank, RTAs and KYC focuses
- (ii) Improved quality and decreased expense of execution through a web empowered front end 'request steering instrument' to oversee customer request stream
- (iii) Faster execution through layouts auto-filled by recovering recorded information
- (iv) End-to-end network between financial backers, wholesalers and Transfer Agents

The customer is the Mutual Fund Industry's "Shared Services" drive framed by the Asset Management Companies (AMCs) of SEBI (Securities and Exchange Board of India, the controller for protections markets in India) enlisted Mutual Funds under the aegis of AMFI (Association of Mutual Funds of India, an industry norms association in India in the common subsidizes area), with a goal of financial backer strengthening, wholesaler comfort, solidification of data to different offices, functional proficiency for RTAs and advantages to AMCs, subsequently helping all partners in the business.

The customer didn't have a current framework which could empower financial backers to exchange across shared asset portfolios presented by different asset houses in the country. The cycle utilized by financial backers to put resources into common asset plans included a great deal of desk work and excess manual cycles, which made it mistake inclined, awkward and complex to oversee.

Through the MFU System (controlled by Intellect Fund Distribution), the customer understood its vision of connecting with the whole contributing client base

through a solitary execution. MFU System gave critical advantages to all partners in the Mutual Fund Industry (financial backers, MF wholesalers/RIAs and Fund Houses/AMCs). AMCs could adequately use MFU system's POS (Point of Service) organization to stretch out their range and presence to already inaccessible areas. MFU framework execution empowered the customer, to wipe out trickeries present in the common asset speculation system and limited inborn
(Source: intellectdesign.com¹⁴⁵)

2.12 ARE INVESTORS SHUNNING AWAY FROM TRANSACTING IN MUTUAL FUNDS THE DIGITAL WAY AFTER COVID-19 UNLOCKING?

Before long the COVID-19 lockdown began somewhat recently of March 2020, the difficulty started for common assets on different grounds- - diminishing actual exchanges, undoing of Systematic Investment Plans (SIPs) by financial backers (because of employment misfortunes, pay cuts, as well as conceded installments), reclamation tension, and hazard avoidance set in as vulnerability lingered. The Assets Under Management (AUM) of the Indian shared asset industry, thus, fell 5% among March and April (regardless of business sectors recuperating from the March lows). All things considered, with fast and productive utilization of innovation, common asset houses were in the long run fruitful in earning AUM. During the time of COVID-19 lockdowns, more than 90% of the gradual business came through computerized implies.

Presently as the COVID-19 limitations have facilitated, the financial movement is acquiring energy in front of the bubbly season. With it, financial backer conduct has additionally gone through certain changes.

During the quarter of July to September 2020, the portion of actual shared asset exchanges, for example through the paper mode, recuperated in the wake of encountering a decay during Q1FY21. Two asset houses that record for roughly 20% of the Indian shared asset industry's absolute AUM saw a normal fall of 6.7% in computerized exchanges during Q2FY21 when contrasted with that in Q1FY21. The traditional strategies are maybe indeed the favored mode to execute in common assets as India keeps on opening from the COVID-19 complete lockdown.

As of not long ago, the paperless exchange was a wonder confined distinctly to a portion of the huge asset houses which had put intensely in related advances. What's more, leaving them to the side, the business normal of computerized exchanges in the all out exchanges has been under 15%, as per a CRISIL report. Until three years prior, the circumstance was even desperate with simply 0.5% exchanges occurring through the advanced course.

(Picture source: freepik.com; photograph politeness pressfoto¹⁴⁶)

2.13 EVENTUAL FATE OF ADVANCED EXCHANGES IN COMMON ASSETS IN INDIA

The developing prevalence of monetary resources post demonetisation and rollout of 4G (and soon 5G in the coming months)¹⁴⁷ will give a critical push to India's computerized economy. The Covid pandemic maybe has shown us a better approach forever and innovation is assuming a crucial part.

The BSE StAR MF - a program based shared asset conveyance stage that permits buys and reclamations of common assets - has seen a 6.7% ascent month-on-month in the exchange volume in October 2020. Against 71.93 lakh exchanges in September, the BSE StAR worked with 76.74 lakh exchanges in October adding up to Rs 22,828 crore.

Aside from that, it selected 2.94 lakh new SIPs worth Rs 74.5 crore in October. The stage so far during FY21 has dealt with 4.76 crore exchanges (against 5.75 crore signed in FY20) and presently holds the SIP book of 55.68 lakh accounts. Like StAR MF, other advanced stages may have additionally acquired ubiquity.

2.14 FINANCIAL BACKER WILL CONDUCT CHANGE IN THE POST-PANDEMIC WORLD

I don't think the rush of digitalization in the shared asset industry will retreat at any point in the near future. Indeed, first-time financial backers who enlisted through computerized modes would adhere to utilizing advanced stages to do exchanges even later on. Of the old shared asset financial backers who tried the computerized stages interestingly during the pandemic have encountered the simplicity of doing exchanges and keeping up with records. They may likewise need to keep utilizing the computerized implies if their experience has been agreeable up until now.

That being said, a specific part of financial backers, show up somewhat reluctant to utilize advanced modes to execute in shared assets, basically in view of the ascent in internet based cheats. As indicated by the information delivered by the Reserve Bank of India (RBI) in September 2020, instances of card and web banking fakes have expanded by 43.5% in FY20 when contrasted with a year prior. Such cases might debilitate beginner financial backers, particularly the newbies from the non-metro urban areas to utilize advanced stages.

How might financial backers utilize computerized means to put resources into shared assets?

Simply contributing through advanced mode isn't sufficient as it may not offer you anything over the comfort in the event that you don't pick a stage shrewdly. One ought to preferably utilize advanced stages to put resources into direct plans of common assets. On the off chance that you haven't knew about them previously, direct plans permit you to put straightforwardly in different plans presented by the shared assets without including any representative or a specialist.

Ordinarily, the cost proportions of direct plans are far lower than those of customary plans. Over the long haul, cash that you save through the distinction in the cost proportions of direct plans and standard plans can have a significant effect in returns you produce on your speculations. Here's the manner by which you can choose the direct common asset stage astutely The fintech blast has led to numerous new

players having no related knowledge in the field of common asset contributing, dispatching computerized administrations for shared asset financial backers. Completing the exchange is the last connection of putting resources into shared assets. The nature of counsel can't be sabotaged, so as the expenses related with contributing.

We ought to unmistakably recognize your necessities. For instance, what kind of administrations you are searching for - - do you simply require a computerized stage to execute or you would require intensive examination supported suggestions too. While you can get stages that offer you exchange benefits free of charge however no impartial counsel; they probably won't fill your need. It is significant that you select a stage that offers you fair-minded common asset research administrations and in addition to a computerized exchange stage.

To assemble a common asset arrangement of effectively oversaw assets; here are a few rules...

- (i) Select appropriate and commendable shared assets plans with a reliable presentation track (in light of a large group of quantitative and subjective boundaries)
- (ii) Give unique accentuation on alpha (for example outperformance against the benchmark list), the danger reward proportions, and execution across market cycles
- (iii) Each asset ought to have seen something like 3 market cycles and showed the capacity to create alpha over the market record
- (iv) Make sure the chose plans are overseen by experienced and able asset directors and have a place with store houses that have obvious speculation frameworks and cycles set up
- (v) Not multiple plans in your portfolio ought to be overseen by a similar asset supervisor
- (vi) Not multiple plans from a similar asset house are or will be remembered for the portfolio.
- (vii) Diversify across speculation style and asset the board
- (viii) Ensure each asset in the portfolio ought to be consistent with its venture style and order

- (ix) Have a speculation time skyline of no less than 5 years when putting resources into value situated plans

Little asset houses gain portion of the overall industry, because of digitalization Driving asset houses, for example, ICICI MF, Nippon India, and UTI MF are gradually losing their portion of the overall industry with more modest asset houses acquiring strength and section of new players. In most recent four years, fair sized common assets, for example, Mirae, Edelweiss, Axis and Kotak have increased the stepping stool as far as portion of the overall industry with sharp expansion in normal AUM. Authorities on the matter agree, little common assets are exploiting becoming advanced spread, as they are currently ready to impart about their items all the more successfully.

The gainers For example, Mirae positioning has expanded to 11 from 24 with its normal resources under administration (AUM) expanding multi-overlap in the quarter finished last month to ₹77,674 crore against ₹9,201 crore in June quarter, 2017. Its piece of the pie was up 0.47 percent to 2.34 percent. Essentially, that of Edelweiss MF was up at ₹54,406 crore (₹7,272 crore) and its positioning leaped to 15 from 26. Its piece of the pie leaped to 1.64 percent from 0.37 percent.

The competition to turn into the vanguard of India's financial exchange is on In opposite, ICICI MF slipped two positions to third spot even as its AUM bounced 60% to ₹4.16 lakh crore (₹2.60 lakh crore) while Nippon India MF rank was down three spots to 6 from three with normal AUM expanded to ₹2.40 lakh crore (₹2.23 lakh crore). Portion of the overall industry of both ICICI MF and Nippon India MF were down to 12.56 percent and 7.25 percent from 13.33 percent and 11.42 percent, separately. Strangely, SBI MF held its numero uno position as far as portion of the overall industry.

(Source : thehindubusinessline.com¹⁴⁸)

2.14 TRANSFORMATION ENGAGING THE INDIAN MUTUAL FUND INDUSTRY

Effect of innovation on common assets and monetary markets Artificial Intelligence has been into the standard information, as it is continually standing out as truly newsworthy, each time it's a novel, new thing and exceptional. Stephen Hawking's admonition on the Artificial Intelligence can't be overlooked, while there are still individuals and government who can't quit chipping away at Artificial Intelligence. Simulated intelligence has effectively made its space in the business, with its relevance into numerous angles. It has helped organization to reduce error and increment productivity. It is now utilized in ECM (Enterprise Content Management) by shared asset organizations. Man-made intelligence does the work of handling enormous information, masterminding, grouping, checking for blunder, and in this manner lessening the repetition and duplication of information

PCs is known for investigating and handling colossal measure of information inside part of seconds, joined with knowledge, keen dissecting and understanding of information could assist with subsidizing supervisors to do the recorded examination of the stocks. With more noteworthy knowledge AI is used for making security examination and showing up at an ideal portfolio with hazard reward proportion. It can likewise be utilized to customize the necessities of the financial backers and propose the most ideal venture choices. Here Robo-Advisors are being created, which can work dependent on specific calculations to comprehend individual clients, its necessities, hazard boundaries, and so on and afterward can handle the information to recommend right items for the financial backers. Since it will be computerized, odds of incorrectness are limited

Administrative contemplations in regards to utilization of man-made brainpower and machine learning Regulating computerized reasoning, is additionally named as management. As AI and AI is now embraced by financial institutions in certain spaces like robotized client communications, hazard evaluation, credit hazard investigation, advance capital, distinguish exchanging openings and improving exchanging execution. Guidelines is needed in regions where there is an outsider reliance, for instance on the off chance that an AI, created by outsider, causes

misfortune, who is to be accused? The outsider, or the specialist organization or the financial backer. Administrative specialists worldwide have forced stricter and different guidelines on resource the board organizations.

The proposed measures to expand guidelines on the monetary administrations sector:

- i. Moreregulations on detailing standards, and furthermore put more weight on resource the executives organizations to debilitate financial backers to recover assets at upset circumstance in monetary market.
- ii. ii. Just like banks embrace pressure testing all the more regularly, the monetary administrations areas ought to likewise oftentimes stretch testing of the relative multitude of assets they manage.
- iii. iii. Low capacity to bear administrative breaks by resource the executives organizations, prompting expanded fines and expanded expense of guidelines. This could prompt expanded weight of guideline on asset the executives organizations and will altogether affect the little players.
- iv. iv. Minimum capabilities for speculation experts, so the base ability level ought to be accomplished to work in a venture warning firms just as asset the board house.
- v. Complete restriction on commissions on special of common assets to ensure consumers.
- vi. Increased detailing to carry more straightforwardness into the framework.

(Source : capgemini.com ¹⁴⁹)

CHAPTER III: RESEARCH METHODOLOGY

RESEARCH METHODOLOGY

3.1 RESEARCH FRAMEWORK FOR MUTUAL FUND INVESTORS

Research Methodology¹⁵⁰ is a systematic or step by step procedure to carry out the research process. Varieties of research methods like qualitative and quantitative techniques are used to achieve research objectives. It can also be defined as the way to find out solution to a research problem.

This research paper examines the pre covid-19 phase and post covid-19 phase of a multi-phase efforts to find out the current role of digitization , information technology and artificial intelligence to facilitated more potential investors of the mutual funds industry in India. In term of primary source of data , a questionnaire was filled up to get the investment behavior of the people in mutual funds industry and a this survey methods covers a wide variety of interment prospective of small retail investors as well as High net woth retail\ (HNI) investors also.

The worldwide pandemic situation of COVID-19 and national level lockdown in India impact the life of human being in the adverse condititom and people aare struggling to meet their financial obligation. Investors are more curious about their lives, jobs, savings and investments duing the padamic. In this paper we have examine the impact of COVID-19 in mutual fund industry in India from December 2016 to March 2021 and taken the data realted to growth mutual funds and ELSS mutual funds for better understanding the invespment patters of the investors and compare between growth and ELSS mutual funds in pre covid-19 period and post covid-19 period till march 2021. Out of the population, a sample of 30 equity-oriented direct growth funds and 30 Tax Saving mutual funds (ELSS) have been taken for this research paper to evaluate the performance of both funds and major finding in the investment of these funds with the sector- wise differences. According to the statistical data analysis, majority of the mutual funds had plugged during this pandemic situation, and some of the major funds rebounded in this period.

Research & methodology

Nature of Research	Exploratory in nature
Nature of Data	Primary Data and Secondary Data
Source of Data	Primary Data Both Online & Offline Survey Through Questionnaire Developed Secondary Data Internet, Magazines, Newspaper, Books etc
Sample Size	500 Respondents data were collected Data Sorted and Verified for Validity and finally 395 Data were shortlisted for sample research. (ELSS funds and Growth funds are selected on the basis of performance in the financial market using judgemental sampling methods)
Period of study	2013-2014 to 2020-2021
Objectives	Statistical Tools
Tests Applied	Descriptive Statistics, Co-efficient of Variation, Standard deviation, Co-relation between variables, Sharpe's Ratio, Beta Test, Treynor Ratio, Welch t-Test, Mann U Whitney Test, Kruskal Wallis Test, Wilcoxon Matched Pair Sign Rank Test, 1 Sample Chi Square Test, 1-way ANOVA, Friedman's 2 way ANOVA, Kolmogorov Smirnov Test, Jensen Alpha Test, Sornito Ratio, Expenses Ratio, CAGR of Funds.
Tools used for Analysis	SPSS, MS Excell, MS-Office

Research Studies in the field of mutual funds limit themselves to some most important and burning topics like investor behavior related to risk and return factors involved in the investment in the mutual funds, correlation between the performance of mutual funds and movement of the stock price in the open market, Marketing strategy related

to advertising expenditure adopted by the investment company due to which money moves from buyers to sellers as well as from one mutual funds to another. The research paper emulated about the optimum sales of mutual funds in India as a proportion of its own alternative attributes

3.2 RESEARCH OBJECTIVE

There are two features in a venture's assessment. The first is the venture's presentation examination with respect to the danger attempted and return gave. The other is about the discernment and inclination of the financial backer towards the speculation. The destinations of this review depend on both these features of ELSS supports which are Investment Performance and Investor Perception. Objectives of the study

The objectives of the paper are given below:

- (i) To examine the danger reward view of individual retail financial backers towards Equity Linked Savings Scheme common assets as looked at Growth shared assets plans
- (ii) To dissect the financial backer's discernment and inclination towards Equity Linked Savings Scheme shared assets when contrasted with Growth common finances plans
- (iii) To analyze the investment performance of Equity Linked Savings Scheme mutual funds plans with Growth mutual funds plans.
- (iv) To analyze the advantages and disadvantages of investing in growth mutual funds Schemes and Tax-Saving mutual funds (ELSS).

The main purpose of the research of the study is to find out whether mutual fund attributes affect the performance of growth and ELSS mutual attributes such as past performance of mutual fund before and after COVID-19 pandemic in India, net assets values of per units of assets, assets under management, brand name of the company in the securities market, customers satisfaction regarding the services provided by the investment companies, kinds of service quality provided to the investors, perfect time duration of services are examined.

In the era of digitalization of mutual funds industries , information technology and online application widow , there are a lot of factors has stated to play a vital substitutes in the various types and the quality of new online investment opportunities to the potential customers. This is an up gradation in information technology through which the desired product and better services are bought and consume by the buyers for maximum utilization.

The most important query in this research study is whether mutual fund attributes really influence performance and sales of mutual fund. Since there are many mutual fund attributes, it is difficult to make a general statement that these mutual fund attributes unequivocally do or do not affect mutual fund performance.

3.3 NULL HYPOTHESIS FORMATION

Hypotheses of the Study

The Hypotheses Testing for the pertinent study of shared assets is as per the following:

H01 = There is no critical distinction in the normal Sharpe Ratio of Growth Mutual Funds and ELSS mutual reserve

H1 = There is a critical distinction in the normal Sharpe Ratio of Diversified Growth Equity assets and ELSS reserves

H02 = There is no critical financial backer's view of hazard in the event of Growth Mutual Funds and ELSS common asset

H2 = There is critical financial backer's view of hazard in the event of Growth Mutual Funds and ELSS common asset

H03 = There is no critical financial backer's view of expected pace of return in the event of Growth Mutual Funds and ELSS common asset

H3 = There is significant investor's perception of expected rate of return in case of Growth Mutual Funds and ELSS mutual fund

3.4 SURVEY SAMPLING METHODS

Sampling method refers to the technique¹⁵¹ that observations are selected from a population to be in the sample for a sample survey.

3.4.1 Population Parameter vs. Sample Statistic

The motive for conducting a sample survey is to estimate the value of some attribute of a population.

- Population parameter. A population parameter is the true value of a population
- Sample statistic. A sample statistic is an estimate, based on sample data, of a population parameter.

The quality of a sample statistic (i.e., accuracy, precision, representativeness) is Strongly affected by the way that sample observations are chosen; that is., by the Sampling method.

3.4.2 Probability vs. Non-Probability Samples

Sampling is a statistical tools which helps to know the characteristics of the universe or population by examing only a small part of it. The values obtained from the study of sample, such as the average and variance are known as ‘statistics’. Such values for the population are called ‘parameters’

3.4.3 Methods of sampling

The theory of sampling is concerned with estimating the properties of the population from those of the sample and secondly with giving the precision of the estimate.

Charles earnest weatherburn.

A sample selected for a study should be

.representative of whole population or universe from which it is drawn

.Confirming to the subject of study

Homogeneous

Appropriate in size

Free from individual bias

There are two types of sampling procedures depending on the inclusion of sample items number

- **Probability samples.**

In this method each member of the population have a known chance or probability of being selected. The inclusion or exclusion of any individual element of the population depends upon the application of probability and not on personal choice.. We have used this method for sampling in our research.

- **Non-probability samples.**

Non-probability sampling is a sampling method in which not all members of the population have an equal chance of participating in the study, unlike probability sampling. Each member of the population has a known chance of being selected. In this method , each unit of the population has a definite but unknown probability of being selected. We have used this method for sampling in our research.

Non-probability sampling methods offer two potential advantages - convenience and cost. The main disadvantage is that non-probability sampling methods do not allow you to estimate the extent to which sample statistics are likely to differ from Population parameters. Only probability sampling methods permit that kind of analysis.

3.4.4 Non-Probability Sampling Methods

Two of the main types of non-probability sampling methods are Judgement samples and convenience samples.

- **Judgement Sampling:** In this method of sampling the choice of sample items depends exclusively on the judgement of the investigator. We can say that based on the choice of his sample items the judgement is given by the investigator by favoring those sample which is just correlated with the population parameter under investigation. A Judgement sample is made up of people who self-select into the survey. Mostly, these people are very much interested in the main topic related to the research survey..

- Convenience sample. The method of convenience sampling is a fraction of one population taken for investigation because of its convenient availability. Convenience sampling is also useful in making pilot studies. Questions may be tested and preliminary information may be obtained by the chunk before the final sampling design is decided upon.

A convenience sample is related to those people to whom the research can reach easily.. We have used this method for sampling in our research.

3.4.5 Probability Sampling Methods

The main types of probability sampling methods are simple random sampling, stratified sampling, cluster sampling, Systematic Sampling and multistage sampling,. The key benefit of probability sampling methods is that they guarantee that the sample chosen is representative of the population. This ensures that the statistical conclusions will be valid.

- (i) Simple random sampling. – It refers to the sampling technique in which each and every item of the population is given an equal chance of being included in the sample. The selection is thus free from personal bias because the investigator does not exercise his discretion of preference in the choice of items. Since selection of items in the sample depends entirely on chance, this method is also known as the method of chance selection. If the sample is chosen at random and if the size of the sample is sufficiently large, it will represent all groups in the population. Random samples are also known as a probability sample because every item of the population has an equal opportunity of being selected in the sample. There are many ways to obtain a simple random sample. One way would be the lottery method. Under this method, all items of the population are numbered or named on separate slips of paper of identical size, colour and shape. These slips are then folded and mixed up in a container or drum. A blind fold selection is then made of the number of slips required to constitute the desired size of sample. The selection of items thus depends entirely on chance. Population

members having the selected numbers are included in the sample. We have used this method for sampling in our research

- (ii) Stratified sampling. Stratified random sampling is one of the restricted random methods which by using available information concerning the data attempt to design a more efficient sample than that obtained by the simple random procedure. The process of stratification requires that the population may be divided into homogeneous groups or classes called strata. Then a sample may be taken from each group by simple random sample. A stratified sample may be either proportional or disproportionate. In a proportional stratified sampling plan, the number of items drawn from each stratum is proportional to the size of the strata. For example, if the population is divided into four strata, their respective sizes being 18, 12, 22, 48% of the population and a sample size of 1,000 is to be drawn, the desired proportional sample may be obtained in the following manner:

From Stratum one $1,000(0.18) = 180$
 From Stratum two $1,000(0.12) = 120$
 From Stratum one $1,000(0.22) = 220$
 From Stratum one $1,000(0.48) = 480$

Sample Size = 1,000

- (iii) Cluster sampling- It involves arranging elementary items in a population into heterogeneous sub groups that are then randomly selected.
- (iv) Systematic Sampling. It is a method of randomly selecting a sample from a directory or list. In this method, every unit is arranged in a order. A unit is selected at each sample interval which is calculated as

$$\text{Sample interval} = \frac{\text{Population Size (N)}}{\text{Sample Size (m)}} = N/m$$
 For example, if we have a population of 600 units and we want to draw a sample of 60 units, sample interval is $(\text{Sample interval} = 600/60) = 10$. Thus every 10th unit selected from a list of 600 units will make our sample complete.
- (v) Multi-stage sampling-

This method refers to a sampling procedure which is carried out in several stages. At first stage, a big unit of sample was selected using some suitable method such as random sampling. Then, a sample of second stage of units is selected from each of the selected first stage unit by some random methods.

For example, suppose we want a sample of 5000 households of Jharkhand. At first stage, we divide the state in 22 districts and randomly select 10 districts. Now, out of 10 districts having 100 cities, we select 5 cities and from each city we select 200 households.

Thus, 1000 families are randomly selected from 5 cities out of 10 districts. This technique is used only if the complete and up-to-date list of the sampling units is available and these units are arranged in some systematic order such as alphabetical, chronological, geographical order etc. This method is different from simple random sampling since every possible sample of n elements is not equally likely.

3.5 RESEARCH DESIGN

Research design¹⁵² is a strategy to develop the foundation of the research and get best solution of the research problem and distinguished from the constitutes the blueprint or the roadmap for the collection, measurement, and analysis of data. Research design can be defined as plan or strategy which helps us to find optimum solution to our research problems. In this pattern the whole things are divided into two distinct groups exploratory research and decisive research to find out the more authentic results. Exploratory research mostly finds out the various aspects of research problem on the basis of some evidence and everytime conclusion doesnot show that the researcher will get definite solution each and every time of the research problem.

Research design can be defined as plan or strategy which helps us to find answers to our research problems. It can be divided into two groups exploratory and conclusive. Exploratory research tends to explore various aspects of research problem but doesn't Promise to provide definite answers to research problem.

Conclusive research aims to provide findings which help a researcher in effective decision making. It uses quantitative techniques of data collection and analysis so that it is easy to summarize and present a research problem.

In order to give the study a scientific framework two types of research design was used:

(i) Exploratory Research Design:

Exploratory research studies also termed as formulative research studies. The main purpose of such studies is that of formulating a problem for more precise investigation or of developing the working hypothesis from an operation point of view. The major emphasis in such studies is on the discovery of ideas and insights. As such the research design appropriate for such studies must be flexible enough to provide opportunity for considering different aspects of a problem under study. Inbuilt flexibility in research design is needed because the research problem, broadly defined initially, is transformed into one with more precise meaning in exploratory studies. , which infact may necessitate in the context of research design for such studies are

taking about, the survey of concerning literature, the experience survey and the analysis of insight=stimulating examples.

(ii) Descriptive Research Design.

Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group, whereas diagnostic research studies determine the frequency with which something occurs or its association with something else. The studies concerning whether certain variables are associated are examples of diagnostic research studies. Most of the social research comes under this category. Thus, the research design in case of descriptive studies is a comparative design throwing light on all the points narrated above and must be prepared keeping in view the objective of the study and the resources available.

In term of effective decision making process, the conclusive research plays an important role to provide findings in the research work.

3.5.1 DATA BASE

The research study has been taken the data collection from primary sources of data as well as secondary source of data also.

For targets 1 to 3, auxiliary information is utilized and for target 4 essential information is utilized.

Essential wellspring of information has been made from an example out of 395 individual potential financial backers comprising of two gatherings, one bunch of respondents having speculation experience (hereinafter called 'Financial backer' classification) in ELSS shared assets just as other duty saving ventures and one more arrangement of respondents putting resources into half and half or development mutual reserves yet not in ELSS reserves (hereinafter called 'Non-Investor' class). Secondary data related to Net Asset Values (NAV) has been taken from private data base provider of mutual fund schemes called ACE MF.

In India, the National Stock Exchange of India (NSE) and Mumbai Stock Exchange (BSE).have provided the market index value related to investment in the mutual funds.

Publication of Securities and exchange board of India(SEBI), Reserve bank of India(RBI), AMFI , other financial market website, Publication of financial journal have been selected for collection of secondary data for analysis.

3.5.2 METHODS OF DATA COLLECTION

The significant of this study is the Investor's insight related to Growth and ELSS funds. To fulfill the optimal outcomes of the objective, the survey technique has been taken for the consideration and two questionnaire's in the well structure form is taken in which one for ELSS Investor category and another for Growth funds category (Appendix 1 and 2).

The complete sample size considered is of 395 financial backers of Hybrid or Growth Scheme and assessment investment funds plans u/s 80C of the Income Tax Act. This sample consists of two types of investors, those who had an investment experience in ELSS funds and those who invested in Hybrid or Growth funds

The quantity of respondents is 395 ELSS Investor classifications and one more for Growth supports class the testing technique utilized is purposive examining. Purposive examining is viewed as a non-likelihood inspecting utilized for getting subjective data, by choosing respondents (financial backers in ELSS assets and financial backers in other expense saving assets), for addressing the examination questions.

Net Asset Value or NAV of mutual funds are calculated in the following formulae

Mutual Fund NAV = Total Assets - Liabilities / Total number of shares or units

The assets of a mutual fund would consist of its investments and cash. The liabilities of a mutual fund include operating expenses.

Every one of the respondents is inhabitants of Jamshedpur and its sub metropolitan region. The information is gathered through a review utilizing organized poll from individual financial backers during the period first April 2020 to 31st July 2021. Financial backers were met face to face with the end goal of the review, by visiting

office edifices, common asset workplaces and financial backer classes. Financial backer references were additionally gotten from reserve merchants and individual contacts.

3.5.3 PILOT STUDY

In phase I have conducted a pilot study in East Singhbhum, West Singhbhum & Saraikela-Kharsawa district with a sample size of 50.

We got insight related to minor modifications related to questionnaire and modified The same before starting the phase II of the study. In phase II of study which was a full fledged study of sample of 395 was collected both using personal interview and Administered interview.

3.5.4 DETERMINATION OF SAMPLE SIZE

If we increase the sample size then more accurate result we will get out of the population. It means that as we increase the sample size for a given confidence level will decrease. Proportional to confidence because the sample size is inversely proportional to confidence interval, even though the relationship between sample size and confidence interval is not linear, i.e. if the double the sample size does not halve the confidence interval. The accuracy of result is based on the research survey and percentage of sample size taken out of the population. In the sample survey if 99% of our sample result favouring the answer and 1% is not supporting the result, then the probability of error is negligible, irrespective of sample size.

3.5.5 The Research Instruments

- **CAGR of Fund :**

CAGR or Compounded Annual Growth Rate¹⁵³ is the most common mutual fund returns used when a fund's performance is discussed. CAGR is a portrayal of the intensified development of your common asset ventures. It shows the asset's normal yearly development or decay throughout a particular timeframe.

It is the intensified returns procured for the period. It is the

accumulated rate at which the venture has developed by after some time.

- **Standard Deviation of Returns of Fund:** The most commonly used of risk in finance is variance or its square root the standard deviation.

The complete danger (exhibit, security-explicit and arrangement) of a shared asset is assessed by Standard Deviation' (SD)¹⁵⁴. In shared assets, the standard deviation uncovers to us how much the profit from an asset is wandering off from the ordinary benefits dependent on its chronicled execution. Toward the day's end can be said it surveys the unpredictability of the asset. In that capacity, it is an extent of the consistency of a shared asset's return. A higher SD number shows that the net resource value (NAV) of the shared asset is continuously unsound and, it is less secure than an asset with a lower Standard Deviation.

Standard deviation estimates the scope of an asset's presentation for example it estimates the outright scattering. Financial speculators portray standard deviation as the unpredictability of past shared asset returns. It shows how much the asset's profits can go amiss from real recorded mean returns. Elevated requirement deviation (SD) portrays a plan with a wide scope of execution, addressing a more prominent potential for unpredictability. Standard deviation is for the most part utilized by financial backers to foresee the scope of profits that the common asset will offer, hence anticipating the misstep of preferring shared assets which are excessively forceful. When discovering different resources portfolio standard deviation, a financial backer necessities to think about standard deviation just as each asset's relationship. This can be determined utilizing the recipe

The standard deviation of a historical return series are defined as follows:

$$\sigma = \sqrt{\frac{\sum (x_i - \mu)^2}{N}}$$

= population standard deviation

= the size of the population

= each value from the population

= the population mean

Standard deviation is generally more convenient as it is in the same units as the rate of return. However, when we talk about the proportion of risk attributable to same factor, it is generally less confusing to work with variance. (Source: wallstreetmojo)

Coefficient of Variation (CV) of Fund :

The coefficient of variety (CV)¹⁵⁵ is a factual proportion of the general scattering of information focuses in an information series around the mean. In finance, the coefficient of variety permits financial backers to decide how much unpredictability, or hazard, is accepted in contrast with the measure of return anticipated from ventures.

Coefficient of Variation Formula = Standard deviation/Mean

It tends to be additionally communicated as beneath,

$$\text{Coefficient of Variation} = \sqrt{\sum N_i (X_i - X)^2 / X}$$

Where

X_i = ith irregular variable

X = Mean of the information series

N = number of factors in the information series

(Source: wallstreetmojo)

- **Beta of the Fund:** systematic risk¹⁵⁶ can be measured in relation to the risk of a diversified portfolio which is commonly referred to as market portfolio which is commonly referred to as the market portfolio or the market. according to Capital Asset Pricing model (CAPM), the non-diversifiable risk of an investment is assessed in terms of the beta coefficient. Beta is a measure of the volatility of a securities' return relative to the returns of a board-based market index equals one. Beta coefficient of 1 would imply that the risk of the

specified security is equal to the market and the interpretation of zero coefficient is that there is no market related risk to the investment.

Beta is computed for a security as:

Cost of equity by CAPM model:

$$K_e = R_f + b(K_m - R_f)$$

Where, K_e = cost of equity capital

R_f = required rate of return on a risk free asset

K_m = Required rate on return on the market portfolio of assets that can be viewed as the average rate of return on all asset.

Thus, beta is an index of the degree of responsiveness of security return with market return.

Beta=1, security has same systematic risk as the market as a whole has.

Beta>1, security has more unavoidable risk than the market as a whole.

Beta<1, security has less systematic risk than the market portfolio.

- **R² (Coefficient of Determination):**

Coefficient of correlation¹⁵⁷ between two variable series is a measure of linear relationship between them and indicates the amount of variation of one variable which is associated with or is accounted for by another variable. A more useful and readily comprehensible measure for this purpose is the coefficient of determination which gives the percentage variation in the dependent variable that is accounted for by the independent variable. In other words, the coefficient of determination is given by the square of the correlation coefficient (r^2)

Thus, Coefficient of determination = r^2 = Explained variance / total variance

For example, if the value of $r=0.9$, we cannot conclude that 90% of the variation in the relative series (dependent variable) is due to the variation in the subject series (independent variable). The coefficient of determination in this case is $r^2 = 0.81$ which implies that only 81% of the variation in the

relative series has been explained by the subject series and the remaining 19% of the variable is due to other factors.

Sharpe's Return to Variability Ratio (Sharpe, 1966) :

The Sharpe measure¹⁵⁸ is similar to the Treynor measure except that it employs standard deviation, not beta, as the measure of risk.

Thus,

Sharpe measure= (Average rate of return on portfolio p-Average rate of return on a risk-free investment) /Standard deviation of the return of portfolio p

$$\text{Sharpe Ratio} = (R_p - R_f) / \sigma_p$$

R_p =Return of portfolio

R_f = Risk-free rate

σ_p = Standard deviation of the portfolio's excess return.

Hence, the Sharpe measure reflects the excess return on a portfolio per unit of its total risk (standard deviation) the grading threshold of the Sharpe ratio.

- ▶ <1 – Not good
- ▶ 1-1.99 – Ok
- ▶ 2-2.99 – Really good
- >3 – Exceptional

Sharpe measure, explained a simple relationship between the risk factors involved in the investment and the expectation of return out of it though they employ different measures of risk.

- **Treynor's Return to Volatility Ratio (Treynor, 1965) :**

According to Jack Treynor, systematic risk¹⁵⁹ or beta is the appropriate measure of risk, as suggested by the capital asset pricing model. The Treynor measure of portfolio performance relates the excess return on a portfolio to the portfolio beta.

Treynor's measure = Excess return of portfolio p/Beta of portfolio p

$$= (\text{Average rate of return on portfolio p- Average rate of return on a risk-free investment}) / \text{beta of the portfolio p}$$

Treynor ratio formula is given as:

$$T = R_i - R_f / \beta_i$$

Here, R_i = return from the portfolio I, R_f = risk free rate and β_i = beta (volatility) of the portfolio,

The better performance of aswe get the higher Treynor's ratio of a portfolio will be The higher the Treynor ratio of a portfolio, the better is its performance. So when analyzing multiple portfolios, the use of the Treynor ratio formula as a metric will help us to analyze them successfully and find the best one among them.

- **Jensen's Alpha (Jensen, 1968) :**

The absolute risk adjusted retrun¹⁶⁰ measure was developed by Michael Jensen and is commonly known as Jensen's measure. It is mentioned as a measure of absolute performance because a definite standard is set and against tha the performance is measured. The standard is based on the manager's prediction ability. Successful prediction of security price would enable the manager to earn higher returns than the ordinary investor expects to earn in a given level of risk.

The basic model of Jensen is given below:

$$R_p = \alpha + \beta(R_m - R_f)$$

Where,

R_p = average return on portfolio

R_f = riskless rate of return

R_m = average market return

The Jensen measure or Jensen Alpha is based on the capital asset pricing model. It reflects the difference between the return actually earned on a portfolio and the return the portfolio was supposed to earn, given its beta, as per the capital asset pricing mode

Thus, the Jensen Alpha is

Average return on portfolio p - [Risk free return + Portfolio beta { Average return on market portfolio - Risk free return }]

Fund evaluation services often place heavy reliance on Alpha because it is a risk-adjusted measure. A positive alpha is considered good and a negative Alpha bad. John C. Bogle, however, is critical as such emphasis on Alpha. He argues: “But Alphas are volatile and can swiftly move from positive to negative. In my view, Alpha because of its unpredictable and backward-looking nature is a counterproductive measure and Alpha is a flawed measure of what to expect from a fund and should generally be ignored. The essence of his argument is that the past performance of an equity mutual fund cannot predict its future performance.

- **Sortino’s Ratio (Sortino, 1994) :**

In this chapter, we will discuss two other ratios related to the mutual fund performance/risk measures, i.e. the Sortino Ratio¹⁶¹ and the Capture Ratios. These are fairly easy to understand, so we will try to keep this chapter as a short note.

We discussed the Sharpe Ratio in the previous chapter. The formula, if you remember looks like this –

Sharpe ratio = [Fund Return – Risk-Free Return]/Standard deviation of the fund

The denominator has ‘Standard Deviation’, which, as you know, is an assessment of risk.

Well, we are talking about the risk of the returns varying from the average expected returns. Read that line again; we are defining risk as to the variation (or the variance) from the average expected returns. The variance can be both positive and negative.

Let me explain, have a look at the image below –

This is the sample daily NAV data for a Mutual fund. I’ve calculated the daily return for the fund for the time series, and I’ve also calculated the average daily return for the time series.

The average return is 0.108%.

Further, I calculate the excess return by subtracting the average return from the actual return. For example, the daily return for 4th August 2020 was 1.23%, the average return is 0.108%.

$$\begin{aligned}\text{Hence, Excess Return} &= 1.23\% - 0.108\% \\ &= 1.13\%.\end{aligned}$$

Of course, you square this return to get the variance, from which you further calculate the standard deviation or the risk.

The point that I want to make here is that when you take the excess return, you get both positive and negative values. A positive value indicates a profit and negative value indicates a loss.

Now, let us look at the Sharpe ratio again

Sharpe ratio = [Fund Return – Risk-Free Return]/Standard deviation of the fund

By, using the ‘standard deviation’ in the denominator, we try to adjust the returns per unit of risk. However, the risk contains both positive and negative returns.

After all, we do not want to penalize the fund for a positive return; we need to scrutinize it for only the negative returns.

The Sortino’s ratio helps in this regard.

The Sortino’s ratio is an improvisation over the Sharpe Ratio, wherein the denominator has only the negative returns or the ‘downside risk’, is considered.

Hence, the Sortino’s Ratio is –

$$= [\text{Fund Return} - \text{Risk-Free Return}]/\text{Downside Risk}$$

The objective of Sortino’s ratio is to estimate the excess return adjusted for only the downside risk. Like the Sharpe ratio, higher the Sortino’s ratio, better it is.

Apart from this one change, there is not much difference between the Sharpe and Sortino’s Ratio.

- **Expense Ratio**

Cost proportion¹⁶² is the yearly support charge exacted by common assets to back its costs. It incorporates yearly working expenses, including the board charges, allotment charges, promoting costs, and so on of the asset.

The cost proportion is determined by isolating the all out costs caused by the normal worth of the portfolio. Worth of a cost proportion relies on the size of the common asset being referred to. An asset working with a more modest pool of monetary assets needs to dispense a specific extent towards ideal administration. This subsequently expands the overall worth of the costs concerning the aggregate sum of assets accessible.

In the event of huge cap shared assets, then again, the sum saved to meet the costs is a more modest subject to the all out resource esteem. Hence, cost proportions have an opposite relationship with size of the individual shared asset. This can be portrayed by the cost proportion equation, given by all out costs isolated by all out resources of the assets. Higher the resource base, lower will be the proportion, as well as the other way around, given all out costs stay consistent.

Cost proportions are generally deducted from complete income produced by a common asset, prior to dispensing it to the financial backers. Higher cost proportions suggest a higher extent of the profits being taken out, accordingly giving lower profits from speculations.

Since cost proportions demand a weight on yearly returns acquired, a financial backer ought to painstakingly examine something similar while picking a common asset plan to contribute. It is a not unexpected misguided judgment that a higher cost proportion shows better administration of a shared asset, with a higher likelihood of producing benefits. Common finances which have a low cost proportion, yet oversaw via prepared administrators with legitimate market expectations can yield exceptional yields also. Common assets having a high cost proportion, then again, can be forcefully overseen for more significant returns, or put resources into organizations having a higher

likelihood of procuring benefits. A more generous income created will make up for the higher costs caused.

Cost proportions charged by a resource the executives' organization on their shared assets are dependent upon specific limitations forced by the Securities and Exchange Board of India (SEBI), to ensure the interests of financial backers. This guarantees a generous progression of monetary assets to capital market of the country. The standards are diverse for Exchange Traded Funds and Index Funds. For an underlying resource base of Rs. 500 Crore of such an asset, a most extreme complete cost proportion of 2% is collected. For next Rs. 250 Crore, assuming any, a proportion of 1.75% is forced, while any resource base higher than that is prepared at 1.5% separately.

Under Section 52 of the SEBI Mutual Fund Regulations, a resource the board organization can charge a limit of 2.5% as the absolute cost proportion for the main Rs. 100 Crore of the portfolio esteem. For resulting resource worth of Rs. 300 Crore, a pace of greatest 2.25% is deductible, while 2% can be charged on ensuing pieces worried about the remainder of resource esteem.

- **Independent –Samples Kruskal-Wallis Test**

This test is used to test the null hypothesis that 'k' independent random samples¹⁶³ come from identical universes against the alternative hypothesis that the median of these universes are not equal. This test is analogous to the one way analysis of variance, but unlike the latter it does not require the assumption that the samples come from approximately normal populations or the universes having the same standard deviation.]

In this test, the data are ranked jointly low to high or high to low as if they constituted a simple sample. The test statistics is H for this test which is worked out as under.

$$H = \frac{12}{n(n+1)} \left[\left\{ \sum R_i^2 / n_i \right\} - 3(n+1) \right]$$

Where, $n = n_1 + n_2 + n_3 + \dots + n_k$ and R_i being the sum of the ranks assigned to n_i observations in the i th sample.

If the null hypothesis is true that there is no difference between sample medians and each sample has at least five items, then the sampling distribution of H can be approximated with a chi-square distribution with $(k-1)$ degrees of freedom.

- **Wilcoxon Matched-Pairs Signed Ranks Test**

This non parametric test¹⁶⁴ is utilized if there should be an occurrence of span/proportion information, to test the theory regardless of whether the middle of the distinction of the two ward test scores rises to nothing. The Wilcoxon Matched-Pairs Signed Ranks Test is a nonparametric test that is regularly seen as being like Student's t-Test for Matched Pairs, however it is utilized for ordinal information or information that truly disregard any similarity to typical circulation. The Wilcoxon Matched-Pairs Signed Ranks Test is a nonparametric test that is frequently seen as being like Student's t-Test for Matched Pairs, however it is utilized for ordinal information or information that truly disregard any similarity to typical circulation. Obviously, there are numerous who might contend that it is essentially too advantageous to even think about contrasting the Wilcoxon Matched-Pairs Signed Ranks Test to Student's t-Test for Matched Pairs despite the fact that they fill comparative needs.

Gathering contrasts for when there are two coordinated with sets are tended to by the two tests, yet once more, the Wilcoxon Matched-Pairs Signed Ranks Test is regularly utilized with ordinal information or potentially information that are seen as being nonparametric (with consideration regarding medians) though the Student's t-Test for Matched Pairs is for the most part utilized with span information that ascent to the degree of parametric dispersions (with consideration regarding implies). This example is fascinating in that there is a tied arrangement of qualities for one of the coordinated with sets, which presents some level of intricacy on how esteems are positioned

when there are ties (i.e., for an individual coordinated with pair, there is no distinction in the two scores that are being analyzed).

The Wilcoxon marked position test is the nonparametric test comparable to the reliant t-test. As the Wilcoxon marked position test doesn't expect ordinariness in the information, it tends to be utilized when this suspicion has been disregarded and the utilization of the reliant t-test is improper. It is utilized to analyze two arrangements of scores that come from similar members. This can happen when we wish to explore any adjustment of scores starting with one time point then onto the next, or when people are exposed to more than one condition.

- **One Sample Chi-Square Test**

This test is utilized in the event of all out/ostensible information for theory testing¹⁶⁵ which includes one ward test. In the event that the test outcomes are huge, it implies that the all out factors don't follow the estimated populace dissemination. This prompts an end that the noticed recurrence isn't equivalent to the normal recurrence. A Chi-square test is a theory testing technique. Two normal Chi-square tests include checking whenever noticed frequencies in at least one classifications match anticipated frequencies.

To decide if the relationship between two subjective factors is genuinely huge, analysts should lead a trial of importance called the Chi-Square Test. There are five stages to lead this test.

Stage 1: Formulate the theories Null Hypothesis:

H₀: There is no huge relationship between understudies' instructive level and their inclination for on the web or eye to eye guidance. or on the other hand

H₀: There is no distinction in the conveyance of educational inclinations among undergrad and graduate understudies. In case there is no relationship between the two factors, the people would be consistently conveyed across the cells of the table. The elective speculation for a chi-square test is consistently two-sided. (It is actually multi-sided on the grounds that the distinctions might happen in the two ways in every cell of the table).

Elective Hypothesis: H_a : There is a huge relationship between understudies' instructive level and their inclination for on the web or vis-à-vis guidance. or on the other hand

H_a : There is a critical distinction in the circulation of informative inclinations among undergrad and graduate understudies.

Stage 2: Specify the normal qualities for every cell of the table (when the invalid theory is valid) The normal qualities indicate what the upsides of every cell of the table would be in case there was no relationship between the two factors. The recipe for processing the normal qualities requires the example size, the line aggregates, and the segment sums.

Stage 3: To check whether the information give persuading proof against the invalid speculation, think about the noticed counts from the example with the normal counts, expecting H_0 is valid. The noticed qualities are the real counts figured from the sample. \square Statistical programming will register both the normal and noticed counts for every cell when directing a chi-square test. The picture underneath shows the table that SPSS makes for the two factors. In every cell, the normal and noticed worth is available.

Stage 4: Compute the test measurement The chi-square measurement analyzes the noticed qualities to the expected \square values. This test measurement is utilized to decide if the distinction between the \square noticed and expected qualities is genuinely huge.

Stage 5: Decide if chi-square is genuinely critical The last advance of the chi-square trial of importance is to decide whether the value \square of the chi-square test measurement is sufficiently huge to dismiss the invalid speculation. Factual programming makes this assurance much easier.

- Related Samples Friedman's Two - Way Analysis of Variance by Ranks

This test is utilized in the event of ordinal information for speculation testing which includes at least two subordinate examples. In the event that the test outcomes are critical, it implies that there is a huge distinction between the example medians. This prompts an end that the examples address populaces

with various middle qualities. While trying to control for undesirable fluctuation, scientists regularly execute plans that pair or gathering members into subsets dependent on normal attributes (e.g., randomized square plan) or carry out plans that notice similar member across a progression of conditions (e.g., rehashed measures plan). The examination of change (ANOVA) is a typical factual strategy used to dissect information from a randomized square or rehashed measures plan. In any case, the supposition of ordinariness that underlies ANOVA is regularly abused, or the size of estimation for the reliant variable is ordinal-level, frustrating the utilization of ANOVA. To address the present circumstance, financial expert Milton Friedman fostered a factual test dependent on positions that might be applied to information from randomized square or rehashed measures plans where the reason for existing is to recognize

- Free – Samples Kolmogorov-Smirnov Test

This test is utilized if there should arise an occurrence of ordinal information for theory testing which comprise of two autonomous examples. It looks at the combined recurrence circulation of the two tests. In the event that the test outcomes are huge, it implies that there is a huge distinction the combined recurrence appropriations of the examples. This prompts an end that the tests don't address a similar populace.

The Kolmogorov–Smirnov Test for Two Independent Samples, the understanding of the Test Results and extra Analytical Procedures for the Kolmogorov–Smirnov Test for Independent Samples and additionally Related Tests. The Kolmogorov–Smirnov test for two free examples is sorted as a trial of ordinal information since it necessitates that total recurrence appropriations be built. The section portrays the graphical strategy for processing the Kolmogorov–Smirnov test measurement. Test certainty stretches are registered for the Kolmogorov–Smirnov test for two autonomous examples.

Daniel (1990) depicts a graphical technique which utilizes a diagram alluded to as a couple outline as an elective method of figuring the Kolmogorov–Smirnov test measurement. The method depicted for figuring a certainty stretch for combined probabilities for the example appropriation which is

assessed with the Kolmogorov–Smirnov integrity of-fit test for a solitary example can be utilized to register a certainty span for total probabilities for both of the examples that is assessed with the Kolmogorov–Smirnov test for two free examples.

- **Autonomous – Samples Mann-Whitney U Test**

This test is utilized in the event of ordinal (rank/request)¹⁶⁶ information for theory testing which includes two free examples. On the off chance that the test outcomes are critical, it implies that there is a huge distinction between the two example medians. This prompts an end that the two examples address populace with various middle qualities. The Mann-Whitney U test is utilized to think about whether there is a distinction in the reliant variable for two free gatherings. It analyzes whether the conveyance of the reliant variable is something very similar for the two gatherings and accordingly from a similar populace.

Dissimilar to the autonomous examples t-test, the Mann-Whitney U test permits you to reach various inferences about your information relying upon the suppositions you make about your information's conveyance. ... These various ends rely on the state of the circulations of your information, which we clarify more about later. The Mann Whitney U test, at times called the Mann Whitney Wilcoxon Test or the Wilcoxon Rank Sum Test, is utilized to test whether two examples are probably going to get from a similar populace (i.e., that the two populaces have a similar shape).

- **Welch's t - Test**

The Hypotheses outlined¹⁶⁷ around the auxiliary information is tried utilizing the Welch's two example t-Test. This test is utilized to decide if two free examples have equivalent means. In this test, there is no suspicion that the changes of the two circulations are equivalent. This test can be utilized with inconsistent example sizes. Assuming the test outcomes are critical, it prompts the end that the method for the two examples are not equivalent.

The Welch's t-test is additionally called inconsistent fluctuations t-test that is utilized to test if the method for two populaces are equivalent. This test is not

quite the same as the Student's t-test and is regularly applied when there is contrast in difference between the two population changes. It can likewise be applied when the sample sizes are inconsistent.

The Welch's t-test can be applied in the accompanying situation

1. When the population is thought to be ordinary
2. When the samples have inconsistent differences
3. Sample sizes are inconsistent

- **ANOVA Test**

Investigation of fluctuation (ANOVA)¹⁶⁸ is a measurable method that is utilized to check if the method for at least two gatherings is fundamentally unique in relation to one another. ANOVA actually takes a look at the effect of at least one variable by contrasting the method for various examples. ... One more measure to think about the examples is known as a t-test.

Investigation of fluctuation (ANOVA) is an assortment of measurable models and their related assessment methods, (for example, the "variety" among and between gatherings) used to break down the distinctions among implies. ANOVA was created by the analyst Ronald Fisher. ANOVA depends on the law of all out difference, where the noticed change in a specific variable is apportioned into parts inferable from various wellsprings of variety. In its least difficult structure, ANOVA gives a factual trial of whether at least two population implies are equivalent, and in this way sums up the t-test past two methods.

One-way Anova test statistics is represented as follows:

$$F = MSB/MSW$$

Where

F = ANOVA coefficient

MSB = Mean sum of squares between the group

MSW = Mean sum of squares within the groups

$MSB = SSB/df_B$ and $MSW = SSW/df_w$

Now,

$$SSB = \sum_{i=1}^k n_j (x_j - \bar{x})^2 \text{ and}$$

$$SSW = \sum_{i=1}^k \sum_{j=1}^k n_j (x_j - \bar{x})^2$$

Where

SSB = Sum of squares between the groups

SSW = Sum of squares within the group

df = Degrees of freedom

k = The number of groups

N = Total number of observations across all groups

This capacity looks at the example implies for k gatherings. There is a general test for k means, numerous correlation strategies for sets of means and tests for the balance of the fluctuations of the gatherings. Consider four gatherings of information that address one examination performed on four events with ten distinct subjects each time. You could investigate the consistency of the exploratory conditions or the intrinsic mistake of the examination by utilizing one way examination of change (ANOVA), notwithstanding, arrangement examination may be more suitable. One way ANOVA is more proper for discovering measurable proof of irregularity or distinction across the method for the four gatherings.

One way ANOVA expects that each gathering comes from an around typical circulation and that the fluctuation inside the gatherings is generally consistent. The elements are orchestrated so that analyses are segments and subjects are columns, this is the means by which you should enter your information in the StatsDirect exercise manual. The general F test is genuinely strong to little deviations from these suspicions yet you could utilize the

Kruskal-Wallis test as an option in contrast to one way ANOVA in case there was any uncertainty.

Examination of change (ANOVA) is an investigation device utilized in measurements to check if the method for at least two gatherings is essentially not the same as one another. ANOVA really looks at the effect of at least one elements by contrasting the method for various examples. Accordingly, the major methodology of ANOVA is to methodically inspect changeability inside bunches being thought about and furthermore analyze inconstancy between the gatherings being looked at.

One way ANOVA is utilized to look at method for the gatherings of a free factor to check whether the gatherings are essentially unique in relation to one another or not.

Subsequently, the reason for single direction Analysis of Variance is to test if bunch implies are equivalent. For this, we ascertain a F proportion for which we partition the fluctuation of the free factor into two parts: variety between test means and variety inside the examples

The ANOVA test permits an examination of multiple gatherings simultaneously to decide if a relationship exists between them. The aftereffect of the ANOVA equation, the F measurement (additionally called the F-proportion), takes into account the investigation of different gatherings of information to decide the inconstancy among tests and inside examples.

3.06 SCHEME OF PRESENTATION

The purpose of the research study is to conclude whether mutual fund attributes affect the performance of mutual fund. Attributes such as past record of selected funds, net asset value of growth mutual funds and ELSS mutual funds, asset under management, brand name of the company, investors satisfaction, service quality provided by the investment company related to future returns, service time are examined. In the era of digitalization in the mutual funds industry and online services provided by the VSAT, there are a lot of new factors have come and somehow play an important role in mutual funds .

CHAPTER 4 - DATA ANALYSIS

DATA ANALYSIS

Secondary Data- Investment Performance

4.1 Introduction

A Mutual fund represents a vehicle for collective investment. Investment in Mutual Funds gives a lot of benefits to the financial investors in terms of return and financial benefits and provides better return against other financial derivatives. Investors are getting opportunity or diversified portfolio of financial assets as per their risk aptitude and future return to fulfill their investment objectives. PORTFOLIO THEORY, BASICALLY GIVEN BY Harry Markowitz¹⁶⁹ in the 1950s, was the first method to justify the financial risk of a portfolio and proposed a research methodology to analyzing the best portfolio. By the way of quantitative analysis, Harry Markowitz performed that why and how diversification reduces the risk factors involved in the financial derivatives and gives better return in long term investment securities. Market movement of mutual fund shows the risk factors involved in the better return and performance of the diversified fund.

Therefore the Financial Analyst of Asset management company always watches the market movement and invests in more diversified classes like equity shares, bond and debenture and other financial derivatives to minimize the risk factors due to sudden change in the financial markets and on average provides better return to their investors. In this way if one fund does not perform well as per the expected return then other funds will compensate by performing well and the expected rate of return goes high and avoids any unforeseen circumstance to the existing investor.

In this way diversification of mutual fund¹⁷⁰ reduces the risk factor of unsystematic risk including business risk, interest rate risk and market risk. Business risk may be caused by a lot of factors like introducing new technology, availability of quality substitute product, shifting in the consumer choice and preference, unavailability of raw materials affects the demand and supply function, change in the government tax policy etc. negatively affect the

market return in the mutual fund and financial tools like diversification reduce the markets risk and enhance the return of the investor up to a spectrum of reasonable height.

To draw in individual little financial backers to build value venture framework in India, the money serve Shri. S.B.Chavan, in his spending plan discourse on 28th February 1989, presented another common asset plot called the 'Value Linked Savings Scheme' (ELSS).The ELSS shared assets highlighted the little individual financial backers with a lower annual expense commitment, in light of the degree of put resources into ELSS assets, during the monetary year.

ELSS shared assets is one of the most incredible monetary instruments to lessen the personal taxation rate to a singular financial backer so suitably, alluded to as Tax Saving Mutual Funds. For an underlying period till 31st March 1991, ELSS speculations were qualified for allowance advantage of Rs.10,000. From the monetary year 1991-92 onwards, the expense motivating force was altered to an assessment discount benefit,under Section 88 of the Income Tax Act, with Rs.10,000, staying the qualified speculation sum. From the monetary year 2005-06, the duty motivation returned to allowance advantage, under Section 80C of the Income Tax Act, with a qualified speculation sum going up to Rs.1,00,000.

The qualified venture for derivation advantage from the monetary year 2014-15 was additionally expanded to Rs.1,50,000The capital formation of a nation completely based on the ultimate utilization of its limited resources.The main aim of wealth creation to maximize the market capitalization of a firm. The surplus revenue if generated by the financial system by investing in different kind of invement opportunities in financial markets to enhance the capital formation and wealth maximization.Indian capital market is an organized platform which provides the growth in GDP in India and facilitiates vast capital formation of thr nation by long term investment plan in financial sector.

This study used a standard statistical software package, SPSS¹⁷¹, to provide descriptive statistics for all years under examination. Specifically, this study provides the mean and standard deviations of the independent variables. A summary of the descriptive statistical results is provided. Aside from the descriptive statistics, this study presents the specified forms of the regression equations for all nine years. This study also performs chi-square test necessary to conclude statistical significance in the parameters and examine the Rsquared and adjusted-R-squared in all of the regression equations. The data are presented in a tabular format. Since the population of mutual funds is finite, this study elects to use the population of mutual funds in the database. All attempts have been made to use the entire population of mutual funds.

4.2 Investment Performance – Secondary Data Analysis and Discussion

This research study has been considering for the valuation the whole inhabitants of ELSS mutual funds that were in continuation with a pathway documentation of 3 years as at 31st August 2021. A total of 40 top performing mutual funds is considered for the evaluation in which 20 Direct plan growth ELSS funds has been taken for the consideration and remaining 20 Best Equity Mutual Funds has been taken for the evaluation. The sample set of 20 direct plan growth ELSS funds has been selected on the basis of highest Assets Under management (AUM) as on 31st August 2021. The main objective of growth mutual funds is to enhance the better return and capital appreciation for the long term investment plan.

Mutual funds provided a an average return of 16% in a duration of last 40 years history which is more than any other financial investment return in financial market. The major part of investment is done in equity funds and this investment is always facing the high risk challenges of open market operation and after the circle of globalization and liberalization, a lot of internal and external factor on world wide affect the expected return in capital market. A lot of financial derivatives like inflation, deflation, recession, real estate crisis, currency convertibility risk factors, hedging and arbitration highly affect the market return in equity funds. These equity funds endow with a lot of opportunity of financial instruments like Large cap funds, Mid cap funds, Small cap funds, Sector Mutual Funds, Equity Linked Savings Scheme (ELSS).

A rundown of test ELSS assets and Growth reserves is displayed in table 4.01. Rundown of test reserves is given in Table 4.01 and the rundown of market records is given in Table 4.02. The exhibition assessment in this review is essentially of the ELSS assets as a classification, comparative with the presentation of Diversified Equity Funds classification and Market Records class. Except if indicated, the terms ELSS reserves,

4.3 ANALYSIS OF MUTUAL FUND INVESTMENTS IN APRIL 2019 AND APRIL 2020

The total Assets managed by the Indian mutual fund industry has decreased from Rs. 25.28 trillion in April 2019 to Rs.23.53 trillion in April 2020, which is a decrease of 6.91% in assets over that of April 2019". The analysis presented in the Tables 1 to 12 given below:

Economic Outlook for FY 2020-21

Goldman Sachs told in its latest report that GDP growth rate¹⁷² of India will be faster than any other country if the proper effective COVID-19 vaccination is available in India and become the third largest economy of the world and in terms of growth in the economy India's gross domestic product will be reduced to 10.3% in FY 2020-21 against a contraction of 14.8% forecast as per the report published in the global financial services and . GDP growth is estimated at 13% in FY22 compared with 15.7% projected. In the Financial Year 2022, India's fiscal deficit is reduced to 6.5% as earlier it was expected to 8%, according to Goldman Sachs. The central government's plus states' fiscal deficit is estimated to narrow from 11.5% to 9.5% of the GDP in the same duration, the report said. "This suggests that the total fiscal policy contribution to growth will decline further in FY22."

Consumer Price Index is the barometre of the financial derivatives, which measures the inflation rate and estimated at 6.2% in FY21, and it will decline to 4.6% in the financial year 2022 as food price decrease based on the supply and demand function in the seasonal variation.

4.4 TOP 10 LARGE CAP MUTUAL FUNDS FOR 2021

Table 4.01

Name of the mutual fund	Returns (in %)				
	1-Year	3-Year	5-Year	7-Year	10-Year
Mirae Asset Large Cap Fund	41.18	13.85	17.46	17.70	15.50
Axis Bluechip Fund	30.82	17.51	17.50	16.12	14.17
ICICI Prudential Bluechip Fund	43.63	12.60	15.77	14.87	13.20
SBI Bluechip Fund	45.94	13.03	14.58	16.24	14.43
Nippon India Large Cap Fund	38.32	10.10	14.51	15.12	12.83
Franklin Bluechip	48.63	11.93	13.16	13.52	11.37
IDFC Large Cap	37.10	12.50	14.32	12.01	10.37
HDFC Top 100	44.44	11.31	15.11	13.70	11.34
L&T India Large Cap	36.47	11.95	13.49	13.77	11.31
Invesco India Large cap	34.28	11.12	13.39	14.06	11.70
Benchmark Index (S&P BSE 100 TRI)	46.72	14.49	16.42	14.51	12.18

(Data as on March 9th, 2021 Source- Value Research¹⁷³)

4.5 List of sample ELSS Funds and Growth Mutual Funds Historic Returns of ELSS & Equity mutual fund Performance Tracker with highest returns

Mutual funds with highest returns
Table 4.02

Sl. No	Name of the mutual fund scheme	CRISIL Ranking	Asset Under management(AuM) (Rs. Cr)	Year Till Date	1Year	2 Years	3 Years	5 Years	10 Years
ELSS Mutual funds									
1	Quant Tax Plan	5	368.44	56%	93%	57%	34%	24%	-
2	IDFC Tax Advantage (ELSS) Fund	5	#####	44%	78%	34%	20%	18%	-
3	Canara Robeco Equity Tax Saver	5	#####	34%	65%	36%	24%	20%	-
4	BOI AXA Tax Advantage Fund	5	512.07	41%	73%	43%	27%	21%	-
5	Mahindra Manulife ELSS Kar Bachat Yojana	4	409.09	40%	73%	31%	20%	-	-
	Growth Mutual Funds								
6	SBI Growth Contra Fund	5	2,823.38	45%	96%	38%	23%	16%	
7	BOI AXA Tax Advantage Growth ELSS Fund -	5	512.07	42%	79%	41%	29%	21%	
8	Canara Robeco Equity Tax Saver -	5	2,679.66	35%	71%	35%	25%	20%	
9	IDFC Tax Advantage (ELSS) Fund -	5	3,338.88	46%	87%	33%	21%	19%	
10	Quant Tax Plan -	5	368.44	58%	100%	57%	35%	25%	

(Source- Moneycontrol.com¹⁷⁴)

4.6 RISK RATIOS - ELSS FUND PERFORMANCE TRACKER (DIRECT PLAN – GROWTH)

Mutual funds with highest returns

Table 4-03

Sl. No	Name of the mutual fund scheme	Asset Under Management (AuM) (Rs.Cr)	Standard Deviation	Beta(Systematic Risk)	Sharpe Ratio	Jenson's Alpha	Treynor's Ratio
ELSS Funds							
1	IDFC Tax Advantage (ELSS) Fund	3338.88	20.51	0.93	0.68	2.06	0.15
2	Canara Robeco Equity Tax Saver	2679.66	19.68	0.88	0.88	6.33	0.20
3	BOI AXA Tax Advantage Fund	512.07	18.78	0.85	0.97	7.49	0.22
4	Quant Tax Plan	368.44	21.35	0.79	1.17	14.75	0.32
5	Kotak Tax Saver Scheme	2249.04	19.26	0.91	0.77	3.55	0.16

(Source: miraeassetmf.co.in¹⁷⁵)

4.7 RISK RATIOS – GROWTH MUTUAL FUND PERFORMANCE TRACKER

Mutual funds with highest returns - Direct Plan - Growth
Table 4.04

Sl. No	Name of the mutual fund scheme	Asset Under Management (AuM) (Rs.Cr)	Standard Deviation	Beta(Systematic Risk)	Sharpe Ratio	Jensen's Alpha	Treynor's Ratio
	Direct Plan – Growth Funds						
1	SBI Large & Midcap Fund	5144.64	18.80	0.90	0.90	0.80	0.19
2	Mirae Asset Emerging Bluechip Fund	21263.17	20.60	0.99	1.15	5.66	0.24
3	Principal Emerging Bluechip Fund	3123.47	19.97	0.97	0.95	1.47	0.20
4	BOI AXA Large & Mid Cap Equity Fund	211.27	19.43	0.89	0.91	2.79	0.20
5	UTI Core Equity Fund	1195.86	20.18	0.96	0.81	-0.06	0.17

(Source: moneycontrol.com¹⁷⁶)

4.8 BEST GROWTH MUTUAL FUNDS TO INVEST IN INDIA.

Table 4.05

Fund	NAV (in Rs.)	Net Asset s (Rs. Cr.)	Min SIP Investme nt	1 Yr (%)	3 yr (%)	5 Yr (%)	2020(%)
IDFC Infrastructure Growth Fund	23.44	655	100	99.2	17	18.8	6.3
L & T Emerging Business Fund	42.648	7284	500	93.5	21	18.2	15.5
DSP BlackRock Natural Resources and New Enrgy Funds	52.617	735	500	93.2	15	16.9	11.5
Franklin Build India Fund	63.89	1077	500	92.3	19	14.2	5.4
Aditya Birla Sun Life Samll cap Fund	54.51	2923	1000	79.7	17	11.6	19.8
Aditya Birla Sun Life banking and Financial Services Fund	39.36	2195	1000	77.9	16	12.5	1.1
IDFC Tax Advantage (ELSS) fund	94.39	3339	500	76	21	17.4	18.7
ICICI Prudential Banking and Financial Services Fund	85.99	5097	100	72.9	17	13.2	-5.5
SBI Small Cap Fund	99.28	9714	500	70.4	26	21.6	33.6
DSP BlackRock Equity Opportunities Fund	363.61	6956	500	66.4	21	15.4	14.2

(Source: fincash.com¹⁷⁷)

4.9 PERFORMANCE OF GROWTH MUTUAL FUNDS

1. IDFC Infrastructure Fund Growth

Table 4.09 (1)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
IDFC Infrastructure Fund Growth	23.44	655	100	99.2	17	18.8	6.3

(Source: fincash.com¹⁷⁸)

The speculation objective of the plan is to look to create long haul capital development through a functioning broadened arrangement of prevalently value and value related instruments of organizations that are taking an interest in and profiting from development in Indian foundation and infrastructural related exercises. In any case, there can be no confirmation that the speculation objective of the plan will be figured it out.

IDFC Infrastructure Fund Growth.

Table 4.09(2)

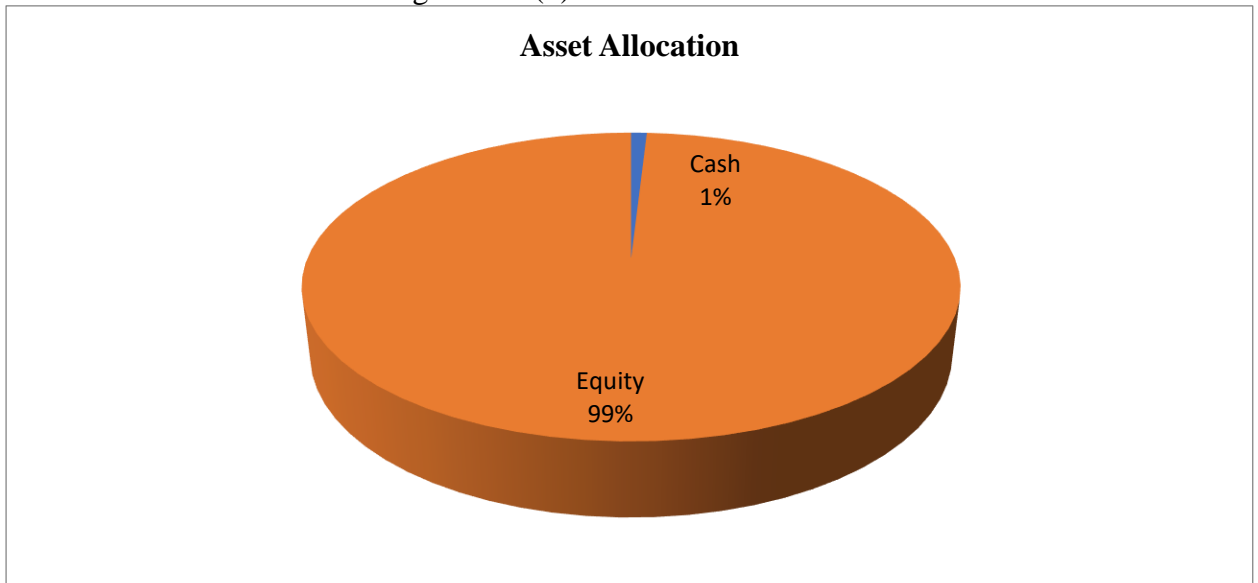
Launch date	8 th march 2011
Net Asset (in Rs. Cr.)	Rs. 659 as on 31 st Aug, 2021
Net Asset Value(NAV)	Rs.24.26
Assets Management Company (AMC)	IDFC Asset Management Company Limited.
Category	Equity - Sectoral.
Risk	High
Sharpe Ratio =(the portfolio return- risk-free return)	3.21
Expense ratio= (total fund costs/ total fund assets.	2.35
Alpha Ratio.= (End Price + DPS – Start Price)/Start Price	0
Information Ratio= (active return of a portfolio / the tracking error)	0

Minimum Investment.	5,000
Minimum SIP Investment.	100
Exit load	0-365 Days (1%), 365 Days and above(NIL).
Sub category	Sectorial

(Source: moneycontrol.com)¹⁷⁹

Asset Allocation – based on Assets Class and its value in percentage

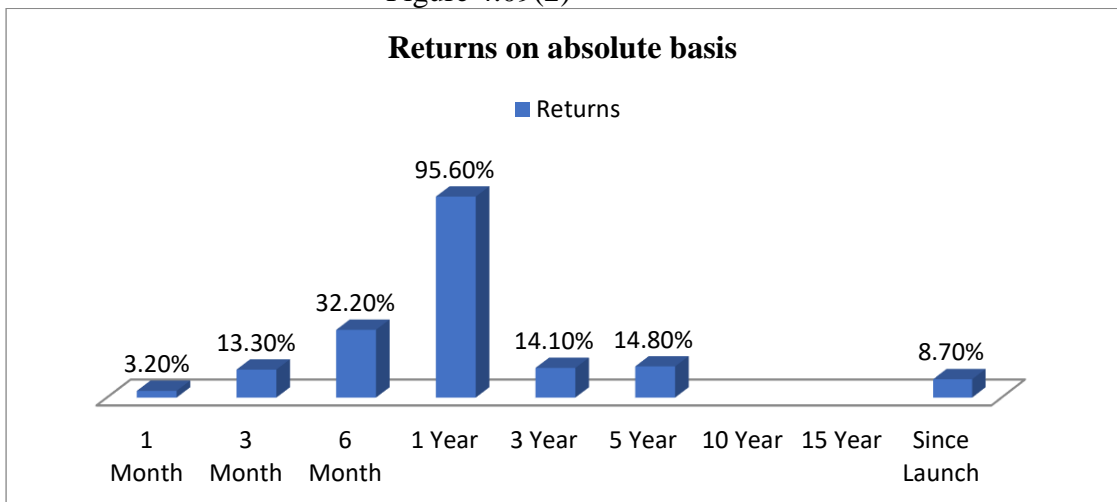
Figure 4.09(1)



(Source: fincash.com)¹⁸⁰

Returns for IDFC Infrastructure Fund Returns up to 1 year are on absolute basis & more than 1 year are on CAGR (Compound Annual Growth Rate) basis. as on 16 Sep 21.

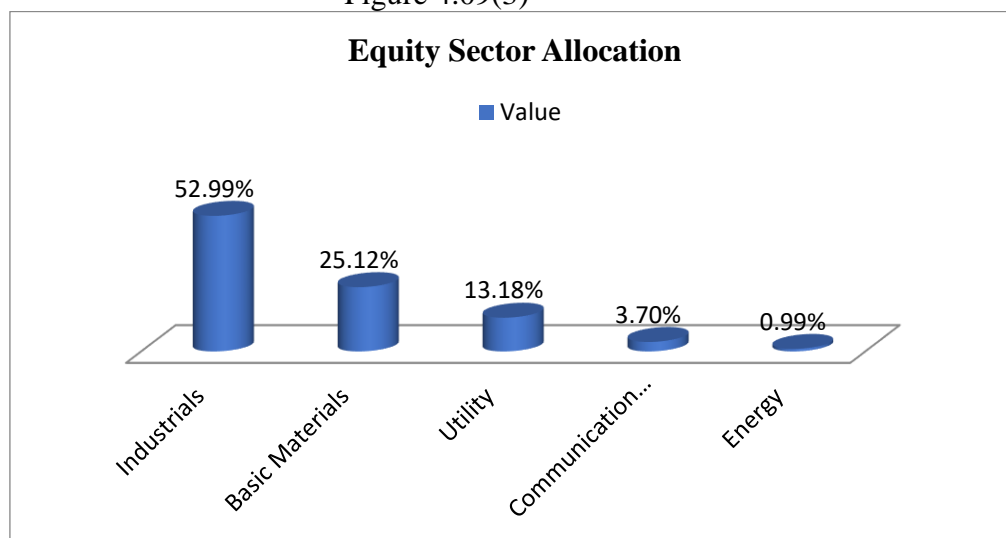
Figure 4.09(2)



(Source: fincash.com)¹⁸¹

Equity Sector Allocation based on weightage (in percentage) of different sector

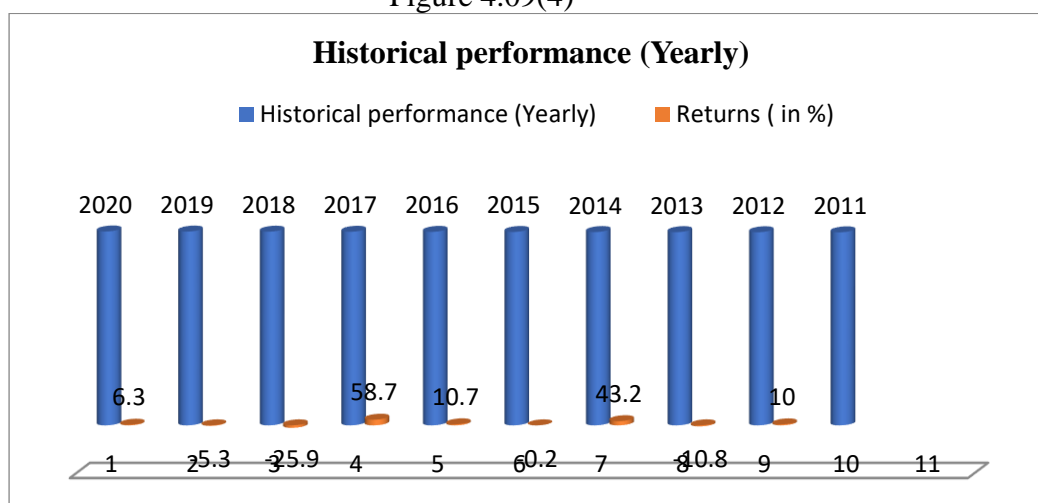
Figure 4.09(3)



(Source: fincash.com)¹⁸² - Equity Sector Allocation

Historical performance (Yearly) on absolute basis and Returns (in %)

Figure 4.09(4)



(Source: fincash.com)¹⁸³

2. L&T Emerging Businesses Fund

Table 4.09(3)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
L & T Emerging	42.64	7284	500	93.5	21	18.2	15.5

Business Fund	8						
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(Source: valueresearchonline.com)¹⁸⁴

L&T Emerging Businesses Fund.

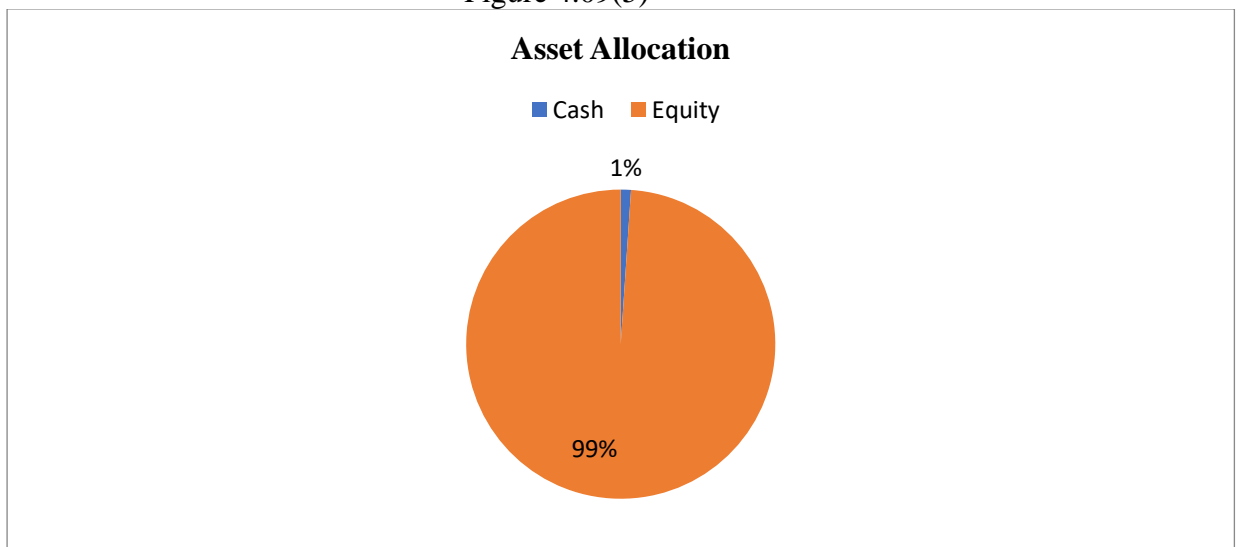
Table 4.09(4)

Launch date	12 th May 2014
Net Asset(in Rs. Cr.)	Rs. 7,248 as on 31 st Aug, 2021
Net Asset Value(NAV)	Rs.42.648
Assets Management Company (AMC)	L& T investment Management Limited.
Category	Equity - Sectoral.
Risk	High
Sharpe Ratio =(the portfolio return- risk-free return)	4.05
Expense ratio= (total fund costs/ total fund assets.	1.95
Alpha Ratio.= (End Price + DPS – Start Price)/Start Price	0
Information Ratio= (active return of a portfolio / the tracking error)	0
Minimum Investment.	5,000
Minimum SIP Investment.	500
Exit load	0-365 Days (1%), 365 Days and above(NIL).
Sub category	Sectorial

(Source: valueresearchonline.com)¹⁸⁵

Asset Allocation – based on Assets Class and its value in percentage

Figure 4.09(5)

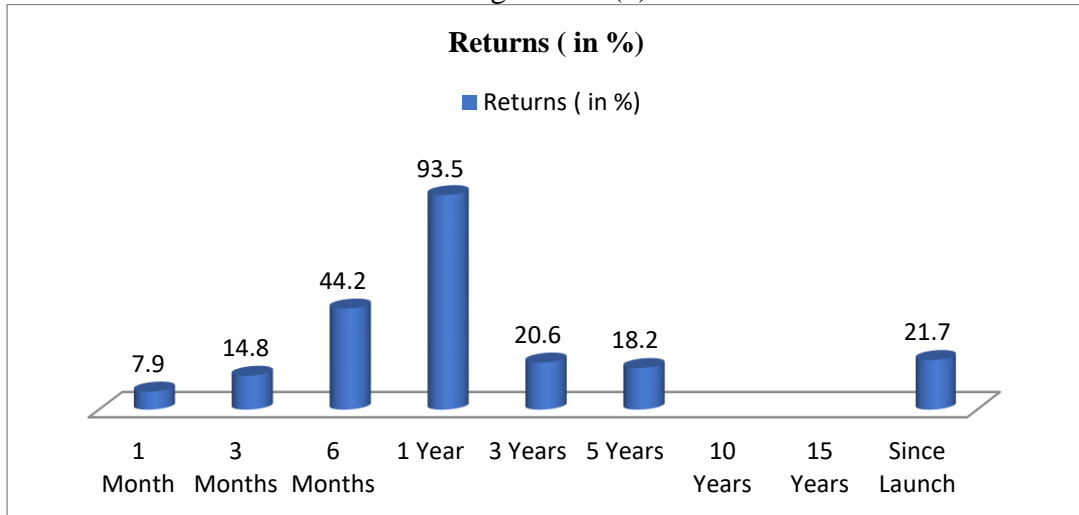


(Source: valueresearchonline.com)¹⁸⁶

Returns for L&T Emerging Businesses Fund

Returns up to 1 year are on absolute basis & more than 1 year are on CAGR (Compound Annual Growth Rate) basis. as on 28 Sep 21.

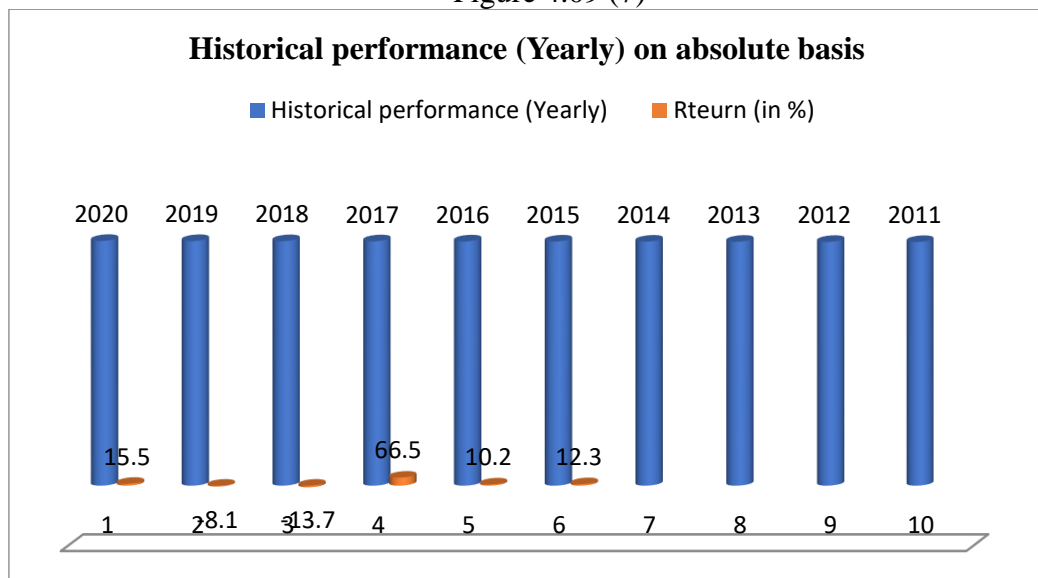
Figure 4.09(6)



(Source: fincash.com)¹⁸⁷- (based on Duration of Time & Returns in %)

Historical performance (Yearly) on absolute basis.

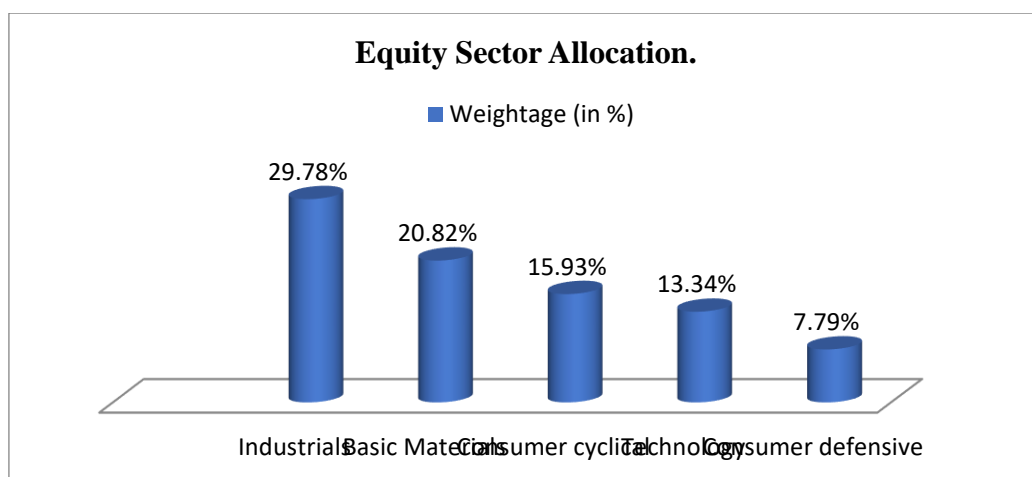
Figure 4.09 (7)



(Source: fincash.com)¹⁸⁸

Equity Sector Allocation.

Figure 4.09 (8)



(Source; . etmoney.com ¹⁸⁹)

3. DSP BlackRock Natural Resources and New Energy Fund.

Figure 4.09(5)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
DSP BlackRock Natural Resources and New Energy Funds	52.617	735	500	93.2	15	16.9	11.5

(Source; etmoney.com ¹⁹⁰)

DSP BlackRock Natural Resources and New Energy Fund Growth.

Table 4.09(6)

Launch date	25 th April 2008
Net Asset Value(NAV)	Rs.54.527
Net Asset(in Rs. Cr.)	Rs. 735 as on 31 st Aug, 2021
Category	Equity - Sectoral.
Assets Management Company (AMC)	DSP BlackRock Invmt Managers Pvt. Ltd..
Risk	High
Expense ratio= (total fund costs/ total fund assets.	2.32
Sharpe Ratio =(the portfolio return-risk-free return)	2.06
Information Ratio= (active return of a portfolio / the tracking error)	0

Alpha Ratio.= (End Price + DPS – Start Price)/Start Price	0
Minimum Investment.	1,000
Minimum SIP Investment.	500
Exit load	0-12 Months (1%),12 Months and above(NIL).
Sub category	Sectorial

(Source;. etmoney.com ¹⁹¹)

Expense ratio refers to the annual recurring costs as a percentage of the net assets of the scheme.from the investor’s point view 0.5% to 0.,75 % is considered as good expenses ratio and more than 1.50% is a high. Here expense ratio is 2.32 wich is considered high.

The expenses ratio for mutual funds , which is considered As an active funds, is higher than the other passive funds

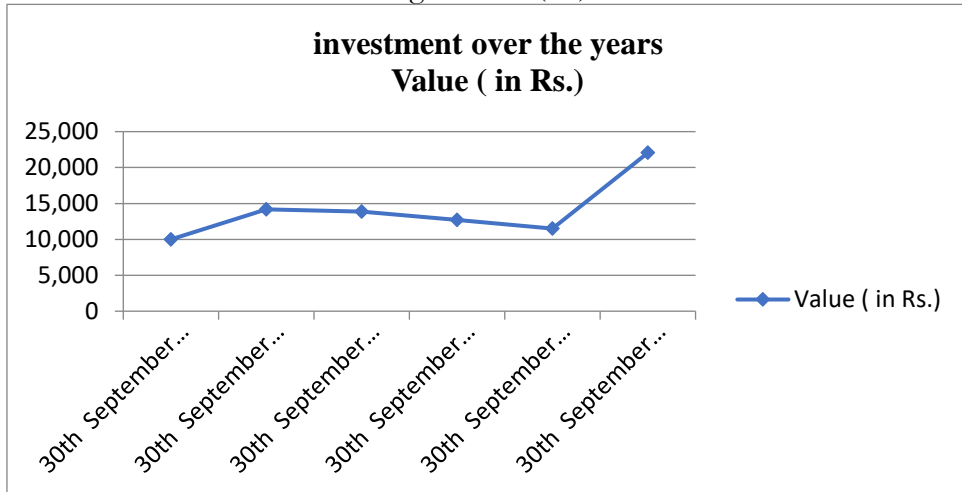
Sharpe’s performance index gives a single value to be used for the performance ranking of various funds or portfolios.

- ▶ the grading threshold of the Sharpe ratio.
- ▶ <1 – Not good
- ▶ 1-1.99 – Ok
- ▶ 2-2.99 – Really good
- ▶ >3 – Exceptional

In the above figure the Sharpe ratio is 2.06, which shows that performace of the funds is really good. Hence, the Sharpe measure reflects the excess reurn on a portfolio per unit of its total risk(standard deviation)

Growth of 10,000 investment over the years. (from 2016 to 2021)

Figure 4.09 (10)

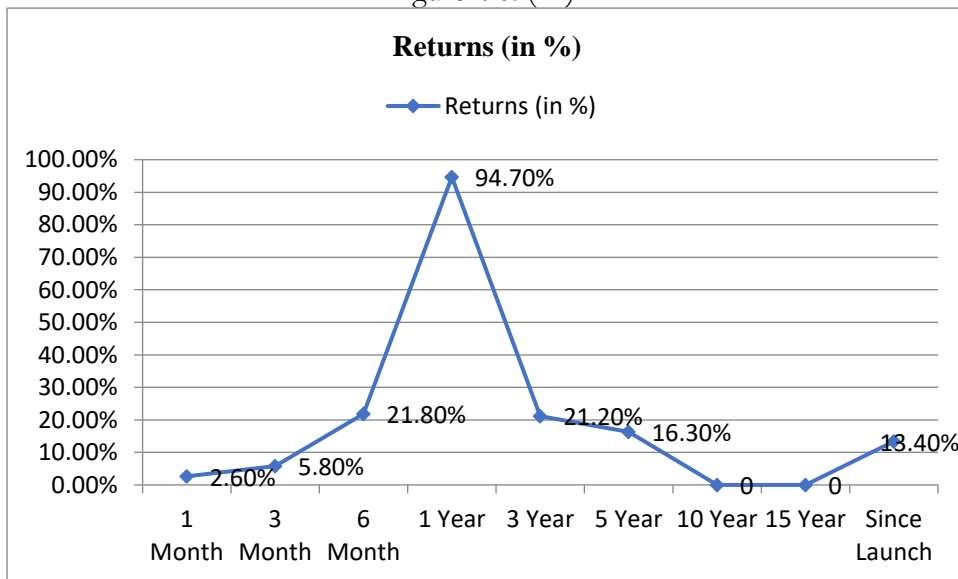


(Source;.fincash.com¹⁹²)

Returns for DSP BlackRock Natural Resources and New Energy Fund.

Returns up to 1 year are on absolute basis & more than 1 year are on CAGR (Compound Annual Growth Rate) basis. as on 8th Oct , 21.

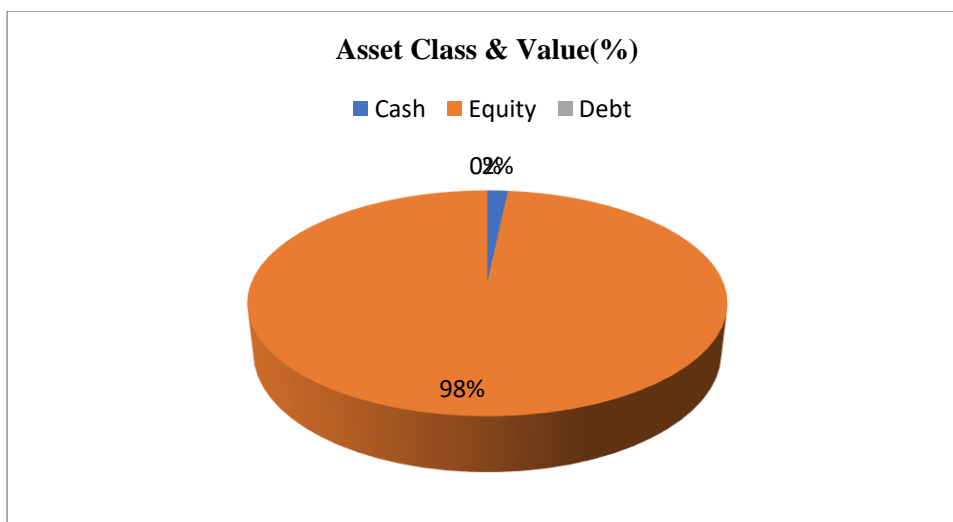
Figure 4.09(11)



(Source;.fincash.com¹⁹³)

Asset Allocation.

Figure 4.09 (12)



(Source;.fincash.com¹⁹⁴)

4. Franklin Build India Fund.

Table 4.09(7)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
Franklin Build India Fund	63.89	1077	500	92.3	19	14.2	5.4

(Source;. franklintempletonindia.com ¹⁹⁵)

Franklin Build India Fund (Growth) Table 4.09(8)

Launch date	4 th Sept 2009
Net Asset(in Rs. Cr.)	Rs. 1077 as on 31 st Aug, 2021
Net Asset Value(NAV)	Rs.66.2106
Assets Management Company (AMC)	Franklin Templeton Asst Mgmt(IND)Pvt Ltd.
Category	Equity - Sectoral.
Risk	High
Sharpe Ratio =(the portfolio return- risk-free return)	2.29

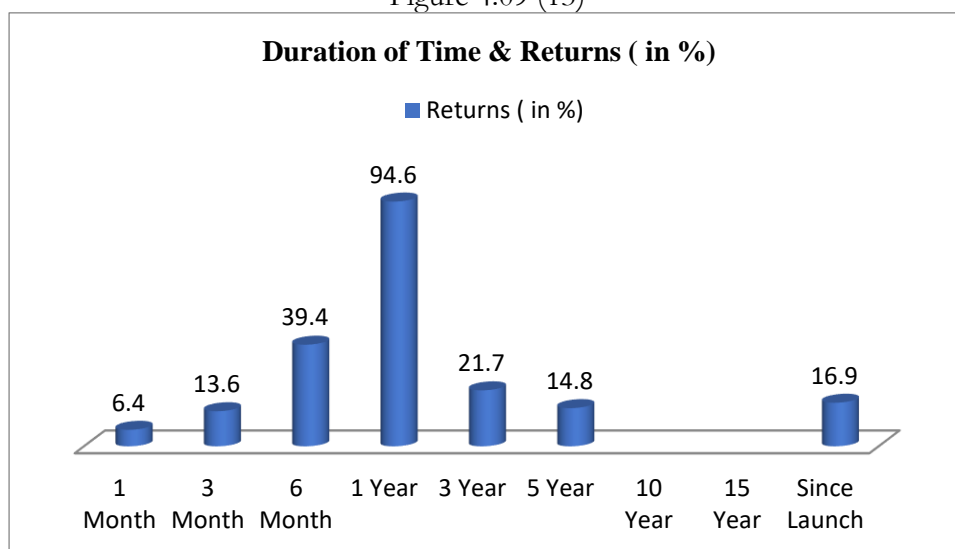
Expense ratio= (total fund costs/ total fund assets.	2.4
Alpha Ratio.= (End Price + DPS – Start Price)/Start Price	0
Information Ratio= (active return of a portfolio / the tracking error)	0
Minimum Investment.	5,000
Minimum SIP Investment.	500
Exit load	1% for 0-12 Months NIL for 12 Months and more
Sub category	Sectorial

(Source: franklintempletonindia.com ¹⁹⁶)

Returns for Franklin Build India Fund.

Returns up to 1 year are on absolute basis & more than 1 year are on CAGR (Compound Annual Growth Rate) basis. as on 12 Oct 21.

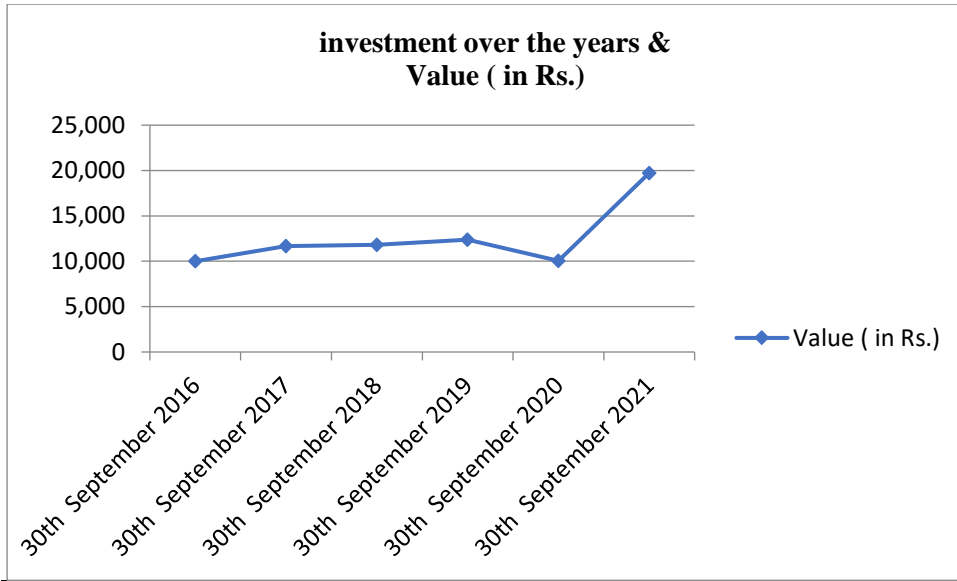
Figure 4.09 (13)



(Source: franklintempletonindia.com ¹⁹⁷)

Growth of 10,000 investment over the years.

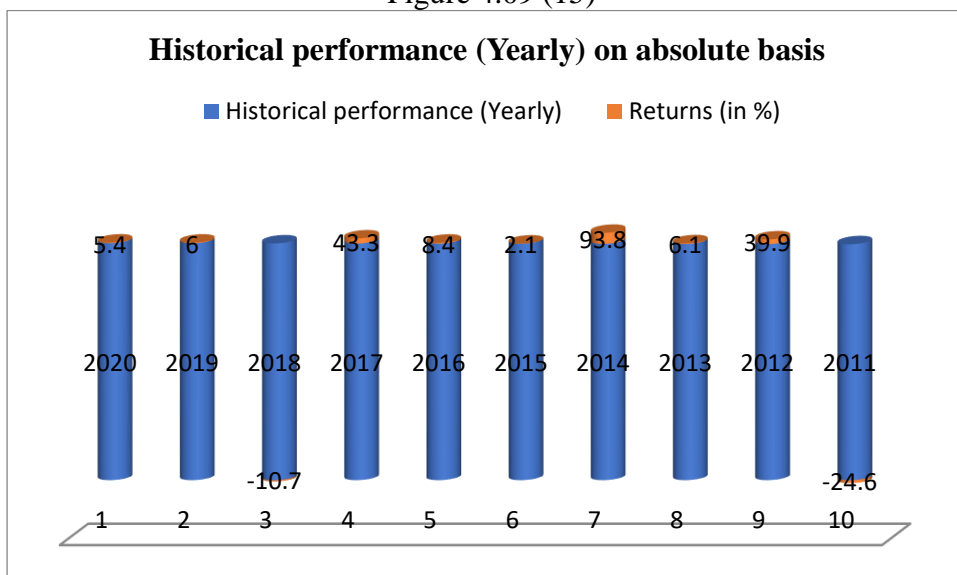
Figure 4.09 (14)



(Source; franklintempletonindia.com ¹⁹⁸)

Historical performance (Yearly) on absolute basis.

Figure 4.09 (15)



(Source; franklintempletonindia.com

¹⁹⁹)

Aditya Birla Sun Life Samll cap Fund

Table 4.09(9)

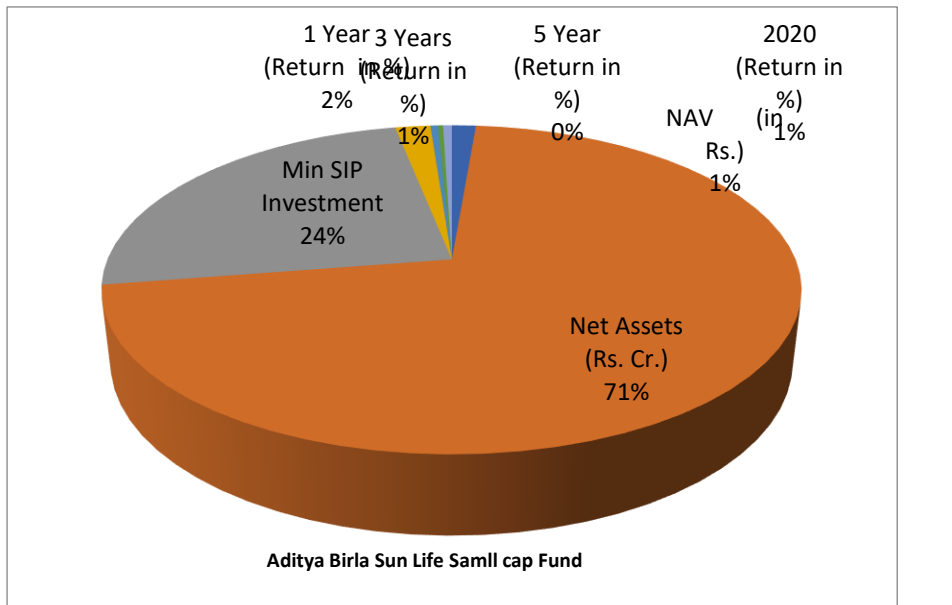
Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)

Aditya Birla Sun Life Samll cap Fund	54.51	2923	1000	79.7	17	11.6	19.8
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(Source; .mutualfund.adityabirlacapital.com ²⁰⁰)

Aditya Birla Sun Life Samll cap Fund

Figure 4.09(16)



(Source; .mutualfund.adityabirlacapital.com ²⁰¹)

Aditya Birla Sun Life banking and Financial Services Fund

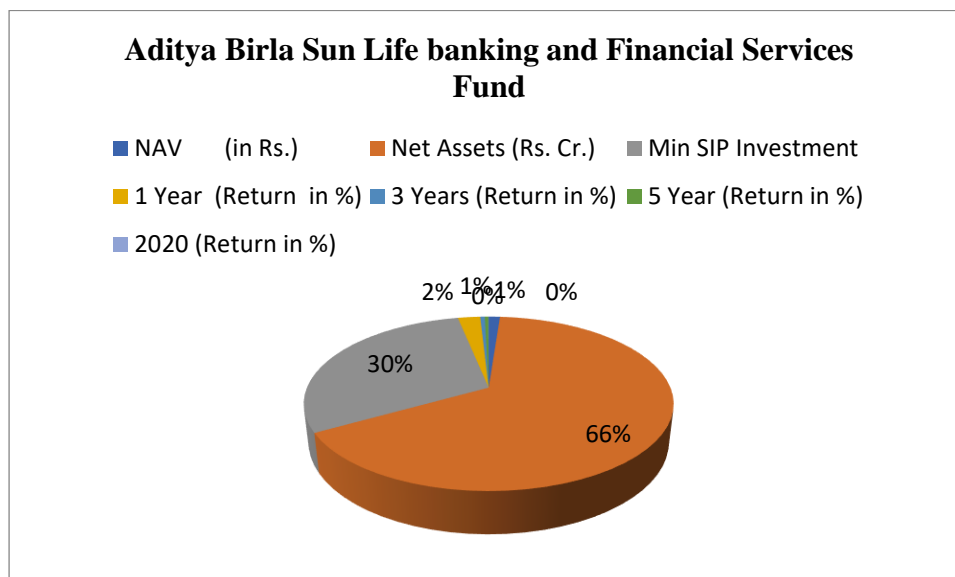
Table 4.09(10)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
Aditya Birla Sun Life banking and Financial Services Fund	39.36	2195	1000	77.9	16	12.5	1.1

(Source; .mutualfund.adityabirlacapital.com ²⁰²)

Aditya Birla Sun Life banking and Financial Services Fund

Figure 4.09(17)



(Source: mutualfund.adityabirlacapital.com ²⁰³)

IDFC Tax Advantage (ELSS) fund - Table 4.09(10)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
IDFC Tax Advantage (ELSS) fund	94.39	3339	500	76	21	17.4	18.7

(Source: valueresearchonline.com ²⁰⁴)

ICICI Prudential Banking and Financial - Table 4.09(11)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
ICICI Prudential Banking and Financial Services Fund	85.99	5097	100	72.9	17	13.2	-5.5

(Source: valueresearchonline.com ²⁰⁵)

SBI Small Cap Fund - Table 4.09(12)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
SBI Small Cap Fund	99.28	9714	500	70.4	26	21.6	33.6

(Source;.fincash.com²⁰⁶)

DSP BlackRock Equity Opportunities Fund - Table 4.09(13)

Fund	NAV (in Rs.)	Net Assets (Rs. Cr.)	Min SIP Investment	1 Year (Return in %)	3 Years (Return in %)	5 Year (Return in %)	2020 (Return in %)
DSP BlackRock Equity Opportunities Fund	363.61	6956	500	66.4	21	15.4	14.2

(Source;.fincash.com²⁰⁷)

4.10 PERFORMANCE OF (ELSS) DIRECT PLAN-GROWTH FUNDS

1. IDFC Tax Advantage (ELSS) Direct Plan-Growth

IDFC Tax Advantage (ELSS) Fund Growth - Table 4.10 (1)

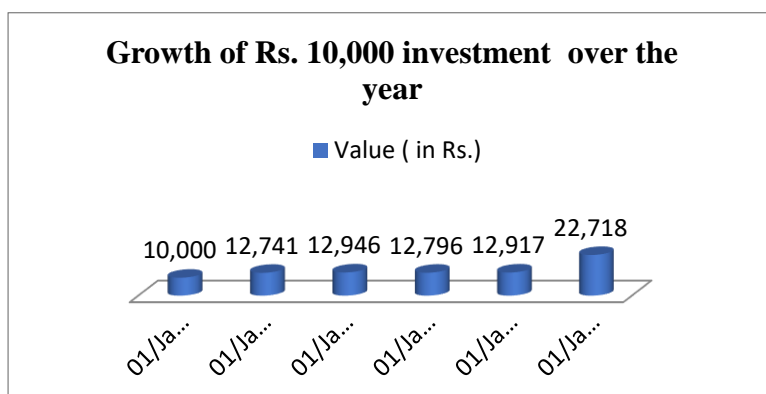
Launch date	26 th Dec 2008
Net Asset(in Rs. Cr.)	Rs. 3,339 as on 31 st Aug, 2021
Net Asset Value(NAV)	Rs.98.48
Assets Management Company (AMC)	IDFC Asset Management Company Limited.
Category	Equity - ELSS
Risk	Moderately High
Sharpe Ratio =(the portfolio return- risk-free return)	3.28
Expense ratio= (total fund costs/ total	2.06

fund assets.	
Alpha Ratio.= (End Price + DPS – Start Price)/Start Price	15.08
Information Ratio= (active return of a portfolio / the tracking error)	0.01
Minimum Investment.	500
Minimum SIP Investment.	500
Exit load	Nil
Sub category	Sectorial

(Source; . moneycontrol.com ²⁰⁸)

Growth of Rs. 10,000 investment in IDFC Tax Advantage (ELSS) Fund over the years (from 2016 to 2021) –

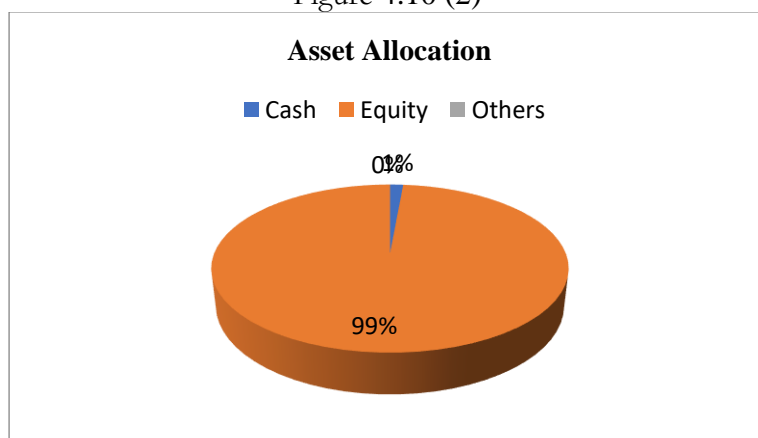
Figure 4.10 (1)



(Source; . moneycontrol.com ²⁰⁹)

Asset Allocation for IDFC Tax Advantage (ELSS) Fund

Figure 4.10 (2)

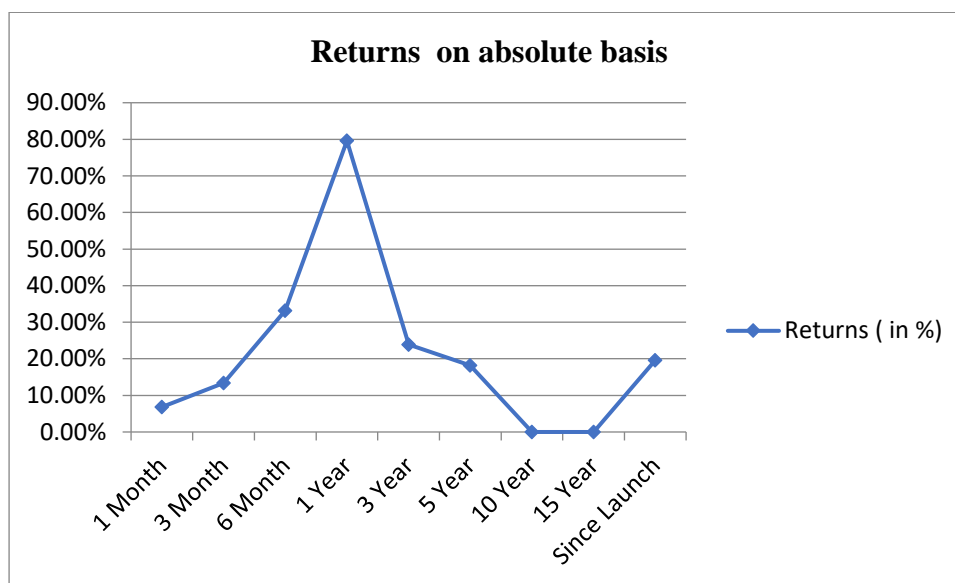


(Source; . moneycontrol.com ²¹⁰)

Returns for IDFC Tax Advantage (ELSS)

Returns up to 1 year are on absolute basis & more than 1 year are on CAGR (Compound Annual Growth Rate) basis. as on 12 Oct 21.

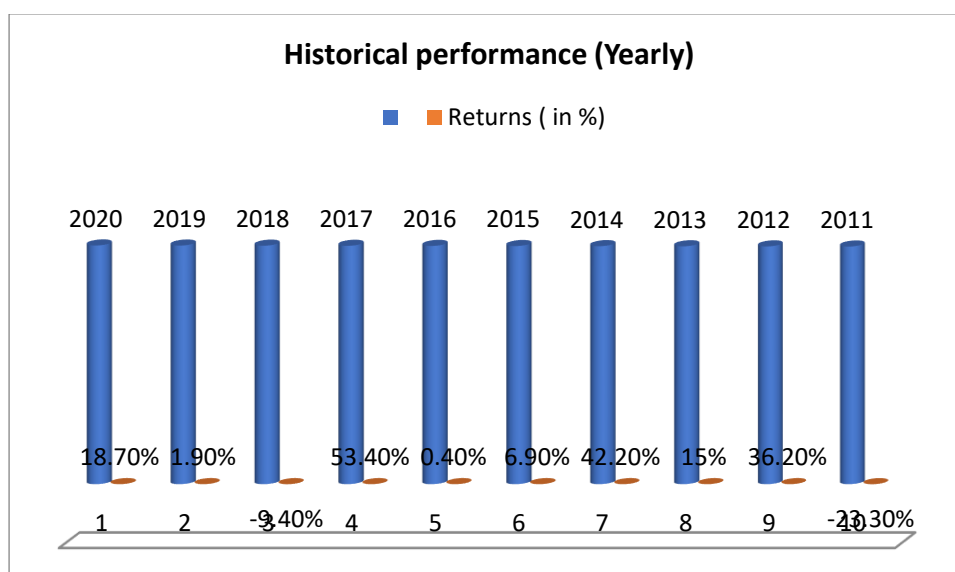
Figure 4.10 (3)



(Source;.fincash.com²¹¹)

Historical performance (Yearly) on absolute basis for IDFC Tax Advantage (ELSS)

Figure 4.10 (4)



(Source;.fincash.com²¹²)

2. L&T Tax Advantage Fund.

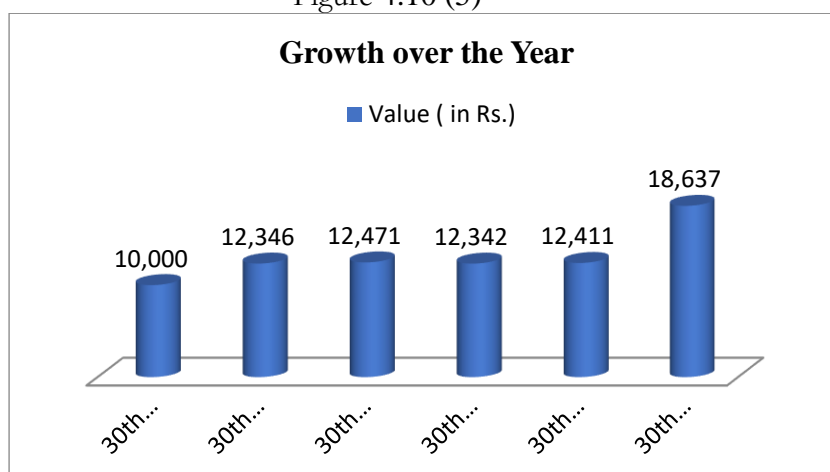
L&T Tax Advantage Fund
Table 4.10 (2)

Launch date	27 th Feb 2006
Net Asset(in Rs. Cr.)	Rs. 3,652 as on 31 st Aug, 2021
Net Asset Value(NAV)	Rs.98.48
Assets Management Company (AMC)	L&T Investment Management Ltd
Category	Equity - ELSS
Risk	Moderately High
Sharpe Ratio =(the portfolio return- risk-free return)	3.23
Expense ratio= (total fund costs/ total fund assets.	2.03
Alpha Ratio.= (End Price + DPS – Start Price)/Start Price	7.20
Information Ratio= (active return of a portfolio / the tracking error)	-0.84
Minimum Investment.	500
Minimum SIP Investment.	500
Exit load	Nil
Sub category	Sectorial

(Source:;. etmoney.com ²¹³)

Growth of Rs. 10,000 investment in *L&T Tax Advantage Fund* over the years (from 2016 to 2021)

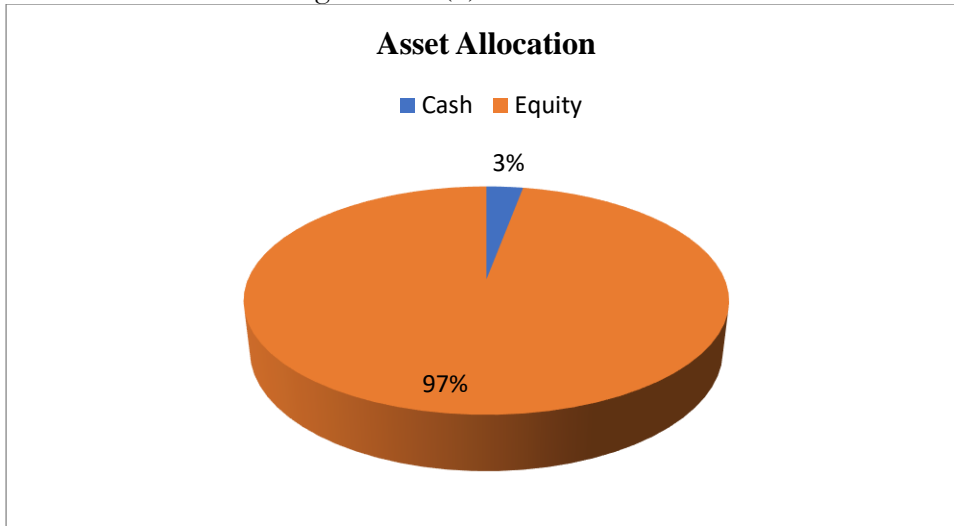
Figure 4.10 (5)



(Source: etmoney.com ²¹²)

Asset Allocation for *L&T Tax Advantage Fund*

Figure 4.10 (6)

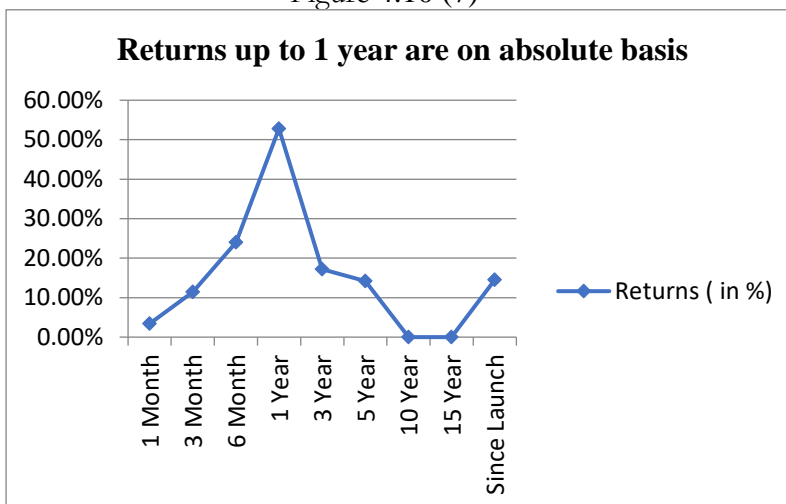


(Source: etmoney.com ²¹⁴)

Returns for *L&T Tax Advantage Fund*

Returns up to 1 year are on absolute basis & more than 1 year are on CAGR (Compound Annual Growth Rate) basis. as on 12 Oct 21

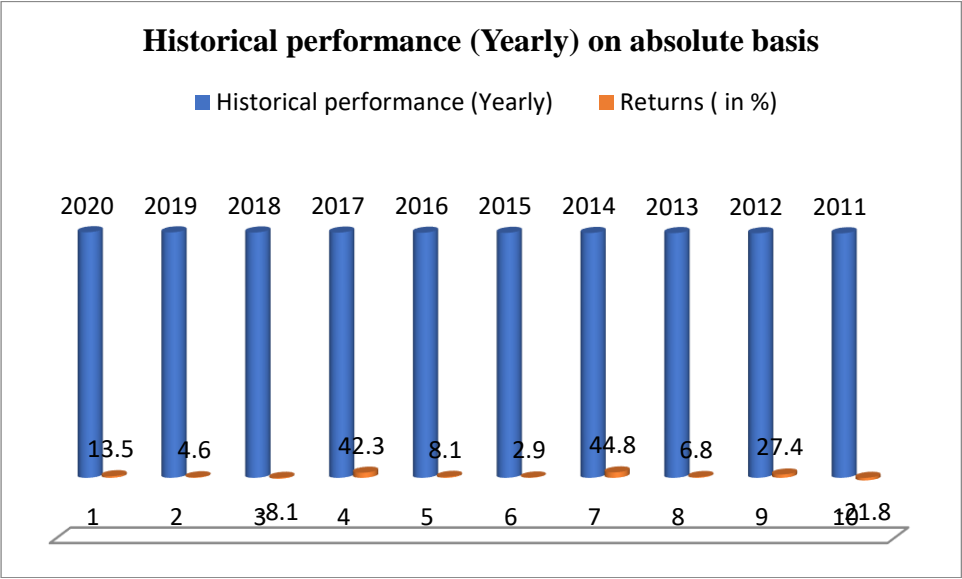
Figure 4.10 (7)



(Source: paytmoney.com ²¹⁵)

Historical performance (Yearly) on absolute basis for L&T Tax Advantage Fund

Figure 4.10 (8)



(Source: . paytmoney.com ²¹⁶)

DATA ANALYSIS

PRIMARY DATA ANALYSIS AND FINDINGS

4.11 Introduction

This study used a standard statistical software package, SPSS, to provide descriptive statistics for all years under examination. Specifically, this study provides the mean and standard deviations of the independent variables. A summary of the descriptive statistical results is provided. Aside from the descriptive statistics, this study presents the specified forms of the regression equations for all nine years. This study also performs chi-square test necessary to conclude statistical significance in the parameters and examine the R-squared and adjusted-R-squared in all of the regression equations. The data are presented in a tabular format. Since the population of mutual funds is finite, this study elects to use the population of mutual funds in the database. All attempts have been made to use the entire population of mutual funds.

When the lockdown ended there were rapid improvements in unemployment, employment, income, and consumption. But, the recovery is not complete. Most of these economic indicators have still not reached their pre-lockdown levels, and whether and when they will do so remains unclear. Further, these figures make it clear that the comprehensive view granted by household level data provides important insights beyond those possible from more aggregated indicators. The Indian central government has recently announced a new stimulus package worth 15 percent of India's GDP.

Critically, this includes schemes to incentivize job creation and to increase demand. As new data become available, we will continue to document trends over time and assess whether these stimulus measures are helping accelerate the recovery in household incomes and expenses. We will also try to understand what drives the large geographic variation in the severity of the economic shock and the speed of recovery and investigate why some individuals and households take longer to recover from the lockdown than others

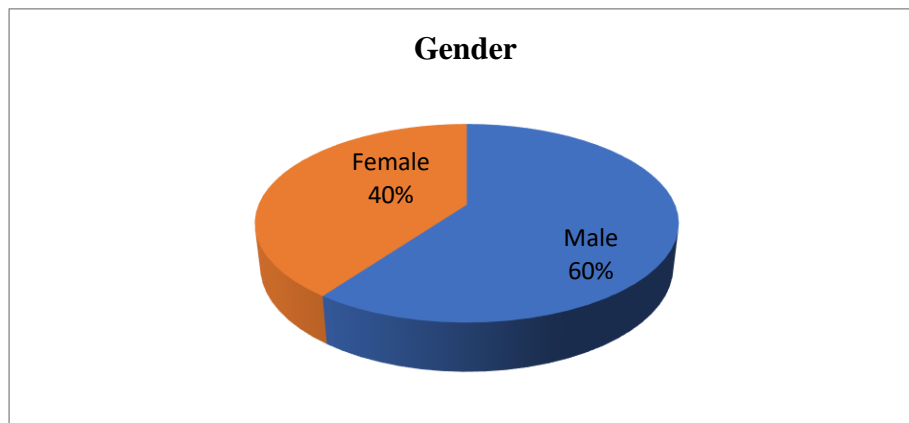
Data Analysis– Investor Perception

The research questions set out are the following

- (i) Is the investor perception towards expected returns of ELSS funds the same as Growth mutual funds?
- (ii) Do investors perceive a higher risk in investing in ELSS funds as compared to Growth mutual funds?
- (iii) Do investors have the same preference for ELSS funds as compared to other Tax saving investments?

Section A

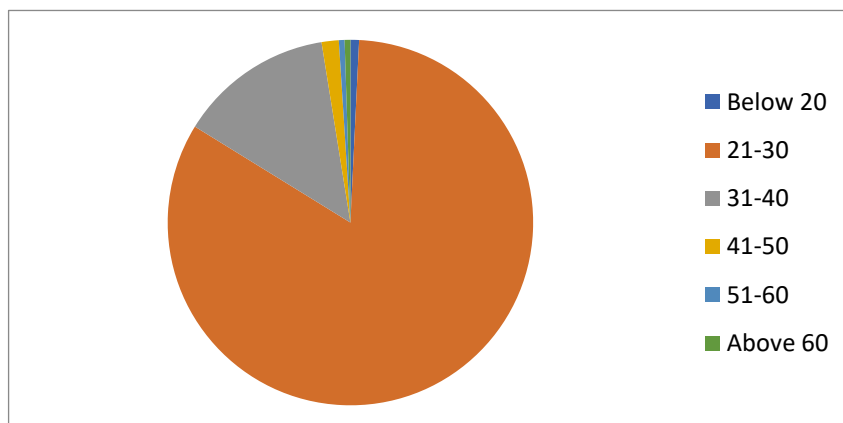
Investor Category Sample Data – Gender –
Figure 4.11(1)



Source: Primary Data – Section A- Question 2 of Investor Category Questionnaire

In the above pie chart 4.01 shows that in the sample survey of 395 people were divided into male and female along with their investment attributes in which the male respondents were 237 i.e 60% and female respondents were 158 i.e 40%

Investor Category Sample Data – Age-
Figure 4.11(2)

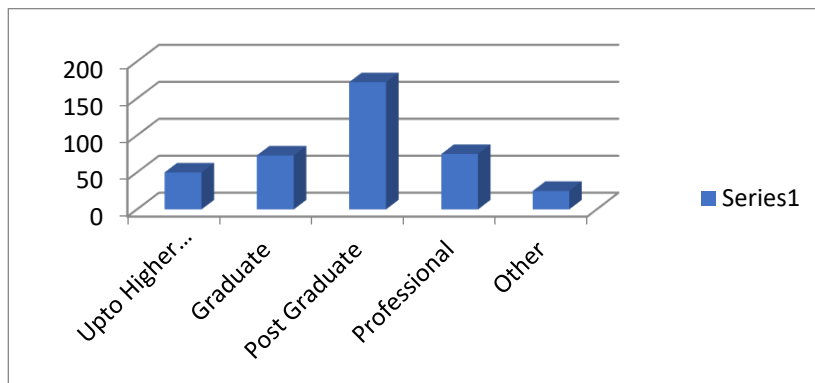


Source: Primary Data – Question 3 of Investor Category Questionnaire

The age of male and female of the investor group of respondents is shown in Chart 5.02. From the pie chart it was observed that the total no of investors less than 20 years was 3. The respondent in the age group 21 to 30 were 328. The respondent in the age group 31 to 40 were 54. The respondent in the age group 41 to 50 were 6. The respondent in the age group 51 to 60 were 2 and The respondent in the age more than 60 years were 2

Investor Category Sample Data - educational qualification

Figure 4.11(3)

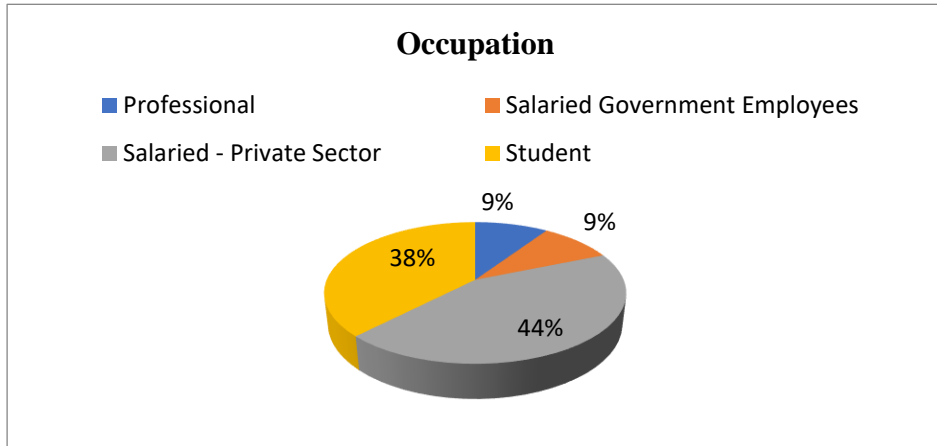


In this sample survey the educational qualification also play an important role to understand the investors behavior in financial market investment.

The educational qualification of the survey respondents is shown in Chart 4.03. Out of a total 395 respondent, Graduates were 73 , Post Graduates were 173 , Professionals were 73 higher secondary were 50 and others were 25

Investor Category Sample – Occupation

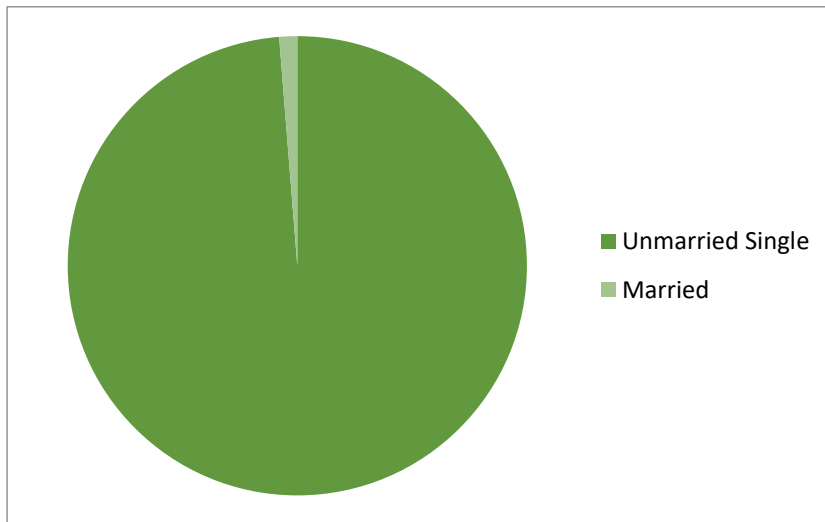
Figure 4.11(4)



There were 9% investors belongs to professional category..9% investors are belongs to Government service and 44 % of the investors were belong to slaries person from private sector and remaining 44% were students

Figure 4.11(5)

Investor Category Sample –Marital Status

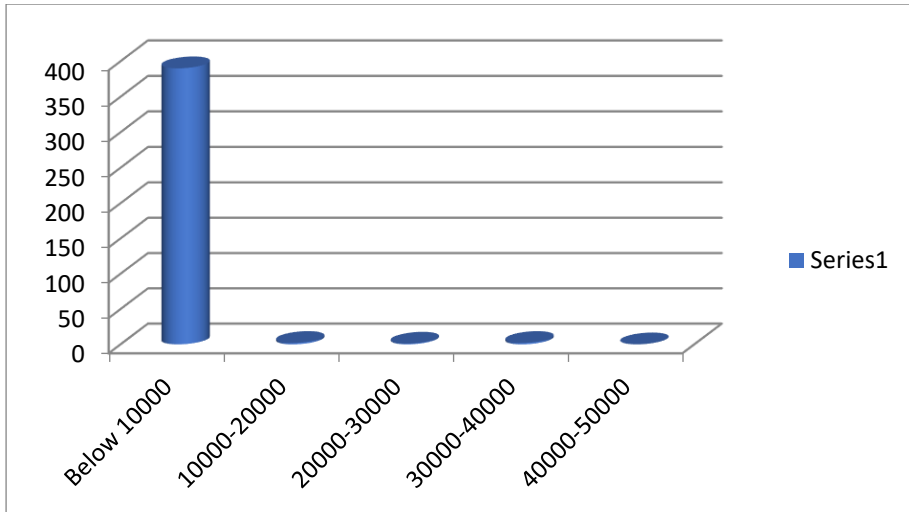


Source: Primary Data – Question 5 of Investor Category Questionnaire

55 percent of married and 45 percent of unmarried belong to the investor category in the sample survey.

Figure 4.11(6)

Investor Category Sample – Monthly Savings



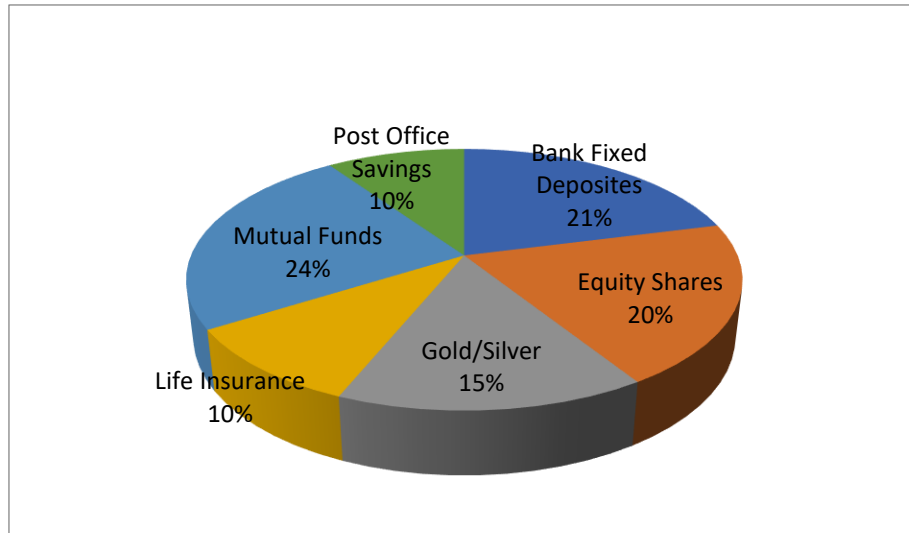
Source: Primary Data – Question 7 of Investor Category Questionnaire

As per the bar diagram, the monthly saving or investment below 10000 belong to 390 respondents, the monthly saving or investment between 10000 to 20000 belong to 2 respondents. The monthly saving or investment between 20000 to 30000 belongs to 2 respondents. The monthly saving or investments between 30000 to 40000 belong to 2 respondents. The monthly saving or investment between 40000 to 50000 belongs to 2 respondents.

4.12 QUESTIONNAIRE- INVESTOR CATEGORY- Growth Funds & ELSS Funds

SECTION B:

Section B : Figure 4.12(1)
Weightage in term of Investment in Growth mutual funds



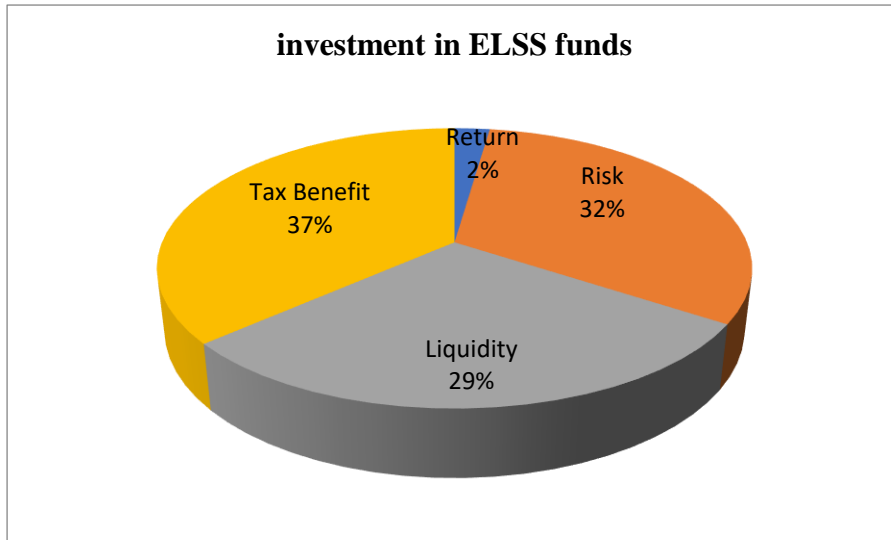
Source: Primary Data – Section B- Question 1 of Non Investor Category Questionnaire

The preference of various investment attributes is given in chart 4.1(section B). It was statistically observed that 20 % of investors willing to invest in equity shares whereas 15% people are interested to invest in gold/silver.10% of people looking to life safety and invested in life insurance products. In the growth mutual funds 24% of people are invested and desired for capital appreciation.10% people are deposited into post office saving and 21% of investors are willing to invest in bank fixed deposit to meet their future goals with secure returns.

Section B: Figure 4.12(2)
Weightage in term of Investment in ELSS Mutual funds

As shown in the diagram, investment attributes has given 37% weightage to tax benefit in term of investment in ELSS funds.29% of investment attributes has given weightage to liquidity to maintain their cashflow in the future outcomes in term of investment in ELSS funds. 32% of investment attributes has given weightage to risk

factors to in term of investment in ELSS funds and 2 % looking for return in their investment.

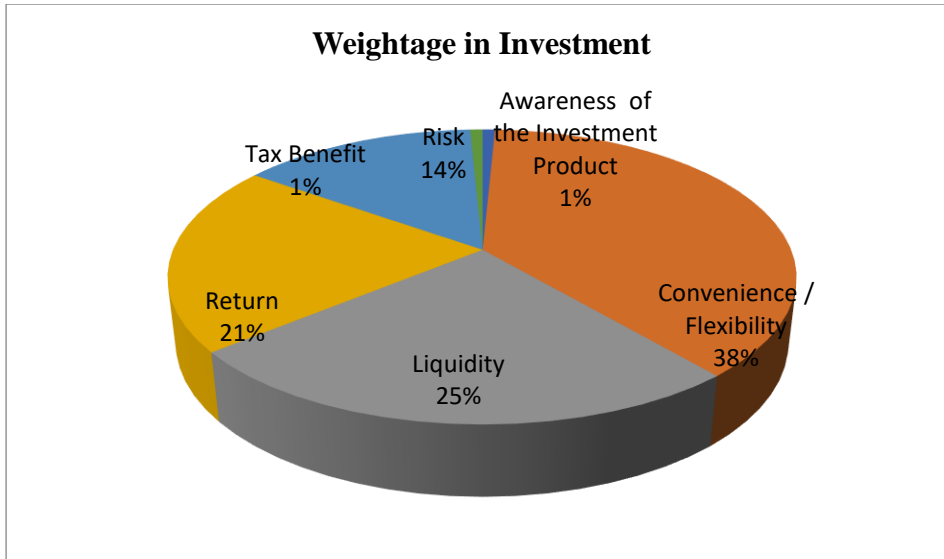


Source: Primary Data – Section B- Question 2 of ELSS Investor Category Questionnaire

Section B: Figure 4.12(3)

Weightage in term of Investment in Growth mutual funds

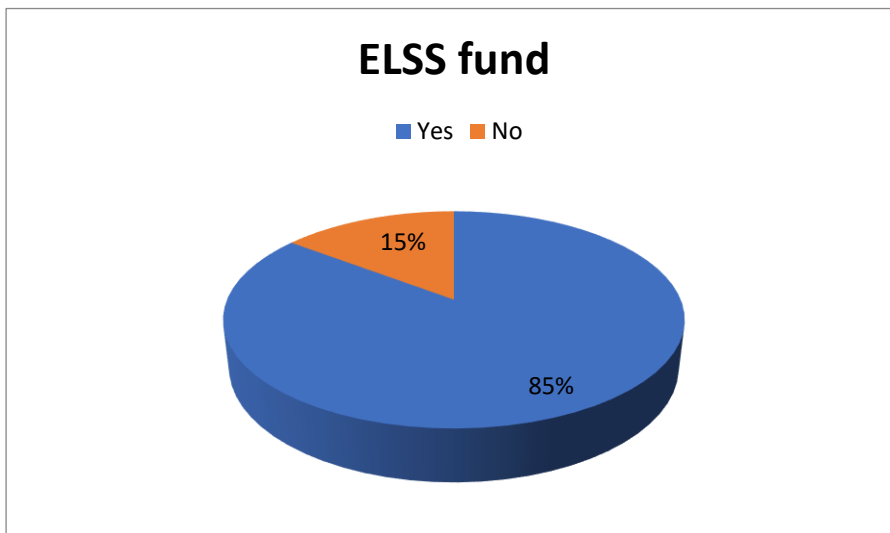
The preference of various investment attributes is given in chart 4.3(section B). According to investors point of view 38 % of investors has given weight age on Convenience / Flexibility and as per the present situation they are decided to investment in different financial alternatives. and given more weighting on Convenience / Flexibility. 25% of investors are believed on liquidity and looking for cash flow in their investment.21% of the investor are looking for return in their investment as the volatile nature of the financial markets.14% of the investors are taking risk a an important factors in their investment.1% of the investors willing to invest in growth funds but looking for tax benefits also and 1% investors are looking for awareness of the investment product



Source: Primary Data –Section B- Question 3 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(4)

Previously anytime invested in an Equity Linked Savings Scheme(ELSS) Mutual Fund in India As per the statistical data 85% of the respondents previously invested in the ELSS funds and 15% of the respondents hadn't invested previously in ELSS funds

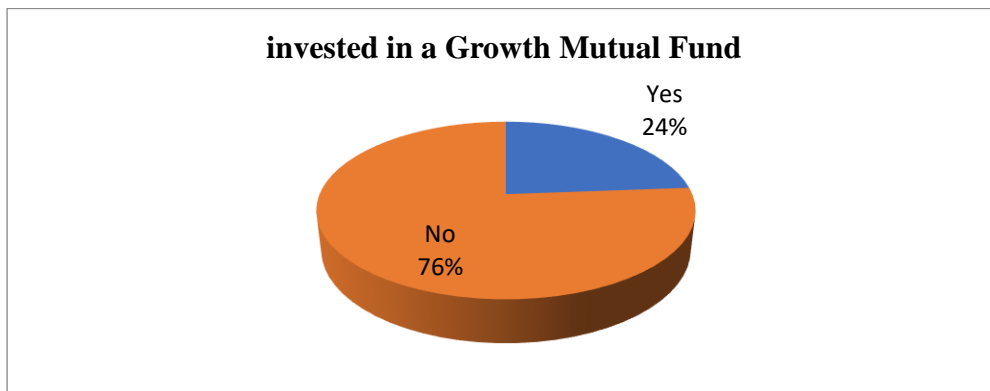


Source: Primary Data –Section B- Question 4 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(5)

Previously anytime invested in a Growth Mutual Fund in India

As a pie-chart shows that 24% of the investors have invested in the growth funds in the past and 76% of the investors have not invested due to the volatile nature of financial markets and lack of awareness to invest in the financial products.

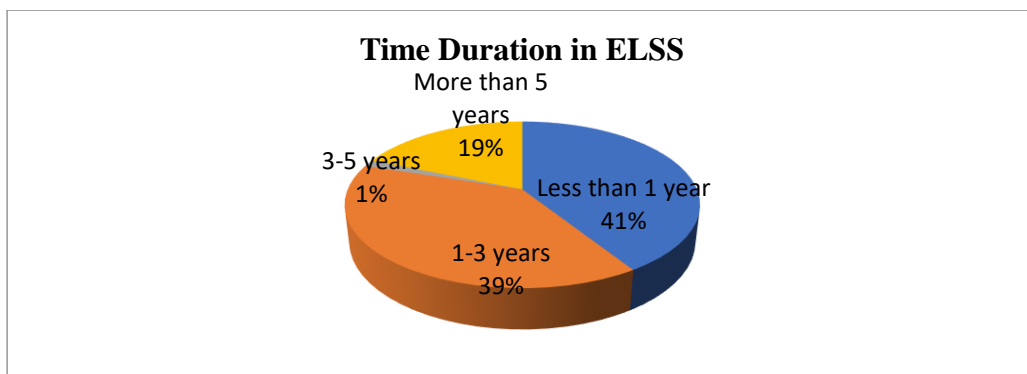


Source: Primary Data –Section B- Question 5 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(6)

Time duration for which investing in Equity Linked Savings Scheme (ELSS)

In the pie chart it was shown that 41% of respondent had invested in ELSS funds for a period less than 1 year. 39% of respondent had invested in ELSS funds for a period between 1 year to 3 years. 19% of respondent had invested in ELSS funds for a period between 3 years to 3 years and 1% of respondent had invested in ELSS funds for a period more than 5 years

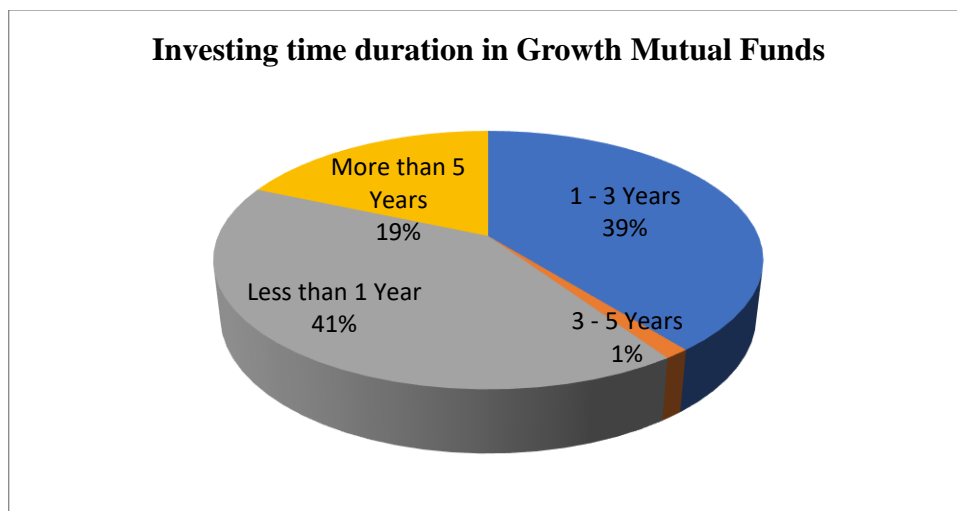


Source: Primary Data –Section B- Question 5 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(7)

How long have you been investing in Growth Mutual Funds ?

As per the survey data, the pie chart shows that 29% investors have done the investment in growth mutual fund for a period more than 5 years. 39% investors have done the investment in growth mutual fund for a period between 1 to 3 years. 1% investors have done the investment in growth mutual fund for a period between 3 to 5 years. 41% investors have done the investment in growth mutual fund for a period less than 1 year.

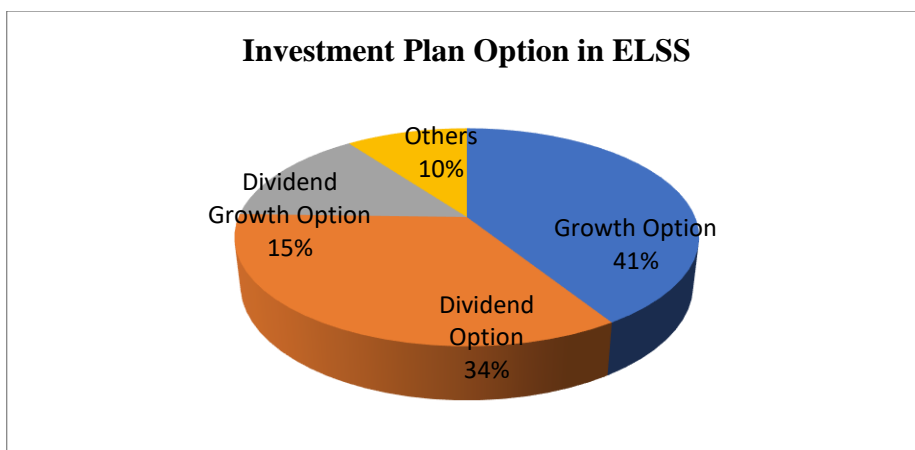


Source: Primary Data –Section B- Question 7 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(8)

In Which ELSS Investment Plan Option do you plan to invest?

It was shown in the graph that 54% investors are looking for dividend option while investing in the ELSS Investment Plan Option. 41% investors are looking for growth option while investing in the ELSS Investment Plan. 15 % investors are looking for dividend growth option while investing in the ELSS Investment Plan and remaining 10 % persons are looking for other option while investing in tax saving mutual funds.

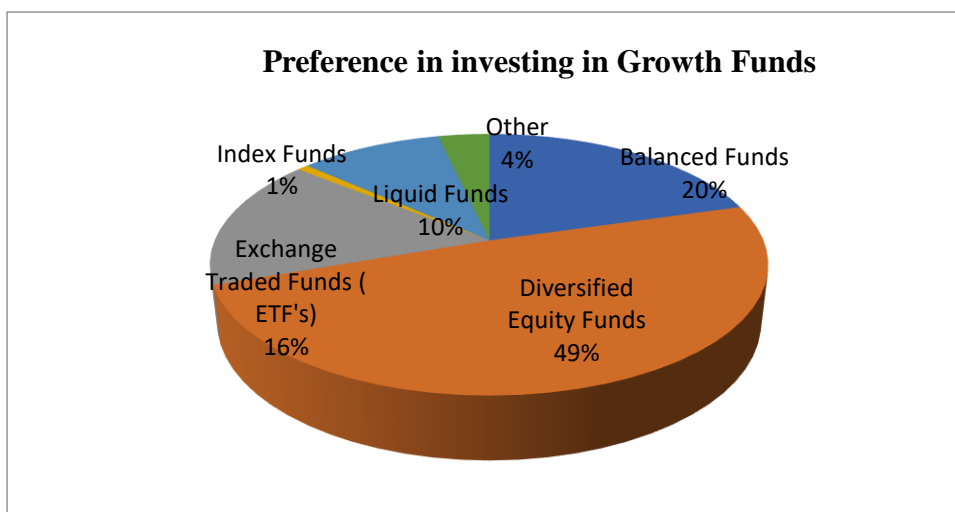


Source: Primary Data –Section B- Question 7 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(9)

What is your preference while investing in Growth mutual funds scheme in India?

The investors preference show that 15 % investment was done in balance fund to invest as per their risk aptetite.A major part of investor willing to prefers diversified equity funds to minimize the risk factors against the uncertainty of the financial markets due to underlying assests.16% of the investors have given preference to exchange traded funds. 4% prefers to index funds of NSE and BSE.10% of the people have prefers to invested in liquid fund to maintain their cashflow in the trasaction.and 4% have given preference in others funds.

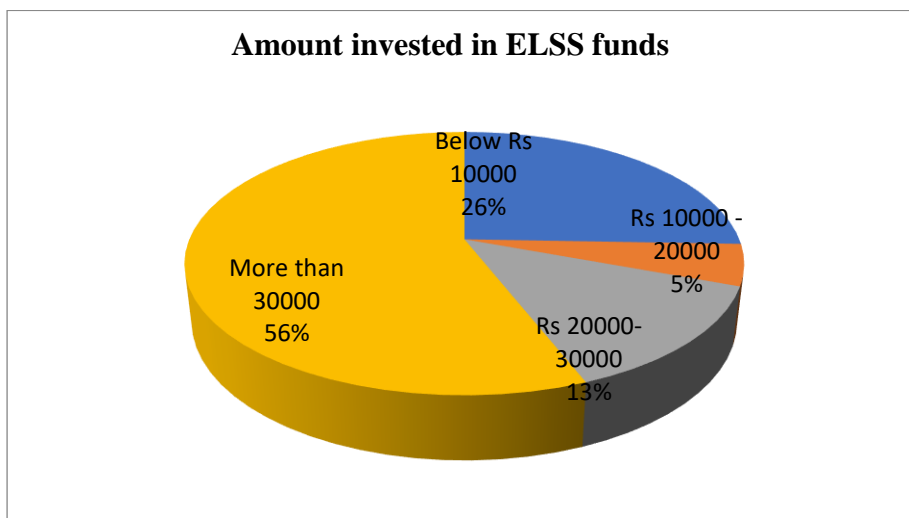


Source: Primary Data –Section B- Question 9 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(10)

How much amount you are investing in ELSS Funds in a year?

As shown in the pie chart, 56% of respondent were invested more than Rs. 30,000 in ELSS funds for getting tax benefits. 26% of people invested less than Rs. 10,000 in the ELSS funds. 13% of people invested in the range of Rs. 10,000 to Rs. 20,000 in the ELSS funds and remaining 5% of people invested in the range of Rs. 20,000 to Rs. 30,000 in the ELSS funds

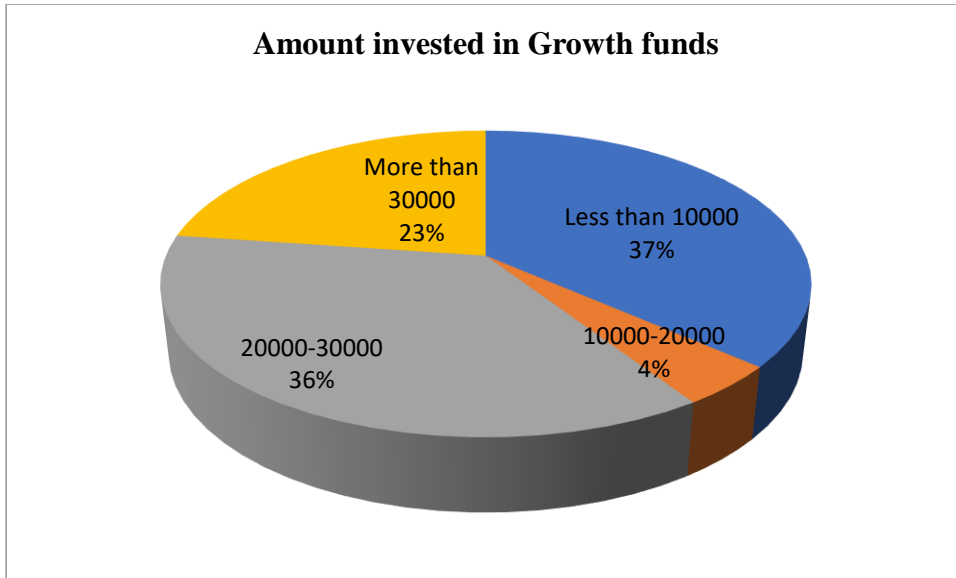


Source: Primary Data –Section B- Question 10 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(11)

How much amount you are investing in Growth Mutual Funds in a year?

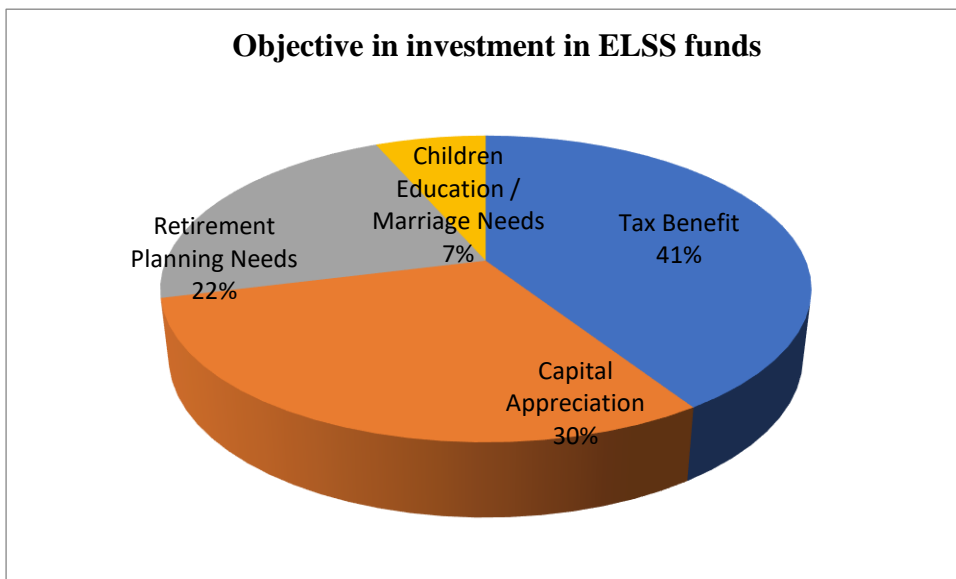
As the primary data shows that 37 % of people invested less than 10000 in growth mutual fund in India in the current situation of COVID-19 and its impact on financial markets. 4% of people invested between Rs.10000 to Rs. 20000 in growth mutual fund in India in the current situation of COVID-19 and its impact on financial markets. 36% of people invested Rs.20000 to Rs. 30000 in growth mutual fund in India and 23% of people invested more than Rs. 30000 in growth mutual fund in India believed that markets will goes up by sharp points.



Source: Primary Data –Section B- Question 11 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(12)

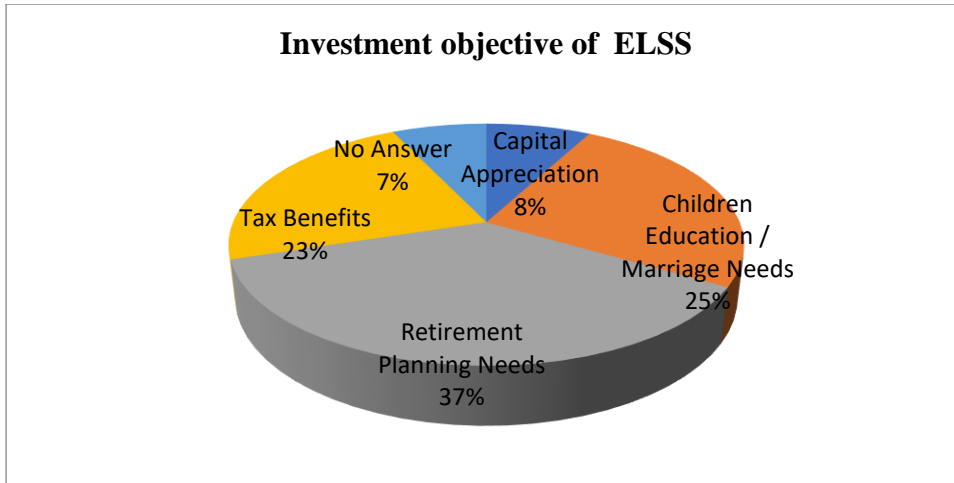
Objective in investment in ELSS funds



Source: Primary Data –Section B- Question 13 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(13)

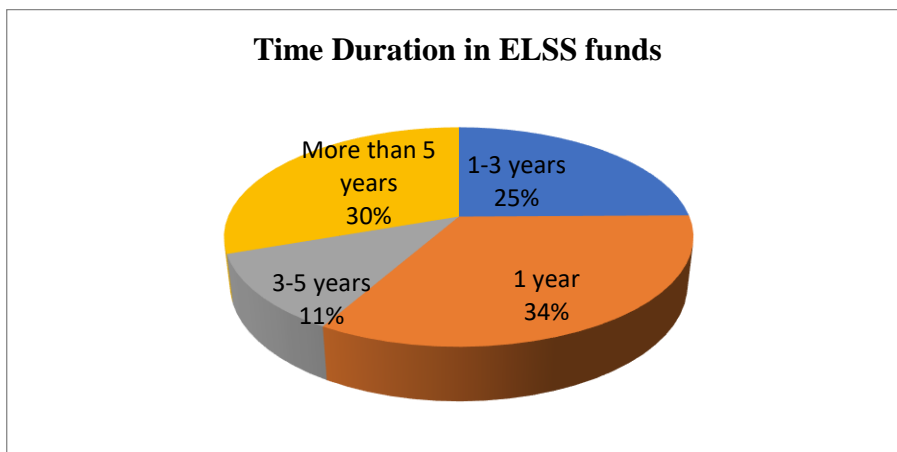
What kind of Investment Objectives do you think can be met while investing in ELSS Funds?



Source: Primary Data –Section B- Question 13 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(14)
Duration of investment in ELSS Funds?

As shown in the pie chart, 34% of people invested in ELSS mutual funds for a period Less than 1 year. 30% of people invested in ELSS mutual funds for more than 5 years and 25% of people invested in ELSS mutual funds from 1 year to 3 years and remaining 11% people invested in ELSS mutual funds from 3 year to 5 years.

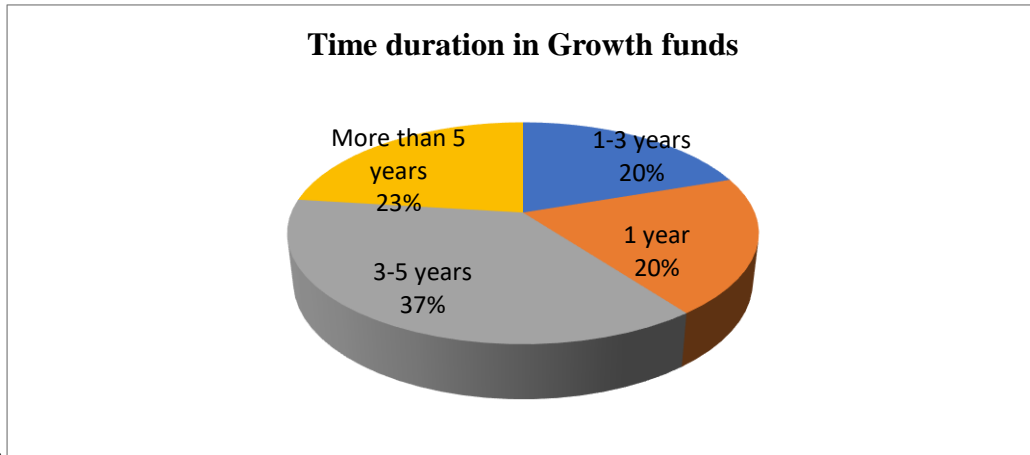


Source: Primary Data –Section B- Question 14 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(15)

How long will you remain invested in Growth Mutual Funds?

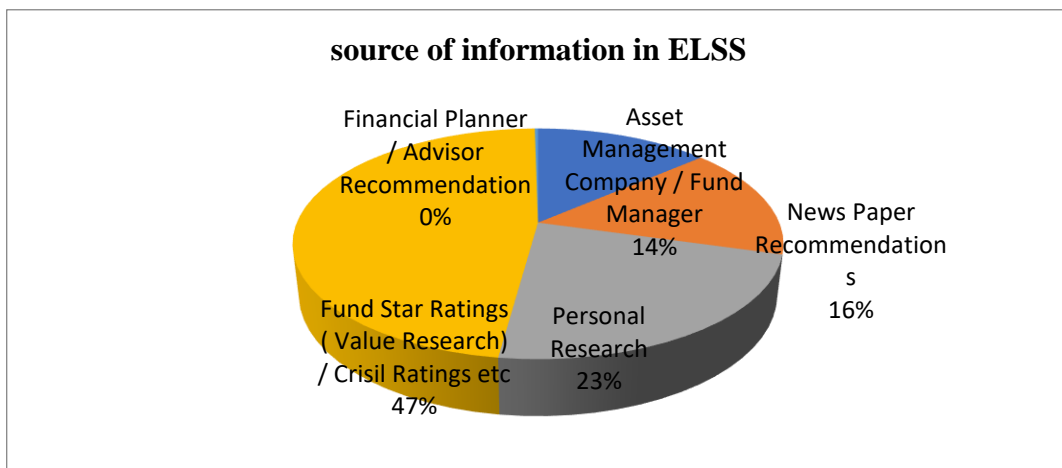
As shown in the pie chart, 23% of people invested in growth mutual funds for a period more than 5 years for capital appreciation. 37% of people invested in growth mutual funds from 3 years to 5 years and 20% of people invested in growth mutual funds from 1 year to 3 years and remaining 20% people invested for just 1 year



Source: Primary Data – Section B- Question 15 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(16)

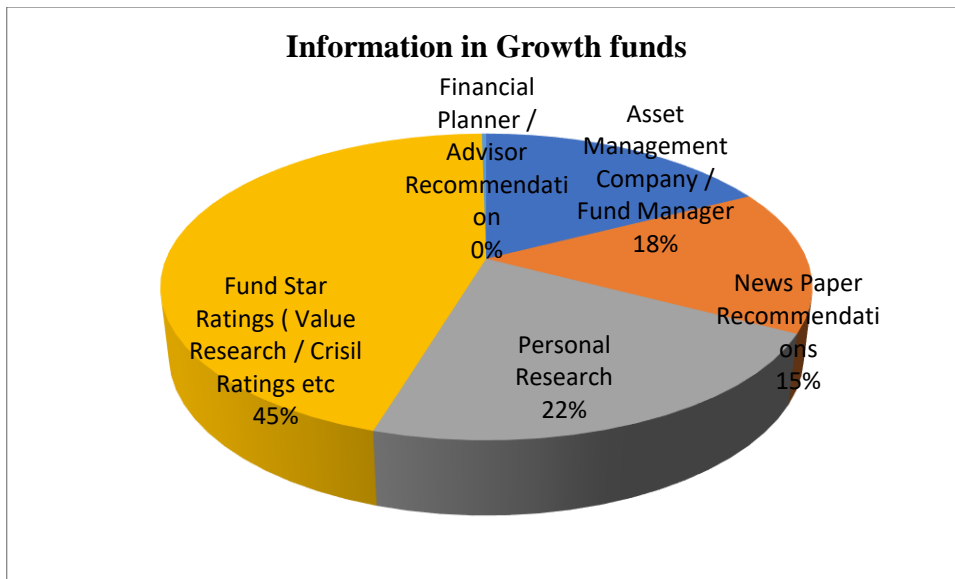
What is your source of information in selecting the ELSS Tax Saving funds for Investment?



Source: Primary Data –Section B- Question 16 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(17)

What is your source of information in selecting the Growth Mutual funds for Investment?

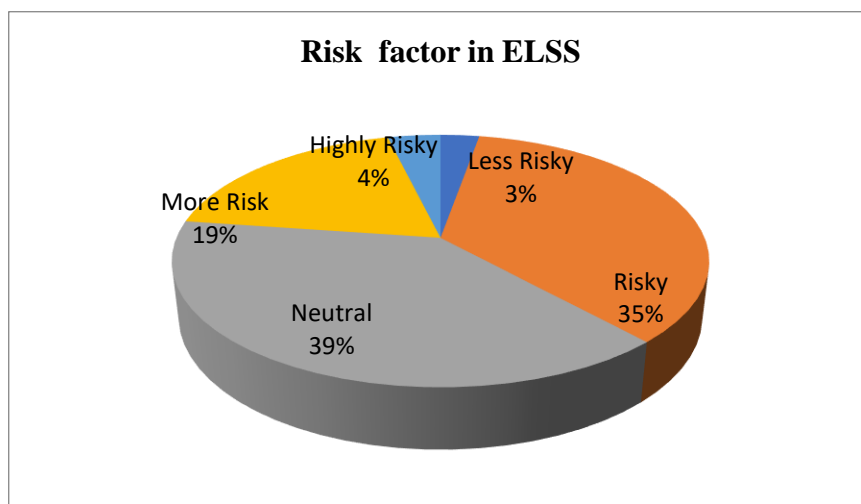


Source: Primary Data – Section B- Question 17 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(18)

According to your point of view what is the risk factors while investing in ELSS Funds?

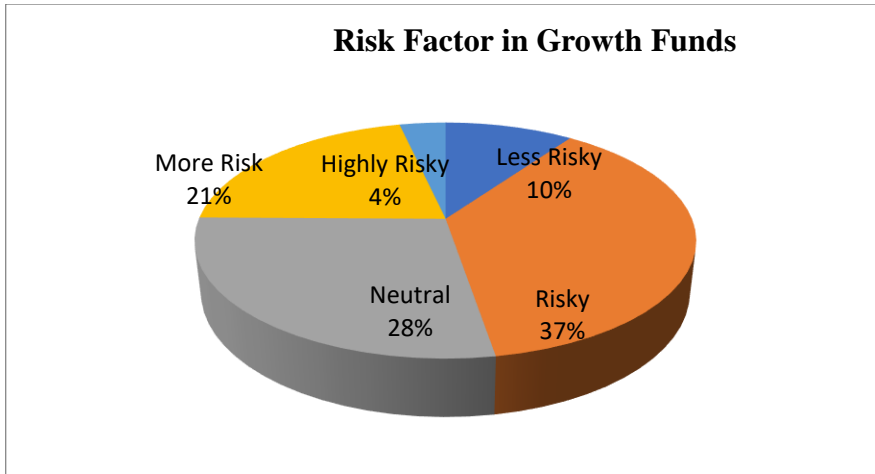
As shown in the pie chart 39% of the respondents



Source: Primary Data – Section B- Question 18 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(19)

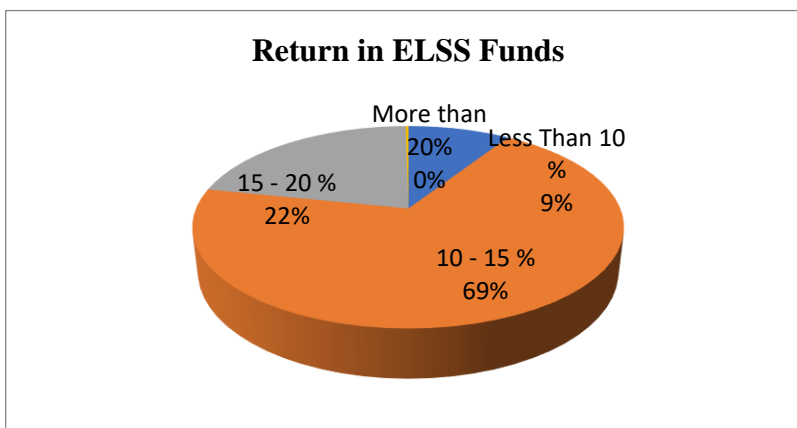
According to your point of view what is the risk factors while investing in Growth Mutual Funds ?



Source: Primary Data – Section B- Question 19 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(20)

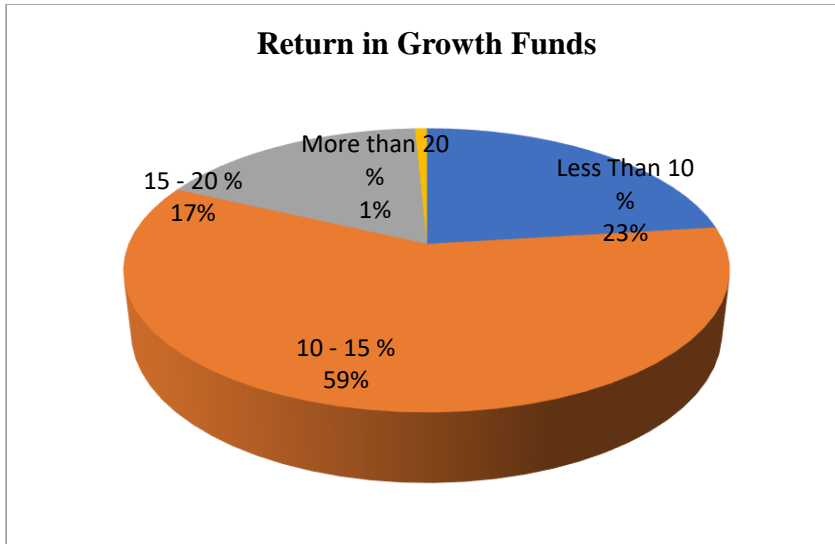
Expectation of investor of Average Annual Returns from ELSS Funds?



Source: Primary Data – Section B- Question 19 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(21)

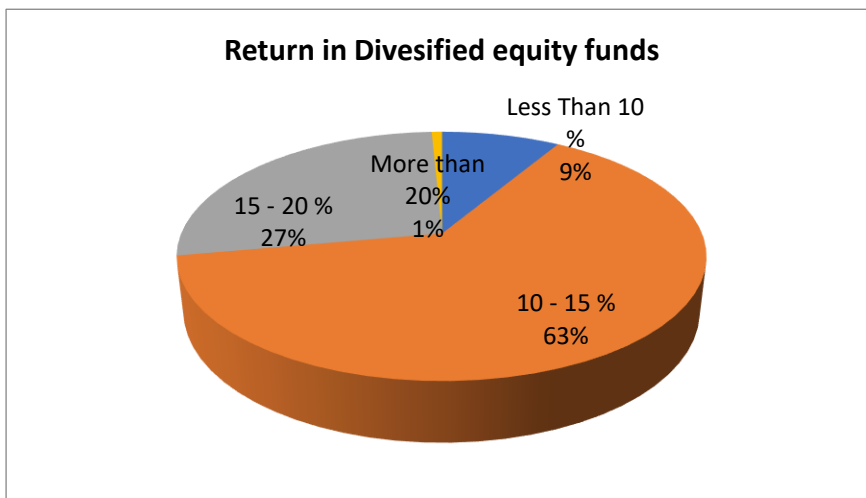
What is your expectation of Average Annual Returns from Growth Mutual Funds?
(Please Tick?)



Source: Primary Data – Section B- Question 21 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(22)

Expectation of investor of Average Annual Returns from Diversified Equity Funds ?

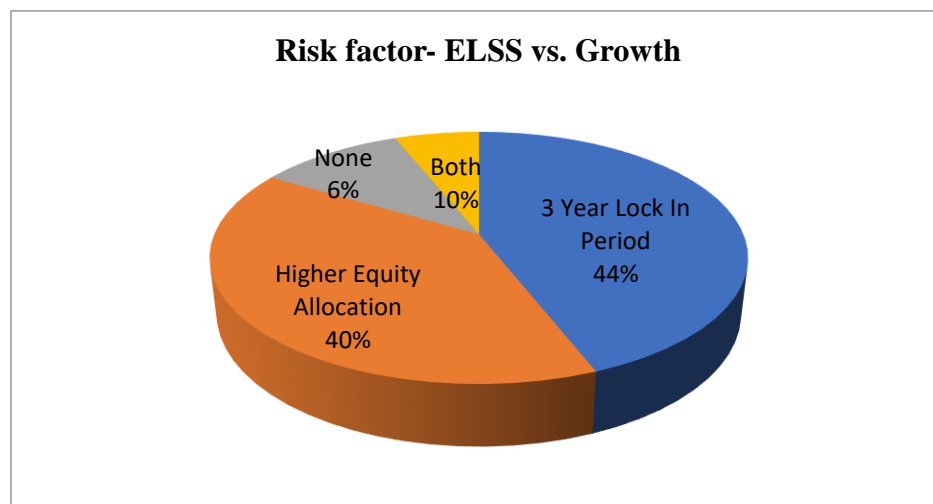


Source: Primary Data – Section B- Question 21 of Diversified Equity Funds Investor Category Questionnaire

Section B: Figure 4.12(23)

Additional risk factors involved in ELSS Funds as compared to Growth Mutual Funds?

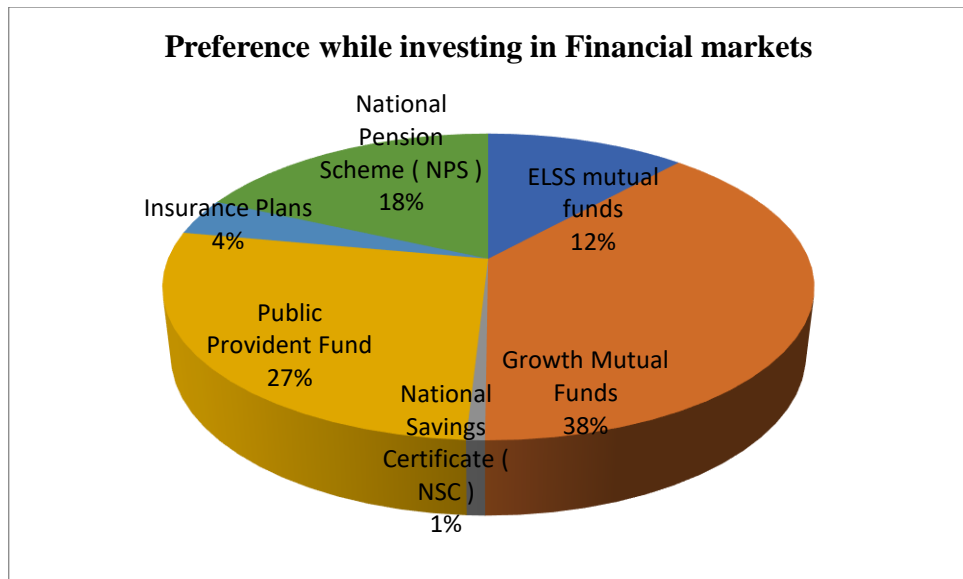
44% of people believed that 3 years lock in period are the additional risk factors in ELSS Funds as compared to Diversified Growth Funds whereas 40% of people believed that higher equity allocation are the additional risk factors in ELSS Funds as compared to Diversified Growth Funds. 10% of people believed that 3 years lock in period and higher equity allocation are the additional risk factors in ELSS Funds as compared to Diversified Growth Funds and 6% people are not considering the both factors as additional risk.



Source: Primary Data – Section B- Question 23 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(24)

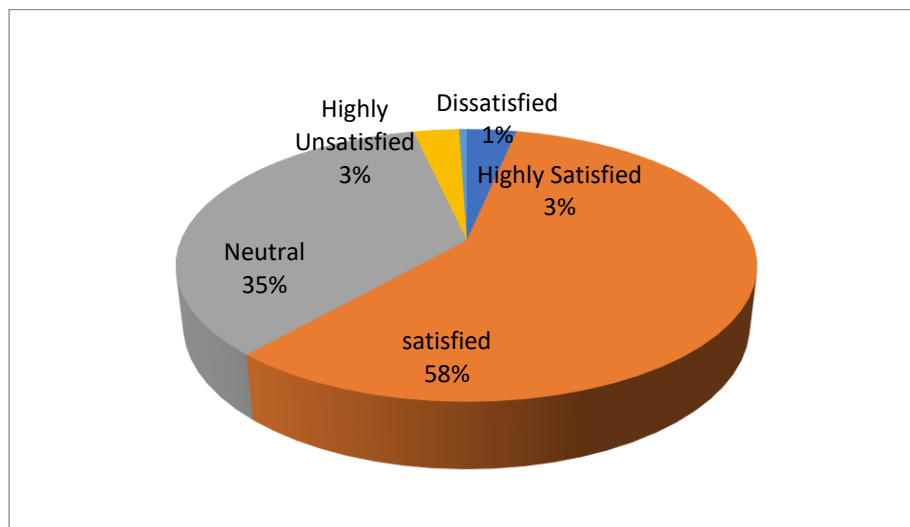
What kind of preference given by you, if Rs 10,000 will be invested in financial markets?



Source: Primary Data – Section B- Question 24 of Mutual fund Investor Category Questionnaire

Section B: Figure 4.12(25)

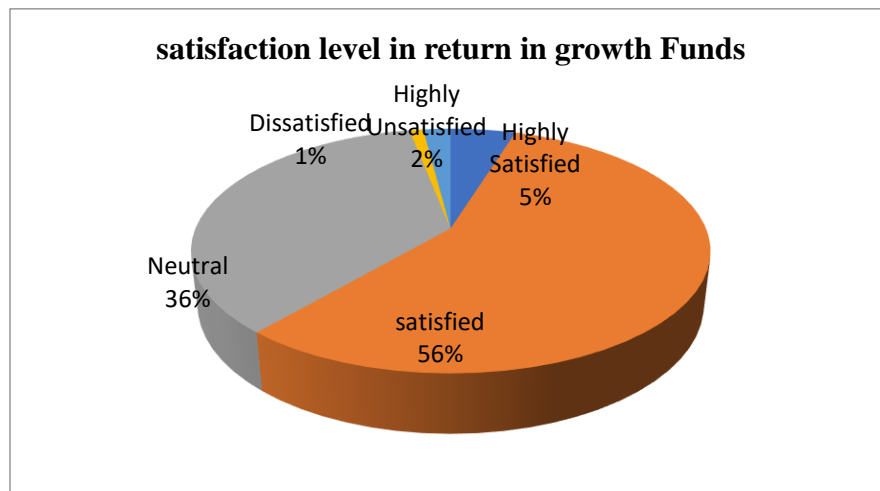
What is your satisfaction level with regard to the Returns performance of ELSS Funds ?



Source: Primary Data – Section B- Question 25 of ELSS fund Investor Category Questionnaire

Section B: Figure 4.12(26)

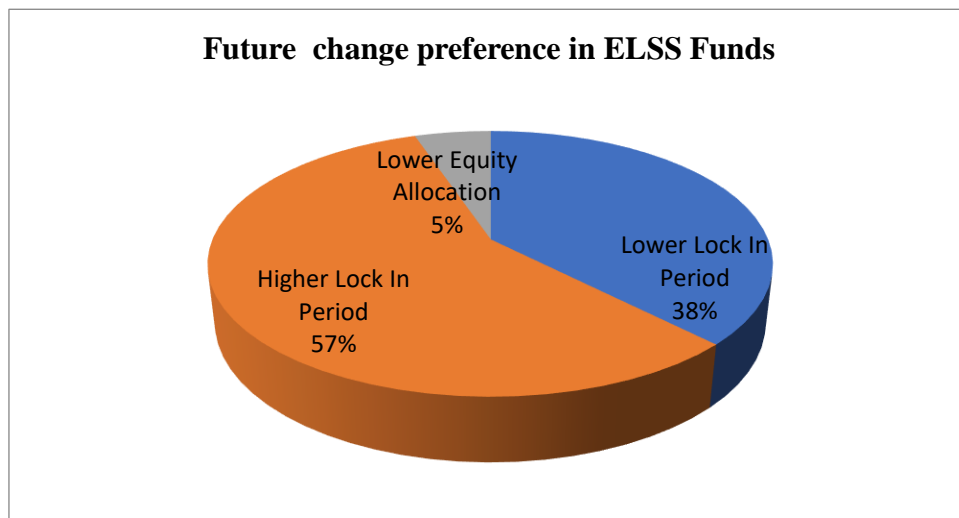
What is your satisfaction level with regard to the Returns performance of Growth Mutual Funds?



Source: Primary Data – Section B- Question 26 of Growth fund Investor Category Questionnaire

Section B: Figure 4.12(27)

What kind of future changes would you like to prefer in the ELSS Fund Regulations?



Source: Primary Data – Section B- Question 27 of ELSS fund Investor Category Questionnaire

4.13 GROWTH MUTUAL FUNDS- PRIMARY DATA –ANALYSIS

IBM SPSS Web Report - DESCRIPTIVE STATISTICS.spv

Correlation

Table 4.13(1)

		Gender	Age	How long have you been investing in growth mutual funds	Monthly average saving	Educational qualification
Gender	Pearson's correlation	1	-0.30	-0.006	-0.039	0.21
	Sig (2 – tailed)		0.291	0.832	0.173	0.473
	N	1201	1201	1201	1201	1201
Age	Pearson's correlation	-0.30	1	0.087**	0.402**	0.011
	Sig (2 – tailed)	0.291		0.003	0	0.7
	N	1201	1201	1201	1201	1201
How long have you been investing in growth mutual funds	Pearson's correlation	-0.006	0.087**	1	0.091**	0.021
	Sig (2 – tailed)	0.832	0.003		0.002	0.464
	N	1201	1201	1201	1201	1201
Monthly average saving	Pearson's correlation	-0.039	0.402**	0.091**	1	0.024
	Sig (2 – tailed)	0.173	0	0.002		0.404
	N	1201	1201	1201	1201	1201
Educational qualification	Pearson's correlation	0.21	0.011	0.021	0.024	1
	Sig (2 – tailed)	0.473	0.7	0.464	0.404	
	N	1201	1201	1201	1201	1201

Source: Author Own research: IBM SPSS Web Report- Correlation

Note: **Correlation is significant at the 0.01 level (2-tailed)

The above statistical data using SPSS shows that in term of karl Pearson’s coefficient of correlation, there is a very weak negative correlation (-0.030) between gender and age factors. In gender and time duration for investing in growth mutual funds, there is a very weak negative (-0.006) correlation between them and the variables move in the opposite direction/, the correlation. In the present situation young generation are more focusing in the investment in growth mutual funds by taking risk and looking for capital appreciation and as older age group people are not taking any risk by investing in growth mutual funds and looking for some alternative investment attributes during the COVID-19 situation due to the highly volatile nature of the Indian mutual funds industry.

Karl Pearson’s coefficient of correlation between the variables X and Y is given by

$$R = \text{Cov}(X,Y) / [\text{STDEV}(X)*\text{STDEV}(Y)]$$

Karl Pearson’s coefficient of correlation is not affected by change in scale or by change in location. Unlike covariance it can be used to compare the relationship between two pairs of variable. It is a unit free measure of relationship between two variables and takes value in [-1,=1]. When r is close to +1 or -1, there is strong positive or negative relationship between the two variables.

IBM SPSS Web Report - Descriptive statistics of Part - A.spv
 Frequencies - Statistics - **Growth Mutual Funds**–Gender

Table 4.13(2)

Gender	Age	Educational Qualification	Occupation	Marital Status	Monthly Average Savings		
N	Valid	822	822	822	822	822	822
	Missing	0	0	0	0	0	0

]Frequency Table - **Growth Mutual Funds**–Gender

Table 4.13(3)

Frequency	Percent	Valid Percent	Cumulative Percent		
Valid		427	51.9	51.9	51.9
	Female	120	14.6	14.6	66.5
	Male	275	33.5	33.5	100
	Total	822	100	100	

Frequency Table -**Growth Mutual Funds**- Age - Table 4.13(4)

Frequency	Percent	Valid Percent	Cumulative Percent		
Valid		427	51.9	51.9	51.9
	21-30	348	42.3	42.3	94.3
	31-39	10	1.2	1.2	95.5
	31-40	32	3.9	3.9	99.4
	41-50	3	0.4	0.4	99.8
	51-50	1	0.1	0.1	99.9
	51-60	1	0.1	0.1	100
	Total	822	100	100	

Source: Author Own research: IBM SPSS Web Report

The above statistical data using SPSS shows that most of the young generation age between 21 to 30 is willing to invest in growth mutual funds. There are so many reasons to invest in mutual funds. They wish to create wealth or to fulfill the long term financial goals to meet their future requirement. A risk factors are involved in the investment of mutual funds and its mainly depends on the risk taking capacity of the investors by choosing the growth funds which gives a better return with capital appreciation

Frequency Table - **Growth Mutual Funds**- Educational Qualification
Table 4.13(5)

Frequency	Percent	Valid Percent	Cumulative Percent		
Valid		427	51.9	51.9	51.9
	Graduate	73	8.9	8.9	60.8
	Others	25	3	3	63.9
	Post Graduate	172	20.9	20.9	84.8
	professional	75	9.1	9.1	93.9
	Upto Higher Secondary (12th Std.)	50	6.1	6.1	100
	Total	822	100	100	

Frequency Table - **Growth Mutual Funds**- Occupation
Table 4.13(6)

Frequency	Percent	Valid Percent	Cumulative Percent		
Valid		426	51.8	51.8	51.8
	Professional	37	4.5	4.5	56.3
	Salaried - Government Employees	37	4.5	4.5	60.8
	Salaried - Private Sector	173	21	21	81.9
	Student	149	18.1	18.1	100
	Total	822	100	100	

Source: Author Own research: IBM SPSS Web Report

Frequency Table -**Growth Mutual Funds**- Marital Status
Table 4.13(7)

Frequency	Percent	Valid Percent	Cumulative Percent		
Valid		426	51.8	51.8	51.8
	Married	6	0.7	0.7	52.6

	Unmarried / Single	390	47.4	47.4	100
	Total	822	100	100	

Frequency Table - **Growth Mutual Funds**-Monthly Average Savings

Table 4.13(8)

Frequency	Percent	Valid Percent	Cumulative Percent		
Valid		426	51.8	51.8	51.8
	0	1	0.1	0.1	51.9
	3000	1	0.1	0.1	52.1
	Below Rs 10000	388	47.2	47.2	99.3
	Rs 10000 -15000	2	0.2	0.2	99.5
	Rs 15000-30000	1	0.1	0.1	99.6
	Rs 16000-30000	1	0.1	0.1	99.8
	Rs.30000-50000	2	0.2	0.2	100
	Total	822	100	100	

Source: Author Own research: IBM SPSS Web Report

Oneway - ANOVA - **Growth Mutual Funds**

Table 4.13(9)

Sum of Squares	df	Mean Square	F	Sig.		
Gender	Between Groups	1.608	3	0.536	2.455	0.062
	Within Groups	261.396	1197	0.218		
	Total	263.004	1200			
Educational Qualification	Between Groups	1.201	3	0.4	0.355	0.786
	Within Groups	1350.48	1197	1.128		
	Total	1351.68	1200			
Monthly Average Savings	Between Groups	18.225	3	6.075	104.428	0
	Within Groups	69.635	1197	0.058		
	Total	87.86	1200			

According to your point of view which investment attributes has more weightage in term of investment in Growth mutual funds	Between Groups	29.531	3	9.844	2.45	0.062
	Within Groups	4773.938	1188	4.018		
	Total	4803.469	1191			
How long have you been investing in Growth Mutual Funds ?	Between Groups	12.835	3	4.278	4.508	0.004
	Within Groups	1136.046	1197	0.949		
	Total	1148.881	1200			
what is your preference while investing in Growth mutual funds scheme in India?	Between Groups	13.49	3	4.497	0.697	0.554
	Within Groups	7721.563	1197	6.451		
	Total	7735.052	1200			
How much amount you are investing in Growth Mutual Funds in a year ?	Between Groups	2.089	3	0.696	5.429	0.001
	Within Groups	153.53	1197	0.128		
	Total	155.619	1200			
According to your point of view what is the risk factors while investing in Growth mutual Funds	Between Groups	3.141	3	1.047	1.033	0.377
	Within Groups	1212.985	1197	1.013		
	Total	1216.127	1200			
How do you rate your satisfaction	Between Groups	1.987	3	0.662	0.662	0.576

with regard to the Returns performance of Growth Mutual Funds ?	Within Groups	1197.973	1197	1.001		
	Total	1199.96	1200			

Source: Author Own research: IBM SPSS Web Report

1. Oneway - ANOVA – Growth funds- Gender

Table 4.13(10)

		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	1.608	3	0.536	2.455	0.062
	Within Groups	261.396	1197	0.218		
	Total	263.004	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and level of significance (0.062) which is less than the F(2.455) and so that we reject the null hypothesis which states that there is no significance difference in the investment of Growth mutual funds due to gender and accept the alternative hypothesis(H1), which states that there is a impact of gender in the investment in Growth mutual funds

Mutual funds investment to risk factors due to open market operation so that genderwise investment play a vital role for the future investment.

1. Oneway - ANOVA – Growth funds- Educational Qualification

		Sum of Squares	df	Mean Square	F	Sig.
Educational Qualification	Between Groups	1.201	3	0.4	0.355	0.786
	Within Groups	1350.48	1197	1.128		

	Total	1351.68	1200			
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Table 4.13(11)

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and level of significance between groups is 0.786 which is more than the F value (0.355), which states that there is no significance difference in the investment of Growth mutual funds due to educational qualifications.

Mutual funds investment to risk factors due to open market operation and risk appetitive and goal of the investors has more weight age in their future planning.

2. Oneway - ANOVA – Growth funds- Monthly Average Savings

Table 4.13(12)

		Sum of Squares	df	Mean Square	F	Sig.
Monthly Average Savings	Between Groups	18.225	3	6.075	104.428	0
	Within Groups	69.635	1197	0.058		
	Total	87.86	1200			

Source: Author Own research: IBM SPSS Web Report

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 18.225 whereas level of significance between groups is 0 which is less than the F value (104.428). This states that there is significance difference in the investment of Growth mutual funds due monthly average saving

Conclusion

Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weight age in their future planning in tax saving funds under section 80C of Income Tax Act

3. Oneway - ANOVA – Growth funds- which investment attributes has more weight age

Table 4.13(13)

		Sum of Squares	df	Mean Square	F	Sig.
According to your point of view which investment attributes has more weight age in term of investment in Growth mutual funds	Between Groups	29.531	3	9.844	2.45	0.062
	Within Groups	4773.938	1188	4.018		
	Total	4803.469	1191			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 29.531 whereas level of significance between groups is 0.062, which is less than the F value (2.45). This states that there is significance difference in the investment plan options of Growth mutual funds due to risk factors involved in highly aggressive funds

Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.

4. Oneway - ANOVA – Growth funds- Time duration for investment

Table 4.13(14)

		Sum of Squares	df	Mean Square	F	Sig.
How long have you been investing in Growth Mutual Funds ?	Between Groups	12.835	3	4.278	4.508	0.004
	Within Groups	1136.046	1197	0.949		
	Total	1148.881	1200			

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 12.835 whereas level of significance between groups is 0.004 ,which is less than the F value (4.278) . This states that there is significance difference in the investment of Growth mutual funds due long term time duration.

A risk factors is involved in mutual funds investment, so that people prefers to invest for the longer period of time with diversification of the funds to minimise the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.

5. Oneway - ANOVA – Growth funds- Preference in Invetsment

Table 4.13(15)

		Sum of Squares	df	Mean Square	F	Sig.
What is your preference while investing in Growth mutual funds scheme in India?	Between Groups	13.49	3	4.497	0.697	0.554
	Within Groups	7721.563	1197	6.451		
	Total	7735.052	1200			
	Within Groups	153.53	1197	0.128		
	Total	155.619	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 13.49 whereas level of significance between groups is 0.554 ,which is less than the F value (0.697). This states that there is significance

difference in the investment plan options of Growth mutual funds due to preference of the investor in capital appreciation by investing in aggressive funds for a longer period of time.

Mutual funds investment to risk factors due to open market operation as well as risk appetitive and goal of the investors to choose the different aggressive and highly risky funds for better return. By the way of diversification of funds, they minimize the risk factors involved in the investment of financial markets.

A lot of derivative factors which influence the final outcome of the financial investment and increase capital appreciation with the diversification of the funds according to the upward and downward market trends of the funds.

6. Oneway - ANOVA – Growth funds- Amount invested

Table 4.13(16)

		Sum of Squares	df	Mean Square	F	Sig.
How much amount you are investing in Growth	Between Groups	2.089	3	0.696	5.429	0.001
Mutual Funds in a year ?						
	Within Groups	153.53	1197	0.128		
	Total	155.619	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 2.089 whereas level of significance between groups is 0.001, which is less than the F value (0.696). This states that there is significance difference in the investment plan options of Growth mutual funds due to amount invested in capital appreciation funds.

People invested a lump sum amount in Growth Mutual funds for capital appreciation purpose as well as high return also. If we saw the history of mutual funds return in India , we are getting more than 30% returned in long term investment plan and due to this reason people are investing huge amount in the growth saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.

7. Oneway - ANOVA – Growth funds- Risk factors in Investment

Table 4.13(17)

		Sum of Squares	df	Mean Square	F	Sig.
According to your point of view what is the risk factors while investing in Growth mutual Funds	Between Groups	3.141	3	1.047	1.033	0.377
	Within Groups	1212.985	1197	1.013		
	Total	1216.127	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 3.141 whereas level of significance between groups is 0.377, which is less than the F value (1.033) . This states that there is significance difference in the investment plan options of Growth mutual funds due to risk factors involved in tax saving funds

Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.

8. Oneway - ANOVA – Growth funds- satisfaction in Returns performance of the funds

Table 4.13(18)

		Sum of Squares	Df	Mean Square	F	Sig.
How do you rate your satisfaction with regard to the Returns performance of Growth Mutual Funds?	Between Groups	1.987	3	0.662	0.662	0.576
	Within Groups	1197.973	1197	1.001		

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 0.987 whereas level of significance between groups is 0.576, which is less than the F value (0.662), which states that there is significance difference in the investment plan options of Growth mutual funds due to satisfaction with regard to the Returns performance of Growth Funds.

People are looking for very high return and investing in the aggressive funds. They are taking the high risk involved in the open markets.

The performance of growth mutual funds and their return play a vital role for their trust and further investment in the growth mutual funds .People are doing a lot of research in term of fundamental and technical analysis of the particular sectors as well as funds also

4.14 ELSS FUNDS- PRIMARY DATA –ANALYSIS

IBM SPSS Web Report - Descriptive statistics of Part - A.spv

IBM SPSS Web Report - DESCRIPTIVE STATISCTICS.spv

Descriptive - Active Dataset - ELSS Funds

Table 4.14(1)

Descriptive	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Gender	395	1	2	1.304	0.4605	0.857	0.123	-1.273	0.245
Age	395	2	5	2.137	0.405	3.552	0.123	15.568	0.245
Educational Qualification	395	1	4	2.815	0.9552	-0.501	0.123	-0.632	0.245
Monthly Average Savings	396	1	4	1.04	0.2992	7.953	0.123	65.684	0.245
which investment attributes has more weightage in ELSS funds. [Returns]	395	6	6	6	0	.	.	.	.
How long have you been investing in Equity Linked Savings Scheme (ELSS) ?	395	1	4	1.965	1.1101	0.943	0.123	-0.494	0.245
In Which ELSS Investment Plan Option do you plan to invest ?	395	1	3	1.4	0.6623	1.4	0.123	0.635	0.245
How much amount you are investing in ELSS Funds in a	395	1	3	1.377	0.4905	0.573	0.123	-1.507	0.245

year ?									
According to your point of view what is the risk factors while investing in ELSS Funds	394	1	5	3.079	1.0369	-0.475	0.123	-0.649	0.245
How do you rate your satisfaction with regard to the Returns performance of ELSS Funds ?	394	1	5	2.185	1.0282	0.921	0.123	0.927	0.245
Valid N (listwise)	394								
IBM SPSS Web Report									

Source: Author Own research: IBM SPSS Web Report

IBM SPSS Web Report - Bivariate Pearsons Correlation Between Variables For ELSS.spv Correlations - ELSS Funds

Table 4.14(2)

		Gender	Age	Educational Qualification	Monthly Average Savings	Investment Preference in ELSS funds. [Returns]	How long have you been investing in (ELSS) ?	In Which ELSS Investment Plan Option do you plan to invest ?	How much amount you are investing in ELSS Funds in a year ?	According to your point of view what is the risk factors while	How do you rate your satisfaction with regard to the Returns performance of ELSS
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										investing in ELSS Funds	Funds ?
Gender	Pearson Correlation	1	-0.033	0.047	-0.016	. ^a	-0.009	-0.033	-0.014	.104*	-0.001
	Sig. (2-tailed)		0.517	0.35	0.754	.	0.864	0.509	0.778	0.039	0.98
	N	395	395	395	395	395	395	395	395	394	394
Age	Pearson Correlation	-0.033	1	0.039	.477*	. ^a	0.045	0.061	-0.005	-0.056	-0.018
	Sig. (2-tailed)	0.517		0.437	0	.	0.376	0.23	0.925	0.268	0.717
	N	395	395	395	395	395	395	395	395	394	394
Educational Qualification	Pearson Correlation	0.047	0.039	1	0.062	. ^a	0.054	-0.003	0.008	-0.096	-0.066
	Sig. (2-tailed)	0.35	0.437		0.221	.	0.888	0.949	0.869	0.058	0.194
	N	395	395	395	395	395	395	395	395	394	394

							5				
Monthly Average Savings	Pearson Correlation	-0.016	.477**	0.062	1	. ^a	0.088	0.008	0.068	0.047	0
	Sig. (2-tailed)	0.754	0	0.221		.	0.088	0.879	0.174	0.352	0.995
	N	395	395	395	396	395	395	395	395	394	394
According to your point of view which investment attribute has more weightage in term of investment in ELSS funds. [Returns]	Pearson Correlation	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a	. ^a
	Sig. (2-tailed)	.	.	.	.	.	.	.	.	.	.
	N	395	395	395	395	395	395	395	395	394	394
How long have you been investing in Equity Linked Savings Scheme (ELSS) ?	Pearson Correlation	-0.009	0.045	0.054	0.088	. ^a	1	-.347**	.123*	-0.068	.108*
	Sig. (2-tailed)	0.864	0.376	0.288	0.08	.		0	0.015	0.175	0.032
	N	395	395	395	395	395	395	395	395	394	394

In Which ELSS Investment Plan Option do you plan to invest ?	Pearson Correlation	-0.033	0.061	-0.003	0.008	. ^a	-0.347*	1	-0.075	-0.002	-0.023
	Sig. (2-tailed)	0.509	0.23	0.949	0.879	.	0		0.137	0.691	0.643
	N	395	395	395	395	395	395	395	395	394	394
How much amount you are investing in ELSS Funds in a year ?	Pearson Correlation	-0.014	-0.005	0.008	0.068	. ^a	-0.123*	-0.075	1	0.086	0.022
	Sig. (2-tailed)	0.778	0.925	0.869	0.174	.	0	0.137		0.087	0.661
	N	395	395	395	395	395	395	395	395	394	394
According to your point of view what is the risk factors while investing in ELSS Funds	Pearson Correlation	.104*	-0.056	-0.0096	0.047	. ^a	-0.068	-0.02	0.086	1	-0.04
	Sig. (2-tailed)	0.039	0.268	0.058	0.352	.	0	0.691	0.087		0.429
	N	394	394	394	394	394	394	394	394	394	394

How do you rate your satisfaction with regard to the Returns performance of ELSS Funds ?	Pearson Correlation	-0.001	-0.018	-0.006	0	. ^a	.108*	-0.023	0.022	-0.004	1
	Sig. (2-tailed)	0.98	0.717	0.194	0.995	.	0.032	0.643	0.661	0.429	
	N	394	394	394	394	394	394	394	394	394	394

Source: Author Own research: IBM SPSS Web Report

*Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

a. Cannot be computed because at least one of the variables is constant.

The above statistical data of ELSS mutual funds using SPSS shows that in term of Karl Pearson's coefficient of correlation, there is a weak negative correlation (-0.033) between gender and age factors. In gender and time duration for investing in ELSS mutual funds, there is a very weak positive (0.009) correlation between them and the variables move in the same direction with low magnitude. The correlation. In the present situation new investors are more focusing in the investment in ELSS mutual funds for tax benefits upto 1.50 lakh u/s 80C of Income tax act, 1961. There is a negative correlation between Investment Plan Option and tax benefit opportunity of gender to invest in ELSS funds. Generally people are given more priority to Tax Saving while investing in ELSS funds and after that they are searching for capital appreciation and other long term goal in their investment. There is a very weak negative correlation between amount investing in ELSS Funds in a year and gender. Mostly people are investing for tax benefit in respect of gender bias and fulfill their future goal in the investment. There is a very weak negative correlation between gender and risk factors while investing in ELSS Funds.

Karl Pearson's coefficient of correlation between the variables X and Y is given by

$$R = \text{Cov}(X,Y) / [\text{STDEV}(X)*\text{STDEV}(Y)]$$

Karl Pearson's coefficient of correlation is not affected by change in scale or by change in location. Unlike covariance it can be used to compare the relationship between two pairs of variable. It is a unit free measure of relationship between two variables and takes value in[-1,=1]. When r is close to +1 or -1, there is strong positive or negative relationship between the two variables.

IBM SPSS Web Report

IBM SPSS Web Report - One Way Anova keeping Age as a Factor Descriptive - .spv

Oneway - Descriptives - ELSS Funds

Table 4.14(3)

Oneway - ANOVA - ELSS Funds

N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	Minimum	Maximum		
				Lower bond	Upper bond			
Gender	2	348	1.305	0.4609	0.0247	1.256	1.353	1
	3	42	1.333	0.4771	0.0736	1.185	1.482	1
	4	3	1	0	0	1	1	1
	5	2	1	0	0	1	1	1
	Total	395	1.304	0.4605	0.0232	1.258	1.349	1
Educational Qualification	2	348	2.805	0.9523	0.0511	2.704	2.905	1
	3	42	2.857	1.0258	0.1583	2.537	3.177	1
	4	3	3.333	0.5774	0.3333	1.899	4.768	3
	5	2	3	0	0	3	3	3
	Total	395	2.815	0.9552	0.0481	2.721	2.91	1
Monthly Average Savings	2	348	1	0	0	1	1	1
	3	42	1.238	0.6917	0.1067	1.023	1.454	1

	4	3	2	1	0.5774	-0.484	4.484	1
	5	2	2.5	2.1213	1.5	-16.559	21.559	1
	Total	395	1.041	0.2995	0.0151	1.011	1.07	1
Investment attributes preference in ELSS funds.	2	348	6	0	0	6	6	6
	3	42	6	0	0	6	6	6
	4	3	6	0	0	6	6	6
	5	2	6	0	0	6	6	6
	Total	395	6	0	0	6	6	6
How long have you been investing in Equity Linked Savings Scheme (ELSS) ?	2	348	1.968	1.1114	0.0596	1.851	2.086	1
	3	42	1.81	1.0178	0.1571	1.492	2.127	1
	4	3	2.333	1.5275	0.8819	-1.461	6.128	1
	5	2	4	0	0	4	4	4
	Total	395	1.965	1.1101	0.0559	1.855	2.074	1
In Which ELSS Investment Plan Option do you plan to invest ?	2	348	1.397	0.6603	0.0354	1.327	1.466	1
	3	42	1.333	0.6115	0.0944	1.143	1.524	1
	4	3	2.333	0.5774	0.3333	0.899	3.768	2
	5	2	2	1.4142	1	-10.706	14.706	1
	Total	395	1.4	0.6623	0.0333	1.334	1.466	1
How much amount you are investing in ELSS Funds in a year ?	2	348	1.382	0.4866	0.0261	1.331	1.433	1
	3	42	1.31	0.4679	0.0722	1.164	1.455	1
	4	3	1.667	1.1547	0.6667	-1.202	4.535	1
	5	2	1.5	0.7071	0.5	-4.853	7.853	1
	Total	395	1.377	0.4905	0.0247	1.329	1.426	1
what is the risk factors while investing in ELSS Funds	2	347	3.098	1.0378	0.0557	2.988	3.208	1
	3	42	2.976	1.0238	0.158	2.657	3.295	1
	4	3	2.333	1.5275	0.8819	-1.461	6.128	1
	5	2	3	0	0	3	3	3

	Total	394	3.079	1.0369	0.0522	2.976	3.181	1
rate of satisfaction level in Returns performance of ELSS Funds ?	2	347	2.196	1.0462	0.0562	2.086	2.306	1
	3	42	2.095	0.9055	0.1397	1.813	2.377	1
	4	3	2	1	0.5774	-0.484	4.484	1
	5	2	2.5	0.7071	0.5	-3.853	8.853	2
	Total	394	2.185	1.0282	0.0518	2.083	2.287	1
Gender	2	348	1.305	0.4609	0.0247	1.256	1.353	1
	3	42	1.333	0.4771	0.0736	1.185	1.482	1
	4	3	1	0	0	1	1	1
	5	2	1	0	0	1	1	1
	Total	395	1.304	0.4605	0.0232	1.258	1.349	1
Educational Qualification	2	348	2.805	0.9523	0.0511	2.704	2.905	1
	3	42	2.857	1.0258	0.1583	2.537	3.177	1
	4	3	3.333	0.5774	0.3333	1.899	4.768	3
	5	2	3	0	0	3	3	3
	Total	395	2.815	0.9552	0.0481	2.721	2.91	1
Monthly Average Savings	2	348	1	0	0	1	1	1
	3	42	1.238	0.6917	0.1067	1.023	1.454	1
	4	3	2	1	0.5774	-0.484	4.484	1
	5	2	2.5	2.1213	1.5	-16.559	21.559	1
	Total	395	1.041	0.2995	0.0151	1.011	1.07	1
Investment attributes preference in ELSS funds.	2	348	6	0	0	6	6	6
	3	42	6	0	0	6	6	6
	4	3	6	0	0	6	6	6
	5	2	6	0	0	6	6	6
	Total	395	6	0	0	6	6	6
How long have you been investing in Equity Linked Savings Scheme (	2	348	1.968	1.1114	0.0596	1.851	2.086	1
	3	42	1.81	1.0178	0.1571	1.492	2.127	1
	4	3	2.333	1.5275	0.8819	-1.461	6.128	1
	5	2	4	0	0	4	4	4
	Total	395	1.965	1.1101	0.0559	1.855	2.074	1

ELSS) ?								
In Which ELSS	2	348	1.397	0.6603	0.0354	1.327	1.466	1
Investment Plan Option	3	42	1.333	0.6115	0.0944	1.143	1.524	1
do you plan to invest ?	4	3	2.333	0.5774	0.3333	0.899	3.768	2

Source: Author Own research: IBM SPSS Web Report

Table 4.14(4)

Sum of Squares	df	Mean Square	F	Sig.		
Gender	Between Groups	0.498	3	0.166	0.782	0.504
	Within Groups	83.046	391	0.212		
	Total	83.544	394			
Educational Qualification	Between Groups	0.987	3	0.329	0.359	0.783
	Within Groups	358.522	391	0.917		
	Total	359.509	394			
Monthly Average Savings	Between Groups	9.233	3	3.078	46.07	0
	Within Groups	26.119	391	0.067		
	Total	35.352	394			
investment attributes preference in ELSS funds. [Returns]	Between Groups	0	3	0	.	.
	Within Groups	0	391	0		
	Total	0	394			
How long have you been investing in Equity Linked Savings Scheme (ELSS) ?	Between Groups	9.709	3	3.236	2.659	0.048
	Within Groups	475.795	391	1.217		
	Total	485.504	394			
In Which ELSS Investment Plan Option do you plan to invest ?	Between Groups	3.524	3	1.175	2.713	0.045
	Within Groups	169.276	391	0.433		
	Total	172.8	394			
How much amount you are investing in ELSS Funds in a year ?	Between Groups	0.483	3	0.161	0.667	0.573
	Within Groups	94.312	391	0.241		
	Total	94.795	394			
risk factors while investing in ELSS Funds	Between Groups	2.249	3	0.75	0.696	0.555
	Within Groups	420.311	390	1.078		
	Total	422.561	393			
Satisfaction level in	Between Groups	0.681	3	0.227	0.214	0.887

Returns performance of ELSS Funds?	Within Groups	414.793	390	1.064		
	Total	415.475	393			
IBM SPSS Web Report						

Source: Author Own research: IBM SPSS Web Report

CHAPTER 5:
FINDINGS & RECOMMENDATION

FINDINGS & RECOMMENDATION

One-way - ANOVA – Growth Mutual funds

1. Oneway - ANOVA – Growth funds- Gender

Table 5.01

		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	1.608	3	0.536	2.455	0.062
	Within Groups	261.396	1197	0.218		
	Total	263.004	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and level of significance (0.062) which is less than the F(2.455) and so that we reject the null hypothesis which states that there is no significance difference in the investment of Growth mutual funds due to gender and accept the alternative hypothesis(H1),

Which states that there is a impact of gender in the investment in Growth mutual funds

Mutual funds investment to risk factors due to open market operation so that genderwise investment plays a vital role for the future investment.

Oneway - ANOVA – Growth funds- Educational Qualification

Table 5.02

		Sum of Squares	df	Mean Square	F	Sig.
Educational Qualification	Between Groups	1.201	3	0.4	0.355	0.786
	Within Groups	1350.48	1197	1.128		
	Total	1351.68	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and level of significance between groups is 0.786 which is more than the F value (0.355) , which

states that there is no significance difference in the investment of Growth mutual funds due to educational qualifications.

Mutual funds investment to risk factors due to open market operation and risk appetitive and goal of the investors has more weight age in their future planning.

2. Oneway - ANOVA – Growth funds- Monthly Average Savings

Table 5.03

		Sum of Squares	df	Mean Square	F	Sig.
Monthly Average Savings	Between Groups	18.225	3	6.075	104.428	0
	Within Groups	69.635	1197	0.058		
	Total	87.86	1200			

Source: Author Own research: IBM SPSS Web Report

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 18.225 whereas level of significance between groups is 0 which is less than the F value (104.428) . This states that there is significance difference in the investment of Growth mutual funds due monthly average saving

Conclusion

Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weight age in their future planning in tax saving funds under section 80C of Income Tax Act

3. Oneway - ANOVA – Growth funds- which investment attributes has more weight age

(Table 5.04)

		Sum of Squares	df	Mean Square	F	Sig.
According to your point of view which investment	Between Groups	29.531	3	9.844	2.45	0.062
	Within Groups	4773.94	1188	4.018		

attributes has more weight in term of investment in Growth mutual funds	Total	4803.47	1191			
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Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 29.531 whereas level of significance between groups is 0.062, which is less than the F value (2.45). This states that there is significance difference in the investment plan options of Growth mutual funds due to risk factors involved in highly aggressive funds.

Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.

4. Oneway - ANOVA – Growth funds- Time duration for investment

(Table 5.05)

		Sum of Squares	df	Mean Square	F	Sig.
How long have you been investing in Growth Mutual Funds ?	Between Groups	12.835	3	4.278	4.508	0.004
	Within Groups	1136.046	1197	0.949		
	Total	1148.881	1200			

Source: Author Own research: IBM SPSS Web Report

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 12.835 whereas level of significance between groups is 0.004, which is less than the F value (4.278). This states that there is significance difference in the investment of Growth mutual funds due long term time duration.

A risk factors is involved in mutual funds investment, so that people prefers to invest for the longer period of time with diversification of the funds to minimise the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.

5. Oneway - ANOVA – Growth funds- Preference in Invetsment

(Table 5.06)

		Sum of Squares	df	Mean Square	F	Sig.
What is your preference while investing in Growth mutual funds scheme in India?	Between Groups	13.49	3	4.497	0.697	0.554
	Within Groups	7721.563	1197	6.451		
	Total	7735.052	1200			
	Within Groups	153.53	1197	0.128		
	Total	155.619	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 13.49 whereas level of significance between groups is 0.554, which is less than the F value (0.697). This states that there is significance difference in the investment plan options of Growth mutual funds due to preference of the investor in capital appreciation by inveting in aggressive funds for a longer period of time.

Mutual funds investment to risk factors due to open market operation as well as risk appetitive and goal of the investors to choose the different aggressive and highly risky funds for better return. By the way of diversification of funds , they minimize the risk factors involved in the investment of financial markets.

A lot of derivative factors which influence the final outcome of the financial investment and increase capital appreciation with the diversification of the funds according to the upward and downward market trends of the funds.

6. Oneway - ANOVA – Growth funds- Amount invested

(Table 5.07)

		Sum of Squares	df	Mean Square	F	Sig.
How much amount you are investing in Growth	Between Groups	2.089	3	0.696	5.429	0.001
Mutual Funds in a year ?						
	Within Groups	153.53	1197	0.128		
	Total	155.619	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 2.089 whereas level of significance between groups is 0.001, which is less than the F value (0.696). This states that there is significance difference in the investment plan options of Growth mutual funds due to amount invested in capital appreciation funds.

People invested a lump sum amount in Growth Mutual funds for capital appreciation purpose as well as high return also. If we saw the history of mutual funds return in India, we are getting more than 30% returned in long term investment plan and due to this reason people are investing huge amount in the growth saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.

7. Oneway - ANOVA – Growth funds- Risk factors in Investment

(Table 5.08)

		Sum of Squares	df	Mean Square	F	Sig.
According to your point of view what is the risk factors while investing in Growth mutual Funds	Between Groups	3.141	3	1.047	1.033	0.377
	Within Groups	1212.985	1197	1.013		
	Total	1216.127	1200			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 3.141 whereas level of significance between groups is 0.377, which is less than the F value (1.033). This states that there is significance difference in the investment plan options of Growth mutual funds due to risk factors involved in tax saving funds

Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.

8. Oneway - ANOVA – Growth funds- satisfaction in Returns performance of the funds

Table 5.09

		Sum of Squares	df	Mean Square	F	Sig.
How do you rate your satisfaction with regard to the Returns performance of Growth Mutual Funds ?	Between Groups	1.987	3	0.662	0.662	0.576
	Within Groups	1197.973	1197	1.001		

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 0.987 whereas level of significance between groups is 0.576, which is less than the F value (0.662), which states that there is significance difference in the investment plan options of Growth mutual funds due to satisfaction with regard to the Returns performance of Growth Funds.

People are looking for very high return and investing in the aggressive funds. They are taking the high risk involved in the open markets.

The performance of growth mutual funds and their return play a vital role for their trust and further investment in the growth mutual funds .People are doing a lot of research in term of fundamental and technical analysis of the particular sectors as well as funds also.

1. Oneway - ANOVA – ELSS Mutual funds- Gender
(Table 5.10)

		Sum of Squares	df	Mean Square	F	Sig.
		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	0.498	3	0.166	0.782	0.504
	Within Groups	83.046	391	0.212		
	Total	83.544	394			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and level of significance (0.504) is less than the F(0.782) and so that we reject the null hypothesis which states that there is no significance difference in the investment of ELSS mutual funds due to gender and accept the alternative hypothesis(H1), which states that there is a impact of gender in the investment in ELSS

Mutual funds.Mutual funds investment to risk factors due to open market operation so that genderwise investment plays a vital role for the future investment.

2. Oneway - ANOVA –ELSS Mutual funds-Educational Qualification
Table 5.11

		Sum of Squares	df	Mean Square	F	Sig.
Educational Qualification	Between Groups	0.987	3	0.329	0.359	0.783
	Within Groups	358.522	391	0.917		
	Total	359.509	394			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and level of significance between groups is 0.783 which is more than the $F(0.359)$ which states that there is no significance difference in the investment of ELSS mutual funds due to educational qualifications.

Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weightage in their future planning.

3. Oneway - ANOVA –ELSS Mutual funds-Monthly Average Savings

Table 5.12

		Sum of Squares	df	Mean Square	F	Sig.
Monthly Average Savings	Between Groups	9.233	3	3.078	46.072	0
	Within Groups	26.119	391	0.067		
	Total	35.352	394			

Source: Author Own research: IBM SPSS Web Report

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 9.233 whereas level of significance between groups is 0 which is less than the $F(42.0)$, which states that there is significance difference in the investment of ELSS mutual funds due monthly average saving

Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weightage in their future planning in tax saving funds under section 80C of Income Tax Act

4. Oneway - ANOVA –Time duration investing in Equity Linked Savings Scheme (ELSS)

(Table 5.13)

		Sum of Squares	df	Mean Square	F	Sig.
How long have you been investing in Equity Linked Savings	Between Groups	9.709	3	3.236	2.659	0.048
	Within Groups	475.795	391	1.217		

Scheme (ELSS)?	Total	485.504	394			
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Source: Author Own research: IBM SPSS Web Report

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 9.709 whereas level of significance between groups is 0.048, which is less than the $F(2.659)$, which states that there is significance difference in the investment of ELSS mutual funds due long term time duration.

A risk factors is involved in mutual funds investment, so that people prefers to invest for the longer period of tme with diversification of the funds to minimise the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.

5. Oneway - ANOVA – ELSS Investment Plan Option prefer to invest

Table 5.14

		Sum of Squares	df	Mean Square	F	Sig.
In Which ELSS Investment Plan Option do you plan to invest?	Between Groups	3.524	3	1.175	2.713	0.045
	Within Groups	169.276	391	0.433		
	Total	172.8	394			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 3.524 whereas level of significance between groups is 0.045, which is less uthan the $F(2.713)$, which states that there is significance difference in the investment plan options of ELSS mutual funds due to preference of the investor in tax saving funds. Mutual funds investment to risk factors due to open market operation as well as risk apetitite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation alo with the diversification of the funds according to the upward and downward market trends of the funds.

6. Oneway - ANOVA – amount investing in ELSS Funds

Table 5.15

		Sum of	df	Mean	F	Sig.
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		Squares		Square		
How much amount you are investing in ELSS Funds in a year?	Between Groups	0.483	3	0.161	0.667	0.573
	Within Groups	94.312	391	0.241		
	Total	94.795	394			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 0.483 whereas level of significance between groups is 0.573, which is less than the $F(0.667)$, which states that there is significance difference in the investment plan options of ELSS mutual funds due to amount invested in tax saving funds

People invested a lump sum amount in ELSS Mutual funds for tax saving purpose as well as capital appreciation also. If we saw the history of mutual funds retrun in India, more than 30% retruned we are getting in long term investment plan and due to this reason people are investing huge amount in the tax saving mutal funds with the diversification of the funds according to the upward and downward market trends of the funds.

7. Oneway - ANOVA – risk factors involved investing in ELSS Funds

Table 5.16

		Sum of Squares	df	Mean Square	F	Sig.
According to your point of view what is the risk factors while investing in ELSS Funds	Between Groups	2.249	3	0.75	0.696	0.555
	Within Groups	420.311	390	1.078		
	Total	422.561	393			

Source: Author Own research: IBM SPSS Web Report

In the statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 2.249 whereas level of significance between groups is 0.555, which is less than the F value (0.696), which states that there is significance difference in the investment plan options of ELSS mutual funds due to risk factors involved in tax saving funds.

Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.

8. Oneway - ANOVA - satisfaction with regard to the Returns performance of ELSS Funds

Sig<F – Reject Ho ;Sig>F- Accept Ho

Table 5.17

		Sum of Squares	df	Mean Square	F	Sig.
satisfaction with regard to the Returns performance of ELSS Funds	Between Groups	0.681	3	0.227	0.214	0.887
	Within Groups	414.793	390	1.064		
	Total	415.475	393			

Source: Author Own research: IBM SPSS Web Report

The statistical data of IBM SPSS Web Report, degree of freedom is 3 and sum of squares between groups is 0.681 whereas level of significance between groups is 0.887, which is more than the F value (0.214) , which states that there is no significance difference in the investment plan options of ELSS mutual funds due to satisfaction with regard to the Returns performance of ELSS Funds.

Examination of the information uncovers that ELSS plans have offered alluring returns over the time of investigation making them an appealing speculation choice for financial backers. Financial backers have perceived this as is clear from the current AUM of this class of assets at Rs. 22.24 lakh crore. In addition, the tax cut accessible by putting resources into ELSS, which decreases available pay to the degree of 150,000 each monetary year, makes this venture item much more alluring.

The examination discoveries propose a couple of thoughts and the significance of the shared asset industry in our economy. The discoveries of the examination could set

out business open doors for some, sub-capacities associated with the working of ELSS shared assets, for example, portfolio the executives specialist co-ops, independent asset directors, proficient preparing establishments and applicants willing to take on this as a lifelong choice.

We additionally prescribe to the organizations engaged with every day checking of these assets to appropriately distribute their resources, transforming (forbesindia.com²¹⁷) it at whatever point important to get the most ideal result. Educating and making mindfulness about the upsides of long haul contributing and charge saving benefits from ELSS explicitly will construct a huge specialty working fragment.

AMCs and AMFI could grow the middle around this through their enlightening workshops and exercises. Further, other duty paying relatives should be urged to think about putting resources into these assets. The public authority can consider rebuilding Section 80C of Income Tax Act, 1961 to empower more certain association of the overall population

CHAPTER 6: CONCLUSION

CONCLUSION

6.1 Growth Mutual Funds- Primary data –Analysis

Correlation

Table 6.01

		Gender	Age	How long have you been investing in growth mutual funds	Monthly average saving	Educational qualification
Gender	Pearson's correlation	1	-0.30	-0.006	-0.039	0.21
	Sig (2 – tailed)		0.291	0.832	0.173	0.473
	N	1201	1201	1201	1201	1201
Age	Pearson's correlation	-0.30	1	0.087**	0.402**	0.011
	Sig (2 – tailed)	0.291		0.003	0	0.7
	N	1201	1201	1201	1201	1201
How long have you been investing in growth mutual funds	Pearson's correlation	-0.006	0.087**	1	0.091**	0.021
	Sig (2 – tailed)	0.832	0.003		0.002	0.464
	N	1201	1201	1201	1201	1201
Monthly average saving	Pearson's correlation	-0.039	0.402**	0.091**	1	0.024
	Sig (2 – tailed)	0.173	0	0.002		0.404
	N	1201	1201	1201	1201	1201
Educational qualification	Pearson's correlation	0.21	0.011	0.021	0.024	1
	Sig (2 – tailed)	0.473	0.7	0.464	0.404	
	N	1201	1201	1201	1201	1201

Source: Author Own research: IBM SPSS Web Report

Note: **Correlation is significant at the 0.01 level(2-tailed)

Correlation is significance at at the 0.01 level(2-tailed)

The above statistical data using SPSS shows that in term of karl Pearson's coefficient of correlation, there is a very weak negative correlation (-0.030) between gender and age factors. In gender and time duration for investing in growth mutual funds, there is a very weak negative (-0.006) correlation between them and the variables move in the opposite direction/, The correlation. In the present situation young generation are more focusing in the investment in growth mutual funds by taking risk and looking for capital appreciation and as older age group people are not taking any risk by investing in growth mutual funds and looking for some alternative investment attributes during the COVID-19 situation due to the highly volatile nature of the Indian mutual funds industry.

Karl Pearson's coefficient of correlation between the variables X and Y is given by

$$R = \text{Cov}(X, Y) / [\text{STDEV}(X) * \text{STDEV}(Y)]$$

Karl Pearson's coefficient of correlation is not affected by change in scale or by change in location. Unlike covariance it can be used to compare the relationship between two pairs of variable. It is a unit free measure of relationship between two variables and takes value in [-1,=1]. When r is close to +1 or -1, there is strong positive or negative relationship between the two variables.

6.2 ONE-WAY - ANOVA – GROWTH MUTUAL FUNDS

- (i) This states that there is an impact of gender in the investment in Growth mutual funds. Mutual funds investment to risk factors due to open market operation so that gender wise investment plays a vital role for the future investment.
- (ii) Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weight age in their future planning.
- (iii) Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weight age in their future planning in tax saving funds under section 80C of Income Tax Act
- (iv) Mutual funds investment to risk factors due to open market operation as well as risk appetite. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors. People are investing in 100% in equity funds for high returns and bearing a more risky fund. Three years locking period is also considered as a risk factor during the present situation of COVID-19 pandemic situation, if investors required money before the 3 year locking period.
- (v) A risk factor is involved in mutual funds investment, so that people prefer to invest for the longer period of time with diversification of the funds to minimize the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.
- (vi) Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different aggressive and highly risky funds for better return. By the way of diversification of funds, they minimize the risk factors involved in the investment of financial markets.
- (vii) A lot of derivative factors which influence the final outcome of the financial investment and increase capital appreciation with the diversification of the funds according to the upward and downward market trends of the funds.
- (viii) People invested a lump sum amount in Growth Mutual funds for capital appreciation purpose as well as high return also. If we saw the history of

mutual funds return in India , we are getting more than 30% returned in long term investment plan and due to this reason people are investing huge amount in the growth saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.

- (ix) Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.
- (x) People are looking for very high return and investing in the aggressive funds. They are taking the high risk involved in the open markets .The performance of growth mutual funds and their return play a vital role for their trust and further investment in the growth mutual funds .People are doing a lot of research in term of fundamental and technical analysis of the particular sectors as well as funds also.

6.3 IBM SPSS WEB REPORT – ONE WAY ANOVA – ELSS MUTUAL FUNDS

1. Mutual funds investment to risk factors due to open market operation so that genderwise investment plays a vital role for the future investment.
2. Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weightage in their future planning.
3. Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weightage in their future planning in tax saving funds under section 80C of Income Tax Act
4. A risk factors is involved in mutual funds investment, so that people prefers to invest for the longer period of time with diversification of the funds to minimize the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.
5. Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation also with the diversification of the funds according to the upward and downward market trends of the funds.
6. People invested a lump sum amount in ELSS Mutual funds for tax saving purpose as well as capital appreciation also. If we saw the history of mutual funds return in India , more than 30% returned we are getting in long term investment plan and due to this reason people are investing huge amount in the tax saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.
7. Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation also with the diversification of the funds according to the upward and downward market trends of the funds.
8. Mutual funds investment to risk factors due to open market operation as well as risk appetite. People are generally looking for tax saving instruments while investing in An equity-linked savings scheme or ELSS funds ELSS funds provides tax benefits to the investors upto 1.50 lakh in one assessment year under the section of income tax act, 1961.so, people are given first preference to tax

benefits factors in ELSS mutual funds and after that looking for the others factors likes capital appreciation etc.

9. Net Inflow of Mutual Fund Schemes - Net Equity Inflows (Rs crore) (motilaloswal.com²¹⁸)

Net investments into such stock plans have been dwindling for months as investors reduce holdings amid worries that the worst impact of the coronavirus may not have passed even as equities continue their ascent. Indian benchmarks have jumped more than 50% of their March low. The Nifty 50 gained 3% in August. All segments witnessed an outflow in August. Among schemes, investors pulled out the most

10. Mutual Fund Investments – Geographical dispersion

Indian mutual fund industry have shown a net investment of Rs. 39,498 crore in financial stock from Jan 2020 to June 2020 which is more than 4 times from its base year (i.e. Previous year 2019) in the same period. As we know that mutual fund investors are very aggressive and this is one of reason to tremendous growth against a sharp decline due to COVID-19 pandemic situation. If we saw the Mutual fund movement in SEBI website , Rs. 30,000 crore was invested in March 2020 alone which show the huge potential and aggressive investors in mutual fund and perform upto to an remarkable growth in the equity mutual funds and portfolio management theory applied a continuously growth in the mutual fund agaist the any other investment in financial sectors. (thefinapolis.com/news²¹⁹)

11. Financial Analyst of Assets Management Company believed that the perception and investment behavior of potential investors find out the opportunity in the invenstment decision rather than taken as a thread in the present sitation of pandemic and better portfolio management reward them a high return in mutual funds . (personalfn.com/²²⁰)

12. There is a net Rs. 1,384 crore was invested in the mutual fund industry during the Jan, 2020, in Feb, 2020 it was Rs. 9,863 crore and showing a remarkable high growth of Rs. 30, 285 crore in the month of march, 2021 which shown the

Hugh potential interment market as compare to other investment avenue. But in the month of April 2020, major investor has taken out Rs. 7,065 crore due to the high risk factor involved in capital market worldwide due the COVID-19 and this pandemic affected the growth of mutual fund as well as world economy also.(.businessworld.in/article²²¹)

13. Mutual Fund Assets of T30 and B30 Locations

T30 generally indicate the top 30 mutual funds in the 30 different geographical locations across the country. and B30 I indicate the location apart from the top 30. The location of B30 are showing the tend towards equity oriented mutual fund investment plan During the period of November 2020,individual investors hold 25 % of assets in the category of B 30 and Foreign institutional investors also contribute almost 5,89% in B30 location..

14. B30 and T30 - Asset Mix

Towards the equity oriented assets, 64% of the equity assets belong to B30 location and invested in equity scheme and 30 % equity oriented scheme contain the portfolio of T30 location.

(Table 6.02)

Month	Equity oriented Schemes	Non-Equity oriented Schemes
Oct'20 (B-30)	62%	38%
Oct'20 (T-20)	35%	65%
Nov'20 (B-30)	64%	36%
Nov'20 (T-20)	35%	65%

(Source: morningstar.in/posts²²²)

15. Equity fund and balance fund are the part of Equity-oriented schemes. Liquid fund and money market instruments are the part of non-equity oriented scheme. Money markets are the short term financial derivative market which is regulated by RBI with high liquidity nature.

16. Growth in Investor Accounts- Investor's capital has been increased by the growth investing, which is an strategy of better investment to enhanced the capital gain in

capital market. In financial investment aspect , growth investors are willing to invest in new and small capital industry and expected for a more than average growth in their future earning as compare to large cap industry, whose share price growth are at par with the market premium and systematic risk beta is around one shown the market growth rate and industry growth rate involved with the same proportionate.(mckinsey.com/business-functions²²³)

17. According to the AMFI report, the net Assets under management (AUM) shown the positive growth in both debt funds as well as equity funds .there was a remarkable growth in the inflows of cash in the debt mutual fund which is almost showing 50percent growth on November 30,2020 as compare to October 2020. There was a continues growth in equity funds and outflow of cash in the equity fund increases by a high volume in the capital market

18. According to the credit rating agency CRISIL published in dec'2020 states that there will be a growth of double digit in mutual funds as the potential investors are looking for a better return in the investment of mutual fund for their capital gain and by the year 2026 , the assets under management will show a landmark of more than Rs. 50,000 crore and this kind of growth shows the investors believe in mutual funds and return in the mutual funds perform a high return as compare to other investment avenue.(crisil.com²²⁴)

19. Mutual fund investment is always contain a risk factors of market volatility , so that investors always looked for safer side of investment but getting less return to mutual funds. But at present time , the investors believe in mutual funds interment and by better portfolio management the are taking the risk factors in a systemic ways and getting good return also na d this enhance the assets under management by a remarkable figure of Rs. 30 lakh core on Nov, 2020

20. From the prior presentation investigation of the chose fifteen value reserves, plainly ten assets have performed well and five supports had not performed well during the review time frame. The sharp fall in the NIFTY during the year 2019

has affected the presentation of the multitude of those reserves. In a definitive investigation, it could be inferred that every one of the assets have performed well in the high unpredictable market development expect SBI Bluechip Fund, Nippon India Largecap Fund, Nippon India Growth Fund, Nippon India Small cap Fund and DSP Smallcap Fund. Consequently, financial backers need to consider factual boundaries like Jensen's alpha, beta, standard deviation, Sharpe Ratios while putting resources into common assets separated from thinking about NAV and Total Return to guarantee steady execution of common assets.

21. Investor can likewise design like one common asset of differentiated value plan, second shared asset of adjusted sort and third one you can plan of obligation type and so forth. Thusly the cash will get broadened, hazard is decreased and the financial backer will get phenomenal benefit. For Example: Rs 20,000 every month, it is insightful to select a limit of three assets. Consider very much appraised huge cap reserves, midcap reserves and a reasonable asset. The last would give the obligation part and lessen the portfolio's disadvantage hazard. Examine the Standard Deviation, Sharpe proportion, Treynor Ratio, Beta, Correlation, P/E Ratio, P/B Ratio and Expense Ratio and additionally its presentation in the bear and the bull stage, and afterward put resources into it. Just making a decision about an asset by its NAV is unessential while choosing the asset as it is the rate gain or misfortune that is important.
22. We set off to look at whether a financial backer would get any expansion advantage by making an arrangement of enormous cap common assets in India. We demonstrate that there is restricted advantage to be acquired by such a portfolio. The SEBI guidelines requiring a base openness of 80% of the portfolio to the best 100 organizations by full market capitalisation and not over 10% openness to a solitary holding are not very prohibitive for store administrators to carry out procedures that are adequately not quite the same as a kind of perspective ETF.
23. Asset chiefs have adequate adaptability to communicate procedures that could show high dynamic offers. A more reasonable requirement on store administrator

activities is that the huge cap file is 'cumbersome'. This represents a predicament for the supervisor. Does she communicate a speculation approach which has a high following blunder, and acknowledge the raised danger of underperformance? Or then again does she take a less an unsafe low following blunder methodology? In a cutthroat market, these choices are imperative to the business achievement.

24. The cross-sectional holding information in June 2020 shows that many assets have followed the last methodology. There is a packing together of huge cap reserves. Remaining adjusted to the benchmark is by all accounts a cognizant decision. The examination of recorded month to month returns shows a high connection and positive covariance among huge cap reserves. The IR of these assets show that they don't beat the reference ETF on a danger changed premise. Given the moderate dynamic offers, hypothetically, it appears to be hard to see
25. Also search for past returns, profit and so on the shared asset has announced. In the event that the financial backer has picked value or securities exchange related common asset, he might go for SIP (Systematic Investment Plan) strategy. A danger unfavorable financial backer ought to try not to put resources into the Sectoral reserves.
26. AMC's utilization NFOs to make energy and push their assets. These plans are dispatched in light of the fact that they are simple roads to catch the executives expenses and increment the asset house's resource base. These plans are normally clones of existing plans, yet with new enthusiastic names displayed to draw in financial backers.
27. Shared assets have effectively assumed control over banks and monetary organizations in US, in offering the most ideal profits from a bunch of differentiated portfolios. The pattern in India is appearing to be identical with numerous shared asset plans acquiring the certainty of contributing people such a lot of that the public area banks and monetary foundations have begun their own common assets inferable from the dread of worldwide pattern. In any case, this

doesn't imply that common assets are brimming with advantages or excellencies. They have their own arrangement of issues with respect to costs, administrations, guidelines, productivity, interest, monetary flimsiness and others, which have been making large concern financial backers. The developing acknowledgment on such issues is unfavorably influencing the financial backers' stake in shared assets industry in India. Be that as it may, encouraging financial factors in the nation are giving confidence for its distinctiveness. The current review is an endeavor to look at the components answerable for this inconsistent condition of common assets in India in order to illuminate its future possibilities.

- 28.** The huge population of the country moving towards the financial investment and looking for a better return. Inflation is one of the major factor in economy which insist us to do the investment to meet our future liabilities and Up to a certain level of inflation is good for the growth of economy and beyond that make a negative impact in the economy and financial sector of the country. GDP growth rate and increase in per in per capita income of the income of the country is the primary factors for outflow of cash in the capital market.

- 29.** In the capital market, better portfolio management with diversify nature minimize the risk factor involes in the open market investment and increase the chance of higher return in long term investment plan in mutual fund. Market risk factors, business risk and interest risk is associated with the high return and in mutual fund investment risk and retrun factor showing the perfect positive correlation between them. In the international funds also a lot of risk factors like currency convertibility, hedging , arbitration and inflation associated with higher return and with the help of fundamental analysis and technical analysis , we are a better portfolio for a long term investment. Currency exchange rate with high risk of volatility is associated with foreign exchange market and to get information about the performance of international mutal fund are easy due to a lot of regulatory factors or international project appraisal involved in the capital investment and theses markets also affected by political and economic change of these countries.(cafemutual.com/news²²⁵)

30. "Arrangement of the top of the line assets" for the financial backers. Additionally, regardless of the accessibility of a huge pool of choices a financial backer may really be passed on with restricted choices because of the presence of comparable, clone-kind of assets with indistinguishable profiles. Hazard faced by a financial backer can be significantly diminished, and accordingly a financial backer can be in an ideal situation by picking a mix of plans rather than a solitary one for a given degree of return. This paper manages some viable issues in this specific situation and arrangements have been recommended dependent on experimental discoveries.
31. Indian mutual fund industry shown a fast growth over the years .and mutual fund showing the fast growth year by year and best performing mutual fund is keep on changing year by year which is based on demand and supply principle of the capoitail market. Various rating agency likes CRISIL, ICRA, FITCH, Standards and Poor, CARE etc are actively participated in the capital market and ranking the mutual funds scheme on the basis of basis of their performance and NAV calculation.On the basis of Qualitative and quantitative factors involved in the better return, these agency give their judgment on the some parameters like standard deviation, Net assets value, asset size, sharpe ratio, coefficient of determination etc. and with the help of these factors we makes a better portfolio for the better investment and our investment will show the better retun in the best perfuming mutual fund in India.(pwc.com/us/en/industries²²⁶)
32. Indian investors have shown three times jump in the contribution to Asset under Management (AUM) in mutual funds over the last three to five years. Year 2017 has proved to be one of the highest grosser by reaching a total corpus of Rs. 17 trillion, despite the poor show by equity and capital markets due to the demonetization and global surge in oil prices. Around Rs. 3.71 trillion contributions came in the year 2017 only, the highest ever contribution till date. The Systematic Investment Plans (SIP) monthly contribution has hit a record high of Rs. 4,500 crore, which is expected to rise even further high. ETFs have also seen a sharp rise in contribution by investors. Rs. 40,000 to Rs. 45,000 crores were invested through the ETFs and arbitrage funds, which represents almost 10% of total contribution. Another reason for sharp rise in mutual fund contribution is scrapping of entry load from the mutual funds. With rising incomes and good

economic policies, mutual funds industry saw a surge in mutual funds AUM and several fund houses were formed. One of the reasons for sudden rise in mutual fund contribution is technology. (valueresearchonline.com²²⁷)

33. Technology has made it possible for the asset management companies to expand its territory to places, where it doesn't have any physical presence. People are now able to get information, suggestion and even they can invest in mutual funds without visiting the representative offices of the AMC. Mutual Fund industry has adapted itself to the changing technological environment in and around itself. And it has seen a positive response from the investors. Investors can now even get the e-KYC done online, without even the physical contact with any of the representatives of the mutual fund industry. Also, SEBI (Securities Exchange Board of India) the regulatory body of the MF industry has made necessary changes in the regulations, so that it can take proper advantage of the new technologies into the mutual fund industry. Impact of technology on mutual funds and financial markets

34. Artificial Intelligence has been into the mainstream news, as it is always making headlines, every time it's something new and remarkable. Stephen Hawking's warning on the Artificial Intelligence cannot be ignored, whereas there are still people and government who can't stop working on Artificial Intelligence. AI has already created its space in the industry, with its applicability into many aspects. It has helped company to reduce inaccuracy and increase efficiency. It is already used in ECM (Enterprise Content Management) by mutual fund companies. AI does the job of processing large data, arranging, classifying, checking for error, and thus reducing the redundancy and duplication of data.(pubdocs.worldbank.org²²⁷)

35. Computers is known for analyzing and processing huge amount of data within fraction of seconds, combined with intelligence, smart analyzing and interpretation of data could help fund managers to do the historical analysis of the stocks. With greater intelligence AI is utilized for making security analysis and arriving at an optimum portfolio with risk-reward ratio. It can also be used to customize the needs of the investors and suggest the best possible investment options. Here Robo-Advisors are being developed, which can work based on certain algorithms to understand individual customers, its needs, risk parameters, etc. and then can

process the data to suggest right products for the investors. Since it will be automated, chances of inaccuracy are minimized.

- 36.** With next generation technology, entire investment process is now paperless, efficient and easy to invest. It has helped the fund houses to increase its efficiency in distribution channel; it is now possible to reach places, which was earlier difficult to reach. With e-commerce platforms, mutual funds would be under the reach of vast majority of the investors. Technology is transforming the asset management companies; it is now being reorganized and more centralized than before. Mobile, social media, cloud computing, Blockchain mechanism, big-data, analytics and Fin Tech is now redefining the future of asset management. Since AI has the potential to enhance the efficiency of the information processing, thus reduces the asymmetries, application of AI.
- 37.** Artificial Intelligence may process large information for the investor and can come up with most probable recommendations, which may be helpful for the investor in taking investment decision. It can reduce the overall trading cost for the investors; can suggest most appropriate trading strategies for the investors according to the changing scenarios. AI can be used to target specific customer segment and come up with better recommendation. Regulatory considerations regarding use of artificial intelligence and machine learning
- 38.** Regulating artificial intelligence is also termed as supervision. As AI and machine learning is already adopted by financial institutions in some areas like automated customer interactions, risk assessment, credit risk analysis, optimize capital, identify trading opportunities and optimizing trading execution.
- 39.** Regulations are required in areas where there is a third-party dependency, for example if an AI, developed by third party, incurs loss, then who is to be blamed? The third party, or the service provider or the investor. Regulatory authorities worldwide have imposed stricter and various regulations on asset management companies. The proposed measures to increase regulations on the financial services sector:

40. More regulations on reporting norms, and also put more stress on asset management companies to discourage investors to redeem funds at distressed situation in financial market.
41. Just like banks undertake stress testing more often, the financial services sectors should also frequently do stress testing of all the funds they manage.
42. Low tolerance for regulatory breaches by asset management companies, leading to increased fines and increased cost of regulations.
43. This could lead to increased burden of regulation on asset management companies and is going to significantly impact the small players.
44. Minimum qualifications for investment professionals, so that the minimum competency level should be achieved in order to work in an investment advisory firms as well as fund management house.
45. Complete ban on commissions on sale of mutual funds in order to protect consumers. Vi. Increased reporting in order to bring more transparency into the system.
46. Robo-advisors could offer tailor-made customized products for the investors, creating individual tailor-made customized products, could create low correlation among the various other trading strategies, which could lead to greater market diversity in market movements. Low cost of trading and increased efficiency in processing of information could help reduce price misalignments and hence build-up of macro-financial price imbalances. More use of machine learning could lead to lack of data transparency to the consumers, and hence it would be more difficult to explain on how a credit or insurance decision was reached (morganstanley.com²²⁹)

- 47.** The technology sector is continuously growing, so it's true that some of your investments may face some near-term headwinds. However, experts project that in the coming days, technology mutual funds will have the capacity to outperform global equity funds. Hence, if there is one sector you need to keep your eyes peeled for, then this is it!
- 48.** Artificial Intelligence is now being adapted by an increasing number of companies worldwide, and when it comes to financial industry, the asset management companies have already started making use of AI and machine learning. It has led to increased efficiency in operations of the financial institutions and also it has increased overall efficiency of the financial system and economy. More efficient risk management of the investment portfolio, helps to appropriate allocation of funds, also reduce cost of transactions and increase speed of the transactions. With adaptation of digitalization in mutual funds, it has shown a very positive sign of increased participation by the investors. (www2.deloitte.com²³⁰)
- 49.** Demonetization may have initially hampered the financial markets, but soon it witnessed highest ever contributions towards asset base of mutual funds, in the year 2017 as compared to over a decade. Investors can now make direct investments, without involvement of any broker or distributor, soon e-commerce platform will make it even more easier for the investors to invest in mutual funds. New technologies like Blockchain mechanism, robo-analytics, robo-advisors will help the asset management companies to increase their efficiency and performance in future.
- 50.** Distribution channels will utilize more of advanced technologies to make their work efficient and investor friendly.
- 51.** Technologies like robo-advisory can help the customer to have access to wealth of information and they can get personalized advisory at their convenience. However, there would be some challenges, which can be tackled by the active involvement of regulators, in bringing the necessary changes in regulations to be in the favor of the investors, by safeguarding the interest of the i

6.4 EXTENSION FOR FURTHER STUDY

This review covered just the main 5 ELSS reserves and their presentation over a range of 5 years. This investigation can be additionally extended to incorporate more ELSS reserves and a more drawn out time span. The exploration can likewise be ventured into enhanced shared asset classes and contrasting outcomes with choose contrasts. Incorporation of loan cost hazard, business hazard, political danger and unfamiliar trade hazard can set out open doors for additional improvement. Expanding the utilization of extra execution proportions and changed contrasting strategies can work with additional turn of event

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APPENDICES

QUESTIONNAIRE

"Performance Analysis of Growth Mutual Funds and Tax-Saving Mutual Funds (ELSS) in India"

Dear Respondent,

I am conducting a pilot survey to "Performance Analysis of Growth Mutual Funds and Tax-Saving Mutual Funds (ELSS) in India" as a part of my Doctoral Program at ARKA JAIN UNIVERSITY JHARKHAND. Kindly fill in the following form. Thank you so much for your time and consideration.

(i) Email _____

(ii) Name _____

(iii) Gender _____

(iv) Contact No.

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(v) Age (Please Tick)

Below 20	21-30	31-40	41-50	51-60	Above 60

(vi) Educational Qualification (Please Tick)

Upto Higher Secondary (12th Std.)	Graduate	Post-Graduate	Professional	Doctoral	Post-Doctoral	Research Scholar

(vii) Occupation (Please Tick)

Salaried - Public Service	Salaried - Private	Salaried - Government Employees	Business / Self Employed	Agriculture Sector	Retired Person	Student
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	Sector					

(viii) Marital Status (Please Tick)

Married	Unmarried / Single

(ix) Monthly Average Savings (Please Tick)

Below Rs 10000	Rs 11000 - 15000	Rs 16000- 30000	Rs 31000- 50000	Above Rs 50000

Questionnaire- Investor Category

1. which of the following is the best investments in your Investment Preference (Please Tick)

Equity Shares	Mutual Funds	Post Office Savings	Bank Fixed Deposits	Life Insurance	Gold / Silver	

2. According to your point of view which investment attributes has more weightage in term of investment in ELSS funds. (Please Tick)

Return	Risk	Liquidity	Awareness of the Investment Product	Tax Benefit	Convenience / Flexibility

3. According to your point of view which investment attributes has more weightage in term of investment in Growth mutual funds (Please Tick)

Return	Risk	Liquidity	Awareness of the Investment Product	Convenience / Flexibility	Tax Benefit

4. Previously anytime you have invested in an Equity Linked Savings Scheme (ELSS) Mutual Fund in India ? (Please Tick)

Yes	No

5. Previously anytime you have invested in an Growth Mutual Fund in India ? (Please Tick)

Yes	No

6. How long have you been investing in Equity Linked Savings Scheme (ELSS) ? (Please Tick)

Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years

7. How long have you been investing in Growth Mutual Funds ? (Please Tick)

Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years

8. In Which ELSS Investment Plan Option do you plan to invest ? (Please Tick)

Growth Option	Dividend Option	Dividend Growth Option	Others

9. what is your preference while investing in Growth mutual funds scheme in India? (Please Tick)

Diversified Equity Funds	Index Funds	Gold Funds	Balance d Funds	Debt Funds	Liquid Funds	Exchange Traded Funds (ETF's)	Others

10. How much amount you are investing in ELSS Funds in a year ? (Please Tick)

Below Rs 5000	Rs 5000 - 15000	Rs 15000-40000	More than 40000

11. How much amount you are investing in Growth Mutual Funds in a year ? (Please Tick)

Below Rs 5000	Rs 5000 - 15000	Rs 15000- 40000	More than 40000

12. What kind of Investment Objectives do you think can be met while investing in ELSS Funds ? (Please Tick)

Tax Benefit	Capital Appreciation	Retirement Planning Needs	Children Education / Marriage Needs	others

13. What kind of Investment Objectives do you think can be met while investing in ELSS Funds ? (Please Tick)

Tax Benefit	Capital Appreciation	Retirement Planning Needs	Children Education / Marriage Needs	others

14. How long will you remain invested in ELSS Funds ? (Please Tick)

Just 1 Years	1 - 3 Years	3-5 Years	Over 5 Years

15. How long will you remain invested in Growth Mutual Funds ? (Please Tick)

Just 1 Years	1 - 3 Years	3-5 Years	Over 5 Years

16. What is your source of information in selecting the ELSS Tax Saving funds for Investment?

Personal Research	Fund Star Ratings (Value Research / Crisil Ratings	Asset Management Company / Fund Manager	News Paper / Magazine Recommendations	Financial Planner / Advisor Recommendation

	etc.			

17. What is your source of information in selecting the Growth Mutual funds for Investment ? (Please Tick)

Personal Research	Fund Star Ratings (Value Research / Crisil Ratings etc.	Asset Management Company / Fund Manager	News Paper / Magazine Recommendations	Financial Planner / Advisor Recommendation

18. According to your point of view what is the risk factors while investing in ELSS Funds(Please Tick)

Less Risky	Risky	Neutral	More Risky	Highly Risky

19. According to your point of view what is the risk factors while investing in Growth mutual Funds ? (Please Tick)

Less Risky	Risky	Neutral	More Risky	Highly Risky

20. What is your expectation of Average Annual Returns from ELSS Funds ? (Please Tick)

Less than 10% pa	10 - 15% pa	15 - 20% pa	Greater than 20% pa

21. What is your expectation of Average Annual Returns from Growth Mutual Funds ? (Please Tick)

Less than 10% pa	10 - 15% pa	15 - 20% pa	Greater than 20% pa

22. What is your expectation of Average Annual Returns from Diversified Equity Funds ? (Please Tick)

Less than 10% pa	10 - 15% pa	15 - 20% pa	Greater than 20% pa

23. What do you consider are the additional risk factors in ELSS Funds as compared to Diversified Equity Funds ? (Please Tick)

3 Year Lock In Period	Higher Equity Allocation	Both	None

24. How will you allocate an amount of Rs 10,000 in the below given Tax Saving Investments or Growth Funds? (Please Tick)

ELSS mutual funds	Growth Mutual Funds	National Savings Certificate (NSC)	Public Provident Fund	Insurance Plans	National Pension Scheme (NPS)	5 Year Bank FD

25. How do you rate your satisfaction with regard to the Returns performance of ELSS Funds ? (Please Tick)

Highly Satisfied	satisfied	Neutral	Dissatisfied	Highly Unsatisfied

26. How do you rate your satisfaction with regard to the Returns performance of Growth Mutual Funds ? (Please Tick)

Highly Satisfied	satisfied	Neutral	Dissatisfied	Highly Unsatisfied

27. What changes would you like to see in the ELSS Fund Regulations ? (Please Tick)

Lower Lock In Period	Higher Lock In Period	Lower Equity Allocation	Dedicated Deduction U/s 80 C for ELSS

28. What changes would you like to see in the Growth Mutual Fund Regulations ? (Please Tick)

























Lower Lock In Period	Higher Lock In Period	Lower Equity Allocation	Dedicated Deduction U/s 80 C for ELSS

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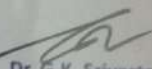
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He / She presented the paper titled An Extent of Financial
Inclusion among Rural Households in Saraikela-
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Ranchi University, Ranchi


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This is to Certify that **Rajeev Kumar Sinha** has participated and presented a **Research Paper** titled **Emerging Trends of Mutual Funds in India: A study Across Category and Type of Schemes** in a **Virtual 5th International Conference** held on **9th April 2021**, organised by **Faculty Research Cell - Samshodhana**, School of Commerce, JAIN (Deemed-to-be University), Bengaluru.

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This is to certify that **Rajeev Kumar Sinha**, has presented a Research Paper titled **Performance Evaluation of Mutual Funds: A Study of Selected Equity Diversified Mutual Funds in India** in an **Online International Conference** held on **22nd December 2020**, organised by **Faculty Research Cell - Samshodhana**, School of Commerce, JAIN (Deemed-to-be University), Bengaluru.

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Presented a paper titled *Analytical Study of Investment Patterns and Investment Preferences of Retail Investors Post COVID 19*

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Dr Punith Cariappa

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INTERNATIONAL MANAGEMENT CONFERENCE - 2020

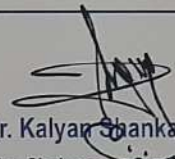
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CERTIFICATE of APPRECIATION

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EMERGING TRENDS OF MUTUAL FUNDS IN INDIA: A STUDY ACROSS CATEGORY AND TYPE OF SCHEMES

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Abstract

The current paper aims to bring out the modern trends in mutual fund industry in India. The emerging circumstances and escalation of mutual funds have been analyzed crossways category, segment and type of assortment. annual percent transform, compound annual growth rate (CAGR) and proportionate market share are the foremost apparatus functional for analyzing enlargement in numeral of schemes, assets under management and capital mobilized.

This situation is at once a threat and an opportunity. It is threat because of the vulnerability of large players who built their business in protected environment and under-developed regulation. To some extent, it is a historical baggage they are carrying which can crush them and the industry if not thrown away carefully and decisively. It is an opportunity because there is room for growth as the large players right-size and as the market also grows. While this happens, all service providers will have to master the first principles of fund management.

The mention phase ranges from 2015-2020, i.e. period of 5th generation financial sector reforms. The Industry's AUM crossed the milestone of ₹10 Trillion (₹10 Lakh Crore) for the first time as on 31st May 2014 and in a short span of about three years the AUM size had increased more than two folds and crossed ₹ 20 trillion (₹20 Lakh Crore) for the first time in August 2017..There are as many as 44 AMFI (Association of Mutual Funds in India) registered fund houses in India which together offer more than 2,500 mutual fund schemes.

Four MF trends that will catch up in 2021

Global investing and roll-down strategy became popular in 2020.

More and more AMCs are launching funds with ESG investing philosophy, and risk meter is a big development. The wide array of funds often makes it a little difficult for investors to choose the best scheme for them. The learning brings out that the mutual fund investors in India at present have as many as 2500 schemes with diversity of features such as dividend, growth, cumulative interest income, monthly income plans, sectoral plans, equity linked schemes, money market schemes, etc. Though both open-end and close-end schemes have registered excellent growth in fund mobilization, but currently the former category of schemes is more popular among the investors. Portfolio-wise analysis has brought that income schemes have an edge over growth schemes in terms of assets under management.

Moreover *Indian Mutual Fund* industry's *Average Assets Under Management* (AAUM) stood at ₹ 32.30 Lakh Crore (INR 32.30 Trillion) The *MF* Industry's AUM has grown from ₹ 12.63 trillion as on February 29, 2016 to ₹31.64 trillion as on February 28, 2021, about 2 ½ fold increase in a span of 5 years. Such are the emerging trends in mutual funds in India and such is the shape of the subjective and the objective subjective conditions in our rapidly transforming markets.

Key Words: Mutual Fund, Open ended Scheme , UTI, ELSS, Assets Under Management (AUM)

Introduction

The purchaser is the Mutual Fund Industry's "Shared Services" inventiveness shaped by the Asset Management Companies (AMCs) of SEBI (Securities & Exchange Board of India, the regulator for securities markets in India) registered Mutual Funds under the protection of AMFI (Association of Mutual Funds of India, an industry standards organization in India in the mutual funds sector), with an purpose of investor empowerment, distributor expediency, consolidation of in sequence to a variety of agencies, operational effectiveness for RTAs and benefits to AMCs, thereby benefiting all stakeholders in the industry.

The client did not have an breathing communications which could facilitate investors to deal transversely mutual fund portfolios accessible by a variety of fund houses in the nation. The procedure worn by investors to devote in mutual fund schemes concerned a lot of official procedure and laid off manual processes, which complete it error-prone, unwieldy and multifaceted to manage. throughout the MFU System (powered by Intellect Fund Distribution), the customer realized its apparition of reaching out to the complete investing purchaser support during a single functioning. MFU System provided noteworthy reimbursement to all stakeholders in the Mutual Fund Industry (investors, MF distributors / RIAs and Fund Houses / AMCs). AMCs could efficiently influence MFU system's POS (Point of Service) system to enlarge their arrive at and occurrence to beforehand inaccessible locations. MFU scheme functioning enabled the customer, to get rid of duplicities in attendance in the mutual fund speculation structure and minimized intrinsic risks within the Mutual Fund Industry.

Digital methods comprise company sites, external portals, social-media, smartphone applications, web-chat, IVR phone facility, presence on web-aggregators, SMS, email, etc. These can be Own-Media, Paid-Media or Earned-Media. Own media means own sites. Earned media resources reviews, mentions, posts and shares which customers make willingly on social-media assets. remunerated media means paid advertisements/promotions.

In terms of plans, smartphones is the largest and fastest growing medium. Tablets are also growing. Computers are reducing in relevance. The purpose of digital methods is to inform, engage and execute clients/prospects with their business. It underway as an 'add-on', but has enthused to a 'must-have'. In financial services, it has become an significant distribution channel. The objective for financial product producers is to reduce the costs as well as increase revenues. For financial product agents, it is really to increase the revenues.

But first-mover advantage need not always translate into brand stickiness. For that, digital methods need to provide a great experience to clients across usability, content and access. Today, customers are not so fixated with brands, as much as with convenience and value. Firms also have to go to the next-level by creating features that compel repeat-visits and client stickiness.

Activities where Digital is making impact in the Financial Services Value-Chain From Customer Engagement to Customer Fulfillment -

Engaging with Existing client → prospect Engagement → Lead Generation → New Client Acquisition → Product promotion & comparision → Buying decision & purchase Completion → Device-Agonstic across and preference - storage → Reporting and Notification → Client servicing and client feedback → Data collection for Management Decision -making.

The MFU structure manages the complete logistics of executing MF dealings, enabling distributors to spotlight additional on provided that excellence suggestion to their clients. It provides a solitary aim for time-stamping dealings and eliminates repetition of certification / processes. MFU scheme is the winner of the Banking Technology Award for the year 2016 in the „Best Industry communications Initiative“ category. This credit is an additional plume in the cap for the MFU classification whose member AMCs explanation for about 92 per cent of the industry Assets Under Management (AUM) and about 94 per cent of industry transactions. presently, the markets are facing opportunities both on the home and the worldwide front. Namely, increasing tensions brought on by the US-China trade disagreement, reduction in international trade quantity and a slower universal as well as Indian growth rate. This economic state of affairs attached with the congregation of changes that SEBI had introduced for the mutual fund Industry has brought on an noticeable difference between expansion and

augmentation potential for the Industry. Getting new customers and growing case share from the breathing ones must be the first main concern for the MF industry. many of initiatives have been engaged, not only by SEBI, AMFI but also by entity companies to accomplish this outline. specified the stretched periphery structure that all stakeholders function in, the spotlight ought to be on structure distribution (enabling and showing the business Prospects to breathing large impending setups like PSU Banks, creating new ARN holders while collaborating with governments through skill development programs and creating employment. Digital boundary is the outlook which desires to be embraced by all active stakeholders and should develop into an essential part of the voyage for anyone amalgamation in currently.in view of the fact that mutual funds are classically sold and not bought, distributors participate a input function in channelizing money in excess of the years, the distributors and IFAs have played an significant role in the explosion of mutual fund schemes as an best deal avenue among primarily, the retail investors, which in twist has resulted in a important payment by them in the largely AUM garnered by the mutual fund industry.

although the rising allocation strength is a strong symbol, the industry requirements to do a great deal more to provide to India's huge inhabitants, particularly to arrive at out to people who are not digitally ability. We can be trained from our close social group in the financial services industry (Life Insurance), the way they have enlarged distribution path crossways the surroundings and leveraged the active Banking framework/infrastructure throughout banc assurance channel. One of the main public life insurance companies has concluded 63 years of operations in India in 2018 and has about 11 lakhs agents. accomplishment still 50% of this huge circulation force can go a extensive method in increasing the arrive at of mutual funds surrounded by households.

Technology is disrupting and it is positively impacting the mutual fund industry. It has enormous reimbursement, chiefly for the investors, along with the AMCs and the distributors. Digitisation and the growth of allotment are where the aggressive benefit will be in the next to future of the mutual fund industry. a lot of distributors are implementation these changes and with them to cultivate their business too. In fact, with internet connectivity improving in B30 towns, usage of digital interfaces has enhanced considerably. The next step would be to educate the customers concerning the expediency of by means of digital intermediate and serving them experiences it.The technological developments are expected to bring increased efficiency and a 'customer delight' factor amongst our investors while increasing the efficiency. This will, I believe turn to be a blessing in disguise for us as the AMC, and the distributors in making us move towards being a more customer centric industry.

Literature review

The world is going digital, and the pace of conversion is rising. India has ~300 mn internet users. Within this, Google estimates it took 20 years for India to notch its first 100 mn users, while the next 100 mn took 2 years and 1.3 years respectively. This is expected to reach 600 mn by 2020, with users across gender and age-groups. Comscore's Sept 2014 figures may be more relevant for financial services. It estimates ~170 mn Males of age 25+ years visited financial websites. While financial services is not a Male-domain in any sense, the absolute numbers are eye-catching by themselves. Digitization has played an essential role in distribution of information and that as well in an appealing way foremost to better information and in rank about the developments in the mutual fund industry and capital markets. The government also has played a important function in digitization throughout widespread efforts in financial inclusion - dispersal financial consciousness to the furthest parts of country and bridging geographical dissimilarity.

Digital methods comprise corporation sites, outside portals, social-media, smartphone applications, web-chat, IVR phone facility, being there on web-aggregators, SMS, email, etc. These can be Own-Media, Paid-Media or Earned-Media. Own media means own sites. Earned media means reviews, mentions, posts and shares which clients make voluntarily on social-media assets. Paid media means paid advertisements/promotions.

In terms of devices, smartphones is the largest and fastest growing medium. Tablets are also growing. Computers are reducing in relevance. The purpose of digital methods is to inform, engage and execute clients/prospects with their business. It started as an 'add-on', but has moved to a 'must-have'. In financial services, it has become an important distribution channel. The objective for financial product producers is to reduce the costs as well as increase revenues. For financial product agents, it is really to increase the revenues.

Prasada Rao et al. (2018) in their research consider that Blockchain technology can assist the entire the stakeholders in the mutual funds industry with its intelligibility, devolution, tamper-resistance, answerability and solitude. With amplified lucidity, the self-confidence level in the middle of the investors will enlarge; as well it will show the way to augmented effectiveness of work, with minor paper-work through digitalization. Daniel O'Keefe et al. (2016) from KPMG surveyed fifteen hundred bank clients about their consciousness of and attention in digital prosperity management. Their unearthing was astonishing, consciousness concerning robo-advisory was 8 to 15 percent, but it was uniformly amazing that 51.8% of the investors were conscious of intelligent portfolio management, and 48% of the investors were aware of Personal Advisor Services. They moreover quoted an amplified swing in new and accessible investors towards robo-advisory, according to their research, robo-advisory could be worth \$2.2 trillion by the year 2020. The financial services business is customer-facing, competitive, distribution-sensitive and turnaround-time sensitive. If the company's target universe is increasingly going digital, it makes sense to adopt digital as the Backbone, rather than a Support. This may give it a 'first-mover advantage', which can have bearing on its success in a market like India, which is still evolving in terms of sophisticated financial products. It also depends on the industry it is in. For example: it can be a support in insurance but it is a must in broking. But first-mover advantage need not always translate into brand stickiness. For that, digital methods need to provide a great experience to clients across usability, content and access. Today, customers are not so fixated with brands, as much as with convenience and value. Firms also have to go to the next-level by creating features that compel repeat-visits and client stickiness.

The world is departing digital, and the speed of adaptation is increasing. India has ~300 million internet users. Within this, Google estimates it took 20 years for India to indentation its first 100 million users, while the next 100 million took 2 years and 1.3 years respectively. This is accepted to reach 600 million by 2020, with users crossways femininity and age-groups. Comscore's Sept 2014 data may be additional pertinent for financial services. It estimates ~170 million Males of age 25+ years visited financial websites. While financial services is not a Male-domain in any sense, the complete information are eye-catching by themselves.

Objective of the study

- i. To study the current trends in growth of mutual fund industry in India
- ii. To examine the emergence of technology in mutual funds industry
- iii. To study the impact of technology on mutual funds and financial markets
- iv. To study the current regulatory considerations regarding use of Artificial Intelligence and machine learning, and lastly,
- v. To study the implications of artificial intelligence for financial stability

Research Methodology

- (a) To examine the mutual fund schemes performance, 10 schemes were selected Mutual Fund.
- (b) Daily NAVs of these schemes are collected for period of five years i.e., August 2015 to July 2020 from amfiindia website.
- (c) For benchmarking and comparison purpose BSE-Sensex and NSE-Nifty is used.
- (d) To consider risk free return yield on 91-day Treasury bills is accepted which 8.52% , during my study period.

Data Analysis

Recent trend in growth of mutual fund industry in India

The industry added 44.2 million folios between March 2014 and June 2019. Almost the entire growth in folios came from the individual investors' segment (retail & HNI), which logged a CAGR of 15.5% over this period. Their average ticket size, too, increased from 102,000 INR in March 2014 to 169,000 INR in June 2019.

The industry added 44.2 million folios between March 2014 and June 2019. Almost the entire growth in folios came from the individual investors' segment (retail & HNI), which logged a CAGR of 15.5% over this period. Their average ticket size, too, increased from 102,000 INR in March 2014 to 169,000 INR in June 2019. A Securities Transaction Tax (STT) is applicable at the rate of 0.001% on equity oriented mutual funds at the time of redemption of units. An investor is not required to pay STT separately as it is deducted from the mutual fund returns.

List of Top tax Saving (ELSS) Mutual Funds for FY 2020

Fund name	3 years return	5 years return
Mirae Asset Tax saver	19.82%	-
Axis Long term Equity fund	19.21%	13.20%
Tata india Tax saving Fund	17.50 %	13.76%
Motilal Oswal Long term equity funds	17.13%	
Inversco India Tax plan	15.52%	11.98%
DSP tax saving Fund	15.25%	12.08%
Aditya Birla sun life tax relief 96	14.83%	11.54%
Kotak tax saver	14.57%	11.03%

<https://www.paisabazaar.com/mutual-funds/tax-benefit-of-mutual-fund/>

Dividend Distribution Tax (DDT) in the hand of mutual fund investors

Investors	Resident /Individual/H UF	Domestic Company	NRI
Dividend			
All Schemes	Tax Free in the hands of Investors		
Tax on distributed income (payable by the scheme) rates			
Equity oriented scheme	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess
	11.648 %	11.648 %	11.648 %
Infrastrure debt funds	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	5%+12% Surcharge+4% Cess
	29.12%	34.944%	5.824%
Other than equity oriented scheme and	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	25%+12% Surcharge+4% Cess

IDF	29.12%	34.944%	29.12%
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Indian investors have shown three times jump in the contribution to Asset Under Management (AUM) in mutual funds over the last three to five years. Year 2017 has proved to be one of the highest grosser by reaching a total corpus of Rs. 17 trillion, despite the poor show by equity and capital markets due to the demonetization and global surge in oil prices. Around Rs. 3.71 trillion contributions came in the year 2017 only, the highest ever contribution till date. The Systematic Investment Plans (SIP) monthly contribution has hit a record high of Rs. 4,500 crore, which is expected to rise even further high. ETFs have also seen a sharp rise in contribution by investors. Rs. 40,000 to Rs. 45,000 crores were invested through the ETFs and arbitrage funds, which represents almost 10% of total contribution. Another reason for sharp rise in mutual fund contribution is scrapping of entry load from the mutual funds. With rising incomes and good economic policies, mutual funds industry saw a surge in mutual funds AUM and several fund houses were formed. One of the reasons for sudden rise in mutual fund contribution is technology. Technology has made it possible for the asset management companies to expand its territory to places, where it doesn't have any physical presence. People are now able to get information, suggestion and even they can invest in mutual funds without visiting the representative offices of the AMC. Mutual Fund industry has adapted itself to the changing technological environment in and around itself. And it has seen a positive response from the investors. Investors can now even get the e-KYC done online, without even the physical contact with any of the representatives of the mutual fund industry. Also, SEBI (Securities Exchange Board of India) the regulatory body of the MF industry, has made necessary changes in the regulations, so that it can take proper advantage of the new technologies into the mutual fund industry.

Impact of technology on mutual funds and financial markets

Artificial Intelligence has been into the mainstream news, as it is always making headlines, every time it's something new and remarkable. Stephen Hawking's warning on the Artificial Intelligence cannot be ignored, whereas there are still people and government who can't stop working on Artificial Intelligence. AI has already created its space in the industry, with its applicability into many aspects. It has helped company to reduce inaccuracy and increase efficiency. It is already used in ECM (Enterprise Content Management) by mutual fund companies. AI does the job of processing large data, arranging, classifying, checking for error, and thus reducing the redundancy and duplication of data.

Computers is known for analyzing and processing huge amount of data within fraction of seconds, combined with intelligence, smart analyzing and interpretation of data could help fund managers to do the historical analysis of the stocks. With greater intelligence AI is utilized for making security analysis and arriving at an optimum portfolio with risk-reward ratio. It can also be used to customize the needs of the investors and suggest the best possible investment options. Here Robo-Advisors are being developed, which can work based on certain algorithms to understand individual customers, its needs, risk parameters, etc. and then can process the data to suggest right products for the investors. Since it will be automated, chances of inaccuracy are minimized.

Growth in Mutual Fund Assets 2020- Assets Under management (Rs.Cr.)

Mutual Funds	Dec 2019	June 2020	Change	% Change
SBI Mutual fund	352632	364,363	11,731	3.33
HDFC Mutual fund	382,517	356,183	-26,334	-6.88
ICICI Prudential Mutual fund	361,507	326,291	-35,215	-9.74

Aditya Birla Sun life mutual fund	249,926	214,592	-35,334	-14.14
Nippon India Mutual fund	204,371	180,061	-24,310	-11.90
Kotak Mahindra mutual fund	176,961	167,326	-9,636	-5.45
Axis Mutual Fund	122,867	134,316	11,449	9.32
IDFC mutual fund	104,630	101,770	-2,860	-2.73
UTI mutual fund	157,119	133,631	-23,488	-14.95
Franklin Templeton Mutual fund	126,475	79,808	-46,667	-36.90

<https://www.moneycontrol.com/mutual-funds/amc-assets-monitor>

With next generation technology, entire investment process is now paperless, efficient and easy to invest. It has helped the fund houses to increase its efficiency in distribution channel, it is now possible to reach places, which was earlier difficult to reach. With e-commerce platforms, mutual funds would be under the reach of vast majority of the investors. Technology is transforming the asset management companies, it is now being reorganized and more centralized than before. Mobile, social media, cloud computing, Blockchain mechanism, big-data, analytics and Fin Tech is now redefining the future of asset management. Since AI has the potential to enhance the efficiency of the information processing, thus reduces the asymmetries, application of AI. AI may process large information for the investor and can come up with most probable recommendations, which may be helpful for the investor in taking investment decision. It can reduce the overall trading cost for the investors, can suggest most appropriate trading strategies for the investors according to the changing scenarios. AI can be used to target specific customer segment and come up with better recommendation.

Regulatory considerations regarding use of artificial intelligence and machine learning

Regulating artificial intelligence, is also termed as supervision. As AI and machine learning is already adopted by financial institutions in some areas like automated customer interactions, risk assessment, credit risk analysis, optimize capital, identify trading opportunities and optimizing trading execution. Regulations is required in areas where there is a third-party dependency, for example if an AI, developed by third party, incurs loss, then who is to be blamed? The third party, or the service provider or the investor. Regulatory authorities worldwide have imposed stricter and various regulations on asset management companies. The proposed measures to increase regulations on the financial services sector:

More regulations on reporting norms, and also put more stress on asset management companies to discourage investors to redeem funds at distressed situation in financial market. ii. Just like banks undertake stress testing more often, the financial services sectors should also frequently do stress testing of all the funds they manage. iii. Low tolerance for regulatory breaches by asset management companies, leading to increased fines and increased cost of regulations. This could lead to increased burden of regulation on asset management companies and is going to significantly impact the small players. iv. Minimum qualifications for investment professionals, so that the minimum competency level should be achieved in order to work in an investment advisory firms as well as fund management house. v. Complete ban on commissions on sale of mutual funds in order to protect consumers. vi. Increased reporting in order to bring more transparency into the system.

Robo-advisors could offer tailor-made customized products for the investors, creating individual tailor-made customized products, could create low correlation among the various other trading strategies, which could lead to greater market diversity in market movements. Low cost of trading and increased efficiency in processing of information could help reduce price misalignments and hence build-up of macro-financial price imbalances. More

use of machine learning could lead to lack of data transparency to the consumers, and hence it would be more difficult to explain on how a credit or insurance decision was reached

Conclusion

Since the inception of the digital era, accessing anything and everything has become easier compared to the good old days of manual intervention. Digitization has touched upon various aspects of our lives. It all started with digitizing our social networks, purchase of goods online, transactions on the net, lifestyle enhancements and now our finances too.

A few years back, an investor residing in a small town could not have imagined having access to wealth advisory. He would typically have had his money in a savings bank account or fixed deposit. Digitization has changed this scenario. Companies can now utilize their digital strengths and processes to tap this customer segment which was earlier under the radar and difficult to reach. Technology can help one with a wider geographical reach, providing relevant and unbiased advisory and customer delight, all at the same time.

The government too has played a significant role in digitization through extensive efforts in financial inclusion - spreading financial awareness to the remotest parts of country and bridging geographical difference. Demonetization gave the much needed push to those who were sitting on the fence - whether to go digital or stay offline.

The technology sector is continuously growing, so it's true that some of your investments may face some near-term headwinds. However, experts project that in the coming days, technology mutual funds will have the capacity to outperform global equity funds. Hence, if there is one sector you need to keep your eyes peeled for, then this is it!

Digitization has been transforming the investment landscape in the following ways:

Information revolution - The internet is replete with information and educative articles highlighting the importance of investing and financial planning. A new investor who is indecisive about whether to and where to invest can get a lot of guidance and take informed decision after comparing various options.

Simple is the new smart - What's making the biggest difference in the life of new investors is the simplification that digitization has introduced. Turn-around-time has reduced dramatically, processes are made paper less and advisory is devoid of any error or bias.

The world is now Mobile First - In today's digital world, smartphones have become our most important gadget - they can do literally everything for us and help us invest anytime and from anywhere. In an endeavor to digitize, various mobile applications became available for easy payments, from monthly bills to bank transactions, or for investing in financial instruments like Mutual Funds, ELSS, Fixed deposits or even pension plans.

E-wallets - E-wallets turned it around to - 'Money in time!' Linking your bank details to the e-wallets makes it easier to transfer the money from one bank account to another. Also, the monthly bills can be paid by just one swipe on your mobile phone. Trading and investing in stocks and bonds has become much easier through robust mobile applications and easier money transfer support.

I strongly believe wealth creation and investments cannot happen in isolation. It is a journey in which the service providers and investors are equal partners. Companies who are investing in digitization are doing so with two-fold benefit - that of empowering their employees to deliver better solutions to customers and more importantly empowering the customers to take informed decisions with ease.

AI is now being adapted by increasing number of companies worldwide, and when it comes to financial industry, the asset management companies have already started making use of AI and machine learning. It has led to increased efficiency in operations of the financial institutions and also it has increased overall efficiency of the financial system and economy. More efficient risk management of the investment portfolio, helps to appropriate allocation of funds, also reduce cost of transactions and increase speed of the transactions. With adaptation of

digitalization in mutual funds, it has shown a very positive sign of increased participation by the investors. Demonetization may have initially hampered the financial markets, but soon it witnessed highest ever contributions towards asset base of mutual funds, in the year 2017 as compared to over a decade. Investors can now make direct investments, without involvement of any broker or distributor, soon ecommerce platform will make it even more easier for the investors to invest in mutual funds. New technologies like Blockchain mechanism, robo-analytics, robo-advisors will help the asset management companies to increase their efficiency and performance in future. Distribution channels will utilize more of advanced technologies to make their work efficient and investor friendly. Technologies like robo-advisory can help the customer to have access to wealth of information and they can get personalized advisory at their convenience. However, there would be some challenges, which can be tackled by the active involvement of regulators, in bringing the necessary changes in regulations to be in the favor of the investors, by safeguarding the interest of the investors

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CLIMATE CHANGE IMPACTS ON MARINE ECOSYSTEMS

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ABSTRACT

In marine environments, rising barometrical CO₂ and environmental change are related with simultaneous changes in temperature, dissemination, definition, supplement input, oxygen content, and sea fermentation, with possibly wideranging organic impacts. Populace level movements are happening a direct result of physiological narrow mindedness to new conditions, modified dispersal examples, and changes in species associations. Along with neighborhood environment driven attack and eradication, these cycles bring about modified local area construction and variety, including conceivable development of novel biological systems. Impacts are especially striking for the shafts and the jungles, as a result of the responsiveness of polar environments to the ocean ice retreat and poleward species relocations just as the awareness of coral-algal advantageous interaction to minor expansions in temperature. Midlatitude upwelling frameworks, similar to the California Current, display solid linkages among environment and species appropriations, phenology, and demography. Amassed impacts might adjust energy and material streams just as biogeochemical cycles, in the end affecting the general environment working and administrations whereupon individuals and social orders depend

Keywords trophic structure, hypoxia, diversity, food webs.

INTRODUCTION

From tropical waters in Hawai'i and Florida, to calm waters in New England and the Pacific Northwest, to cold Arctic oceans off of Alaska, the United States has the absolute generally assorted and useful sea biological systems on the planet. Americans depend on sea biological systems for food, occupations, diversion, energy, and other crucial administrations, and waterfront provinces of the United States are home to north of 123 million individuals, or 39% of the U.S. populace (Ch. 8: Coastal).⁸ The fishing area alone offers more than \$200 billion in financial movement every year and supports 1.6 million jobs.⁹ Coastal environments like coral and shellfish reefs, kelp woods,

mangroves, and salt swamps give natural surroundings to numerous species and coastline insurance from tempests, and they have the ability to sequester carbon.

The seas assume a critical part in the worldwide environment framework by engrossing and rearranging both hotness and carbon dioxide.^{14,15} Since the Third National Climate Assessment (NCA3),¹⁶ comprehension of the physical, compound, and natural conditions in the seas has expanded, taking into consideration further developed identification, attribution, and projection of the impact of human-caused fossil fuel byproducts on seas and marine assets.

Human-caused fossil fuel byproducts impact sea biological systems through three principle processes: sea warming, fermentation, and deoxygenation. Warming is the clearest and all around recorded effect of environmental change on the sea. Sea surface waters have warmed on normal $1.3^{\circ} \pm 0.1^{\circ}\text{F}$ ($0.7^{\circ} \pm 0.08^{\circ}\text{C}$) each century all around the world somewhere in the range of 1900 and 2016, and over 90% of the additional hotness connected to fossil fuel byproducts is contained in the ocean.¹⁵ This warming effects ocean levels, sea flow, definition (thickness contrast between the surface and more profound waters), efficiency, and, at last, whole environments. Changes in temperature in the sea and in the climate modify sea flows and wind designs, which impact the irregularity, overflow, and variety of phytoplankton and zooplankton networks that help sea food webs.^{17,18}

As well as warming, overabundance carbon dioxide (CO₂) in the air has an immediate and free impact on the science of the sea. At the point when CO₂ disintegrates in seawater, it changes three parts of sea chemistry.^{15,19,20,21} First, it increments broke down CO₂ and bicarbonate particles, which are utilized by green growth and plants as the fuel for photosynthesis, conceivably helping a considerable lot of these species. Second, it expands the centralization of hydrogen particles, acidifying the water. Acridity is estimated with the pH scale, with lower esteems showing more acidic conditions. Third, it diminishes the centralization of carbonate particles. Carbonate is a basic part of calcium carbonate, which is utilized by numerous marine creatures to shape their shells or skeletons. The immersion condition of calcium carbonate is communicated as the term Ω . At the point when the convergence of carbonate particles in sea water is low to the point of yielding $\Omega < 1$ (alluded to as undersaturated conditions), uncovered calcium carbonate structures start to break down. For straightforwardness, the terms sea fermentation and acidifying will allude to the set-up of compound changes talked about above.

Expanded CO₂ levels in the climate are additionally causing a decrease in sea oxygen concentrations.¹⁵ Deoxygenation is connected to sea warming through the immediate impact of temperature on oxygen dissolvability (warm water holds less oxygen). Warming of the sea surface makes an improved vertical thickness contrast, which diminishes the exchange of oxygen beneath the surface. Biological system changes connected with temperature and delineation further impact oxygen elements by modifying photosynthesis and respiration.^{22,23}

Each of the three of these cycles warming, fermentation, and deoxygenation-collaborate with each other and with different stressors in the sea climate. For instance, nitrogen manure running off the land and entering the Gulf of Mexico through the Mississippi River invigorates algal sprouts that ultimately rot, making an enormous no man's land of water with extremely low oxygen^{24,25} and, at the same time, low pH.²⁶ Warmer conditions at the surface lull the rate at which oxygen is renewed, amplifying the effect of the no man's land. Changes in temperature in the sea and in the climate influence sea flows and wind designs that can modify the elements of phytoplankton blooms,¹⁷ which then, at that point, drive low-oxygen and low-pH occasions in beach front waters.

Changes in sea biological systems are as of now affecting the U.S. economy and the waterfront networks, societies, and organizations that rely upon sea environments (Key Message 1). Fisheries give the most substantial financial advantage of the sea. While the effect of warming on fish stocks is turning out to be more serious, there has additionally been progress in adjusting fisheries the board to an evolving environment (Key Message 2). At last, the

capacity for environment related changes in sea conditions to affect the United States was made particularly clear by significant marine hotness wave occasions that happened along the Northeast Coast in 2012 and along the whole West Coast in 2014-2016 (Key Message 3). During these occasions, the districts experienced high sea temperatures like the normal conditions anticipated not long from now under future environment situations. Biological system changes incorporated the presence of warm-water species, expanded mortality of marine well evolved creatures, and an exceptional unsafe algal blossom, and these elements joined to deliver financial pressure in a portion of the Nation's most significant fisheries.

Marine species are delicate to the physical and substance states of the sea; consequently, warming, fermentation, deoxygenation, and other environment related changes can straightforwardly influence their physiology and performance.^{27,28,29} Differences in how species react to states of being lead to changes in their overall overflow inside a biological system as species decay or expansion in overflow, colonize new areas, or leave spots where conditions are no longer favorable.^{30,31,32,33} Such redesign of species in marine networks can bring about certain species losing assets they rely upon for their endurance (like prey or sanctuary). Different species might be presented to hunters, contenders, and illnesses they have seldom experienced previously and to which they have not advanced conduct reactions or other defenses.^{34,35,36} Climate change is making networks that are naturally unique in relation to those that as of now exist in sea biological systems. Redesign of these networks would change the environment administrations given by marine biological systems in manners that impact local economies, fisheries collect, hydroponics, social legacy, and coastline security (Figure 9.1) (see likewise Ch. 7: Ecosystems, KM 1; Ch. 8: Coastal, KM 2

Marine Ecosystem Services

A round graph shows an assortment of marine biological systems and the administrations they give to human networks. Imagined at focus are four marine biological system types found in the United States, including tropical coral reefs, ocean ice environments in the Arctic, uninhibitedly floating tiny fish, and creatures and kelp that live on the sea base. The administrations these environments give to individuals incorporate hydroponics, fishing, the travel industry, means gather, coastline assurance, and social personality.

While environment driven biological system changes are inescapable, the most evident effects are happening in tropical and polar biological systems, where sea warming is causing the deficiency of two weak natural surroundings: coral reef and ocean ice ecosystems.^{41,42} Warming is prompting an expansion in coral fading occasions around the globe,⁷ and mass dying and additionally episodes of coral illnesses have happened off the shorelines of Puerto Rico, the U.S. Virgin Islands, Florida, Hawai'i, and the U.S.- Affiliated Pacific Islands.^{43,44} Loss of reef-building corals modifies the whole reef environment, prompting changes in the networks of fish and spineless creatures that occupy reefs.^{45,46} These progressions straightforwardly sway waterfront networks that rely upon reefs for food, pay, storm insurance, and different administrations (Figure 9.1) (see likewise Ch. 27: Hawai'i and Pacific Islands, KM 4).

The degree of ocean ice in the Arctic is diminishing, further worsening temperature changes and expanding destructiveness in the Arctic Ocean (Ch. 26: Alaska, KM 1).¹⁵ The decrease in ocean ice addresses an immediate loss of significant living space for creatures like polar bears and ringed seals that utilize ice for hunting, haven, movement, and proliferation, making their overflows decline.^{47,48,49} The Arctic Ocean food web is filled by exceptional blossoms of green growth that happen at the ice edge. Loss of ocean ice is likewise moving the area and timing of these sprouts, affecting the food web up to fisheries and top hunters like executioner whales (Ch. 26: Alaska, Figure 26.4).^{50,51,52} Surface waters around Alaska have or will before long turn out to be forever undersaturated regarding calcium carbonate, further focusing on these biological systems (Ch. 26: Alaska, Figure 26.3).

Projected Impacts

Most of marine biological systems in the United States and all over the planet currently experience fermented conditions that are completely not quite the same as conditions before the modern transformation (Ch. 7: Ecosystems).^{14,53,54} Models gauge that by 2050 under the higher outflows situation (RCP8.5) (see the Scenario Products segment of Appendix 3 for additional on situations) most environments (86%) will encounter blends of temperature and pH that have until recently never been capable by present day species.⁵⁴ Regions of the sea with low oxygen focuses are relied upon to extend and to progressively encroach on waterfront ecosystems.^{15,55,56} Warming and sea fermentation present extremely high dangers for some, marine living beings, including seagrasses, warm water corals, pteropods, bivalves, and krill throughout the following 85 years.⁵⁷ Ocean fermentation and hypoxia (low oxygen levels) that co-happen in seaside zones will probably represent a more serious danger than if species were encountering either independently.⁵⁸ Furthermore, under the higher situation (RCP8.5), before this current century's over, essentially all coral reefs are projected to be encircled by fermented seawater that will challenge coral growth.⁵⁹

Changes in biodiversity in the sea are in progress, and throughout the following not many years will probably change marine ecosystems.³³ The species variety of calm environments is relied upon to increment as conventional assortments of species are supplanted by more different networks like those found in hotter water.⁶⁰ Diversity is relied upon to decrease in the hottest biological systems; for instance, one review projects that virtually all current species will be avoided from tropical reef networks by 2115 under the higher situation (RCP8.5).⁶¹

Environment instigated interruption to sea biological systems is projected to prompt decreases in significant biological system administrations, like hydroponics and fishery usefulness (Key Message 2) and sporting open doors (Figure 9.1) (Ch. 7: Ecosystems, KM 1). Eelgrass, saltmarsh, and coral reef biological systems additionally assist with shielding shorelines from waterfront disintegration by disseminating the energy in sea waves (Ch. 8: Coastal, KM 2). The deficiency of the sporting advantages alone from coral reefs in the United States is relied upon to reach \$140 billion by 2100 (limited at 3% in 2015 dollars).⁶² Reducing ozone depleting substance outflows (for instance, under RCP4.5) could diminish these aggregate misfortunes by as much as \$5.4 billion yet won't stay away from numerous biological and monetary impacts.

Open doors for Reducing Risk

Warming, fermentation, and decreased oxygen conditions will communicate with other non-environment related stressors like contamination or overfishing (Key Message 2). Preservation measures, for example, endeavors to ensure more seasoned people inside species,^{63,64} keep up with solid fish stocks (Key Message 2),⁶⁵ and set up marine secured regions can build strength to environment impacts.^{66,67,68} However, these methodologies are innately restricted, as they don't address the underlying driver of warming, fermentation, or deoxygenation. There is developing proof that numerous environment changes can be kept away from just with significant decreases in the worldwide normal air CO₂ concentration.^{57,69,70}

Arising Issues and Research Gaps

Species can adjust or adjust to changing physical and synthetic conditions, however little is had some significant awareness of species' versatile limit and regardless of whether the pace of transformation is quick to the point of staying aware of the exceptional pace of progress to the environment.^{71,72,73} Furthermore, sea biological systems are turning out to be progressively novel, implying that information on ebb and flow biological systems will be a less solid aide for future independent direction (Ch. 28: Adaptation, KM 2). Kept observing to gauge the impacts of warming, fermentation, and deoxygenation on marine environments, joined with research center and field tests to comprehend the components of progress, will empower further developed projections of future change and ID of powerful protection procedures for changing sea biological systems.

Fluctuation in sea conditions can essentially affect the circulation and usefulness (development, endurance, and conceptive achievement) of fisheries species.^{74,75} For stocks close to the warm finish of their reach, (for example, cod in the Gulf of Maine),⁷⁶ expansions in temperature for the most part lead to efficiency decays; interestingly, warming can upgrade the efficiency of stocks at the virus end of their reach, (for example, Atlantic croaker).⁷⁷ These progressions in efficiency have direct financial and social effects. For instance, warming water temperatures in the Gulf of Maine exacerbated overfishing of Gulf of Maine cod, and the ensuing low standards have brought about financial pressure in New England.⁷⁶ Reductions in the overflow of Pacific cod connected with the new hotness wave in the Gulf of Alaska prompted a failure of the fishery to collect the Pacific cod share in 2016 and 2017, and to a roughly 80% decrease in the admissible amount in 2018.⁷⁸

Changes in efficiency, enrollment, survivorship, and, sometimes, dynamic developments of target species to follow their favored temperature conditions are prompting shifts in the dispersion of numerous financially and casually important fish and spineless creatures, with most moving poleward or into more profound water with warming oceans.^{31,79,80,81,82} Shifts in fish stock conveyances can have huge ramifications for fisheries the board, fisheries, and fishing-subordinate networks. Fishers might be relied upon to move with their objective species; in any case, fishing costs, port areas, guidelines, and different elements can oblige the capacity of the fishing business to intently follow changes in the ocean.⁸³ Shifts across administration limits are now making the executives challenges in certain locales and can become trans-limit issues for fish stocks close to public boundaries (Ch. 16: International, KM 4).⁸⁴

Changes in the circumstance of occasional natural occasions can likewise affect the circumstance and area of fisheries exercises. The circumstance of pinnacle phytoplankton and zooplankton biomass is impacted by oceanographic conditions (like definition and temperature).^{85,86} Since adolescent fish endurance and development are subject to food accessibility, changeability in the circumstance of tiny fish blossoms influences fish usefulness (e.g., Malick et al. 2015⁸⁷). Movement and generating, occasions that frequently rely upon temperature conditions, are additionally changing.^{1,88,89,90} For instance, the board of the Chesapeake Bay striped bass fishery depends on a decent fishing season that is intended to abstain from getting huge egg-bearing females relocating right off the bat in the season. As temperatures rise, more females will generate right off the bat in the season, decreasing their accessibility to fishers.⁸⁹ The area and size of waterfront hypoxic zones (which are reasonable exacerbated by temperature and sea acidification)⁵⁶ can influence the spatial elements of fisheries, for example, the Gulf of Mexico shrimp fishery, with expected financial repercussions.

Projected Impacts

The productivity, distribution, and phenology of fisheries species will continue to change as oceans warm and acidify. These changes will challenge the ability of existing U.S. and international frameworks to effectively manage fisheries resources and will have a variety of impacts on fisheries and fishing-dependent sectors and communities. Projected increases in ocean temperature are expected to lead to declines in maximum catch potential under a higher scenario (RCP8.5) in all U.S. regions except Alaska (Figure 9.2).⁹² Because tropical regions are already some of the warmest, there are few species available to replace species that move to cooler water.⁶¹ This means that fishing communities in Hawai'i and the Pacific Islands, the Caribbean, and the Gulf of Mexico are particularly vulnerable to climate-driven changes in fish populations. Declines of 10%–47% in fish catch potential in these warm regions, as compared to the 1950–1969 level, are expected with a 6.3°F (3.5°C) increase in global atmospheric surface temperature relative to preindustrial levels (reached by 2085 under RCP8.5).⁹² In contrast, total fish catch potential in the Gulf of Alaska is projected to increase by approximately 10%, while Bering Sea catch potential may increase by 46%.⁹² However, species-specific work suggests that catches of Bering Sea pollock, one of the largest fisheries in the United States, are expected to decline,⁹³ although price increases may mitigate some of the economic impacts.⁹⁴ Similarly, abundance of the most valuable fishery in the United States, American lobster, is projected to decline under RCP8.5.⁶⁴ Ocean acidification is expected to reduce harvests of U.S. shellfish, such as the Atlantic sea scallop;⁹⁵ while future work will better refine impacts, cumulative consumer losses of \$230 million (in 2015 dollars) across all U.S. shellfish fisheries are anticipated by 2099 under the higher scenario (RCP8.5).⁶²

Projected Changes in Maximum Fish Catch Potential

Two guides are shown; one is inset in the base left corner of the other. The bigger guide shows North America, and the inset map shows Hawai'i and the U.S.- Affiliated Pacific Islands. The guides show how most extreme fish get potential is projected to change (in percent) along the coasts for the period 2041 to 2060, comparative with 1991 to 2010, under a higher RCP8.5 situation. Along most of coasts, decays of up to 10 percent are normal. The most articulated decays (20% or more) are anticipated for the U.S. Atlantic shore and the U.S.- Affiliated Pacific Islands. Greatest catch potential increments are anticipated for Arctic Alaska and Greenland, with Greenland bragging expands in excess of 30%.

The ramifications of the extended changes in fisheries elements on revenue^{94,96} and limited scope Indigenous fisheries remain uncertain.⁹⁷ Indigenous people groups rely upon salmon and other fishery assets for both food and social worth, and decreases in these species would present critical difficulties to certain networks (e.g., Krueger and Zimmerman 2009⁹⁸) (Ch. 15: Tribes, KM 2; Ch. 24: Northwest). Also, western Alaska people group get a critical portion of the incomes created by Alaska groundfish fisheries through the Western Alaska Community Development Quota program.⁹⁹ This program gives a significant wellspring of fishery-determined pay for these networks. Where there is solid dependence of fish stocks on explicit natural surroundings, movements might prompt fish turning out to be more focused when water temperature or different changes in sea conditions push species against an actual

limit, for example, ice or the sea bottom.⁸³ Alternatively, changes in species disseminations are probably going to drive vessels farther from port, expanding fishing costs and conceivably affecting vessel safety.¹⁰⁰ Under such conditions, there will likewise be new open doors that outcome from species turning out to be more bountiful or spatially accessible. Advance information and projections of expected changes permit fish makers to foster new business sectors and gatherers the capacity to adjust their stuff and fishing conduct to exploit new opportunities.^{84,101,102}

Open doors for Reducing Risk

A significant decrease of ozone harming substance outflows would diminish environment driven sea changes and essentially lessen hazard to fisheries.¹⁰³ Warming, fermentation, and deoxygenation interface with fishery the board choices, from occasional and spatial terminations to yearly amount setting, designations, and fish stock modifying plans. Representing these variables is the foundation of environment prepared fishery management.^{84,104,105} Modeling concentrates on show that environment prepared, biological system based fisheries the board can assist with diminishing the effects of a few expected changes and increment versatility under changing conditions.^{93,106,107} There is presently a public technique for coordinating environment data into fishery choice making,¹⁰⁵ and the North Pacific Fishery Management Council is currently straightforwardly fusing sea conditions and environment projections in its preparation and choice making.^{108,109}

Public and territorial endeavors have been in progress to describe local area weakness to environmental change and sea acidification.^{38,110,111} The advancement of environment prepared fisheries will be especially significant for beach front networks, particularly those that are exceptionally subject to fish stocks for food and for money. Focusing on and taking an interest in an expanded variety of fisheries with more species can work on monetary strength of reapers and fishing communities.^{112,113,114} Current strategies can make obstructions that block diversification,¹¹² yet more unique administration can empower better adaptation.¹¹⁵ Even without straightforwardly representing environment impacts, preparatory fishery the board and better motivators can increment financial advantages and improve resilience.^{64,65,116}

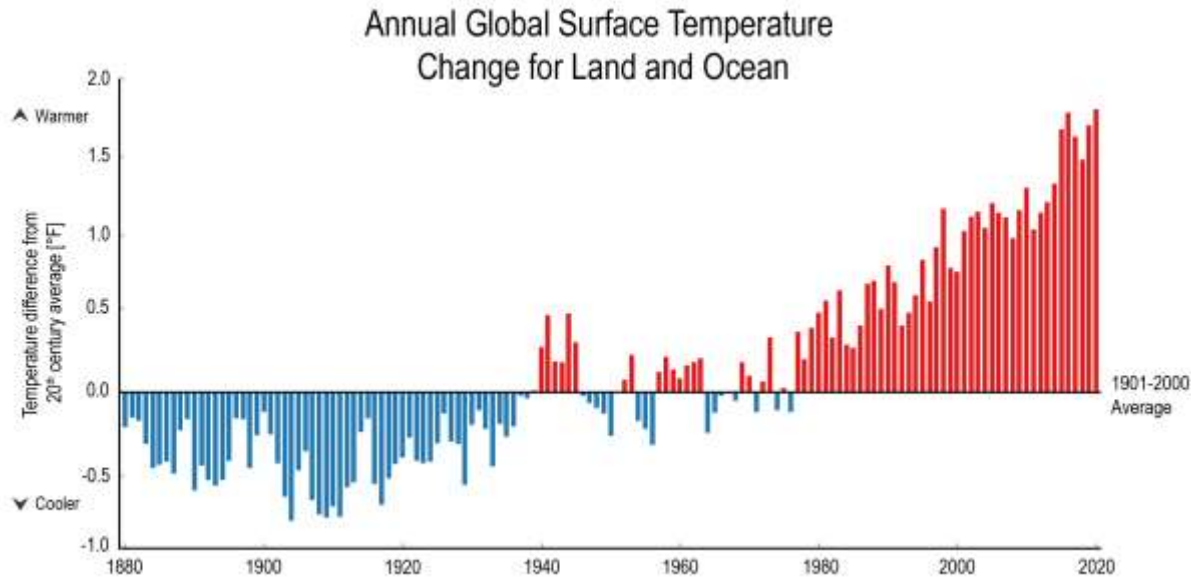
causes and effects of climate change

The planet is warming, from North Pole to South Pole. Beginning around 1906, the worldwide normal surface temperature has expanded by more than 1.6 degrees Fahrenheit (0.9 degrees Celsius)- significantly more in touchy polar locales. Furthermore the effects of rising temperatures aren't hanging tight for some remote the impacts of an unnatural weather change are showing up this moment. The hotness is softening ice sheets and ocean ice, moving precipitation examples, and setting creatures progressing.

Land and sea surface temperatures are expanding

Since the 1880's, the normal worldwide temperature has expanded by 1.8°F. Since the last part of the 1970's, normal temperatures have surpassed the last century's normal consistently.

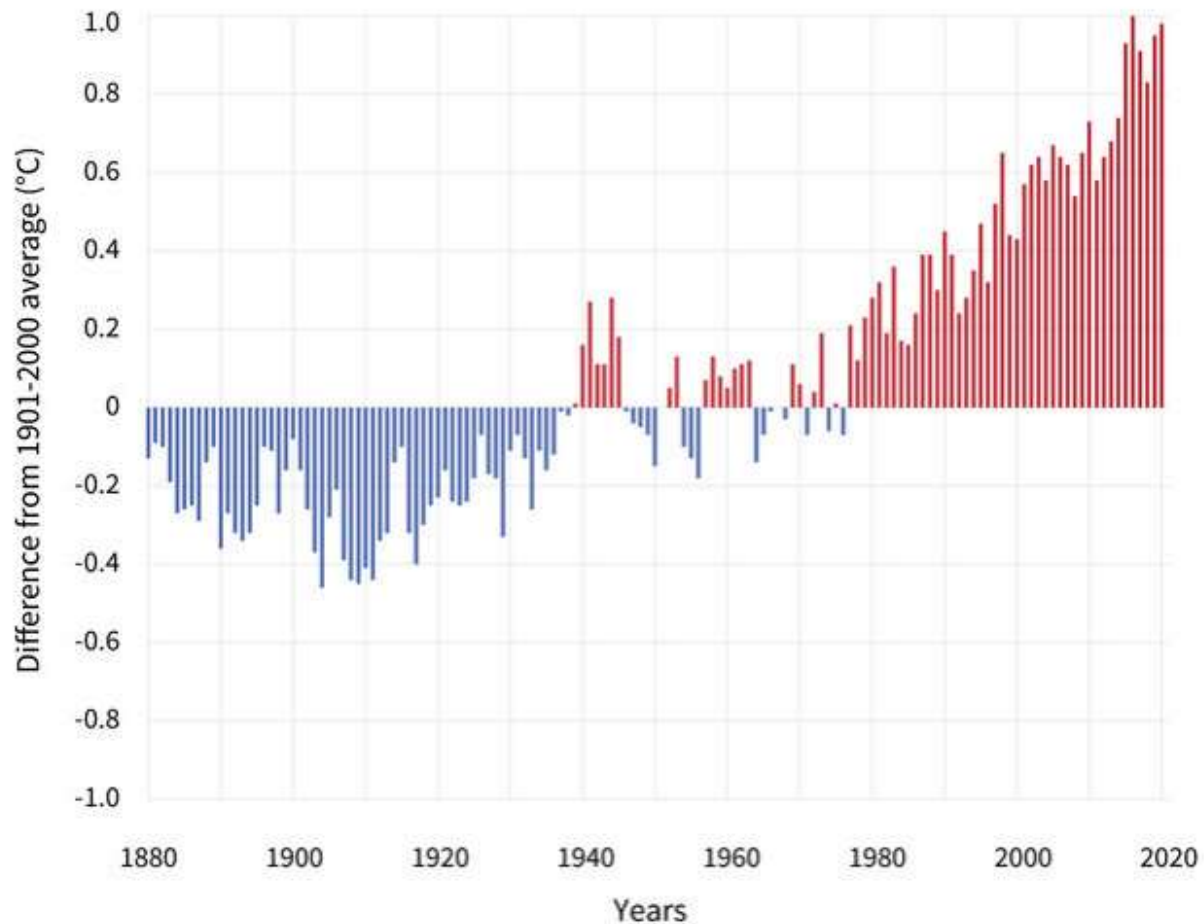
The bars on the diagram show the quantity of degrees by which the normal worldwide temperature for every year contrasts from the normal worldwide temperature during the last century (1901-2000).



Climate Change: Global Temperature

- • Earth's temperature has ascended by 0.14° F (0.08° C) each ten years beginning around 1880, and the pace of warming throughout the course of recent years is over two times that: 0.32° F (0.18° C) each ten years starting around 1981.
- • 2020 was the second-hottest year on record in view of NOAA's temperature information, and land regions were record warm.
- • Found the middle value of across land and sea, the 2020 surface temperature was 1.76° F (0.98° Celsius) hotter than the 20th century normal of 57.0°F (13.9°C) and 2.14° F (1.19° C) hotter than the pre-modern time frame (1880-1900).
- • Notwithstanding a late-year La Niña occasion that cooled a wide area of the tropical Pacific Ocean, 2020 came simply 0.04° Fahrenheit (0.02° Celsius) short of tying 2016 for hottest year on record.
- • The 10 hottest years on record have happened beginning around 2005.
- • From 1900 to 1980 another temperature record was set on normal each 13.5 years; from 1981-2019, another record was set at regular intervals.

GLOBAL AVERAGE SURFACE TEMPERATURE

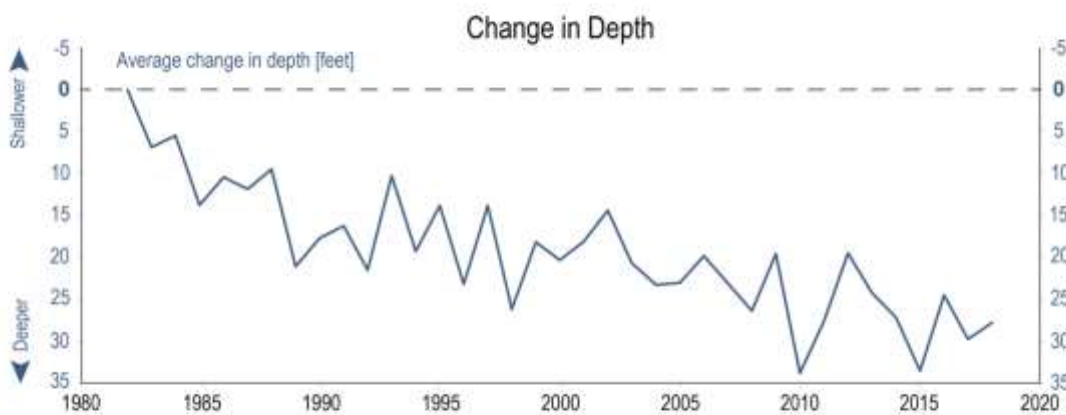
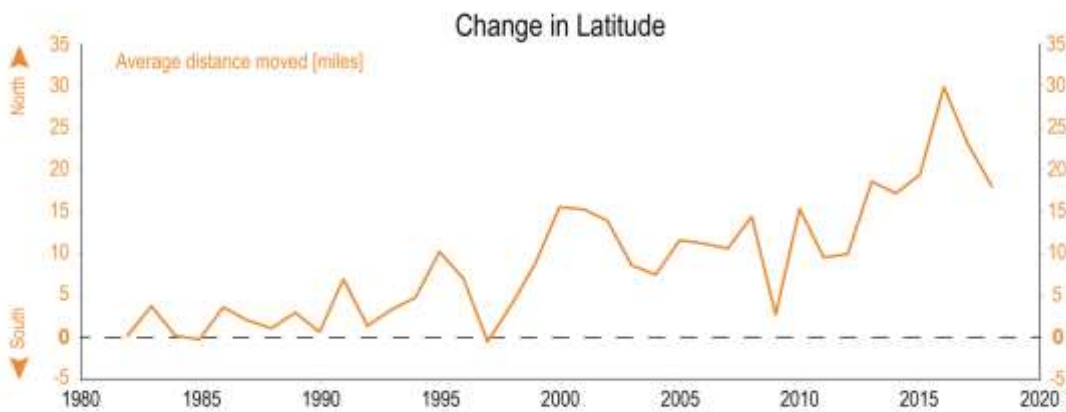


- Given the colossal size and hotness limit of the worldwide seas, it takes a gigantic measure of hotness energy to raise Earth's normal yearly surface temperature even a modest quantity. The about 2-degree Fahrenheit (1 degrees Celsius) expansion in worldwide normal surface temperature that has happened since the pre-modern time (1880-1900) might appear to be little, however it implies a huge expansion in amassed heat.
- That additional hotness is driving provincial and occasional temperature limits, diminishing snow cover and ocean ice, strengthening weighty precipitation, and changing natural surroundings ranges for plants and creatures growing some and contracting others. As the guide underneath shows, most land regions have warmed quicker than most sea regions, and the Arctic is warming quicker than most different areas

Marine species are moving to cooler waters

Changes in water temperature can influence the conditions where fish, shellfish, and other marine species live. Certain fish species normally move in light of occasional temperature changes, moving toward the north or more profound to cooler waters-in the mid year and relocating back throughout the colder time of year. As environmental change makes the seas become hotter all year, in any case, populaces of certain species adjust by moving away from regions that have become excessively warm. Along U.S. coasts, perceptions demonstrate that marine species are moving toward the north or to more profound waters that have a more appropriate temperature. As more modest prey species move their territories, bigger hunter species might follow them.

Marine Species Distribution



Average Location of Select Fish and Shellfish Species



The diagrams show the yearly change in scope (orange line; development in miles) and profundity (blue line; profundity change in feet) of 140 marine species along the northeastern U.S. coast and in the eastern Bering Sea. Changes in the focuses of biomass have been accumulated across each of the 140 species. The guides show the yearly habitats of biomass for three species (Alaska pollock, snow crab, and Pacific halibut) in the eastern Bering Sea from 1982 to 2018 (left) and for three species (American lobster, red hake, and dark ocean bass) along the northeastern U.S. coast from 1973 to 2018 (right). Spots are concealed from light to dull to show change after some time. Information sources: NOAA NMFS and Rutgers University.

About Marine Species Distribution

This pointer tracks marine creature species in view of their "focal point of biomass," which is a point that addresses the focal point of every species' dispersion by absolute biomass (or weight) as far as their geographic area (i.e., scope, longitude, and profundity). Assuming a fish populace were to move commonly toward the north, the focal point of biomass would move toward the north too. Fish are particularly portable, and consequently will quite often move their area more effectively than species ashore in light of the fact that they face less actual hindrances. Additionally, numerous marine species, particularly fish, don't have fixed settling spots or abodes that may somehow constrain them to remain in one spot.

Information for this pointer were gathered by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA NMFS), who screen marine species populaces by directing yearly overviews in which they fish the sea at standard stretches along the coast. By recording what they get at every area, researchers can ascertain every species' focal point of biomass. These information have been handled and made freely accessible by Rutgers University at: <https://oceanadapt.rutgers.edu>(link is outer).

This pointer centers around two review locales that have the most persistent and longest-running examining: the Atlantic Ocean off the northeastern U.S. coast and the eastern Bering Sea off the shore of Alaska. The upper charts show the normal change in the focal point of biomass across 140 species in these areas. Following information from numerous species is helpful, since, supposing that an adjustment of conduct or dispersion happens across an enormous scope of animal categories, it is almost certain the consequence of a more precise or normal reason. For consistency, these information are restricted to species that were recognized each year. The lower maps show these progressions topographically for three species in every district. These species were picked in light of the fact that they address an assortment of living spaces and species types (a combination of fish and shellfish) and in light of the fact that they will more often than not be genuinely plentiful. A portion of these animal varieties support significant fisheries that are assumed not to be vigorously affected by overfishing, lessening the opportunity that fishing is unduly impacting the noticed patterns. Extra detail connected with this marker can be found as a feature of the U.S. Ecological Protection Agency's Marine Species Distribution marker.

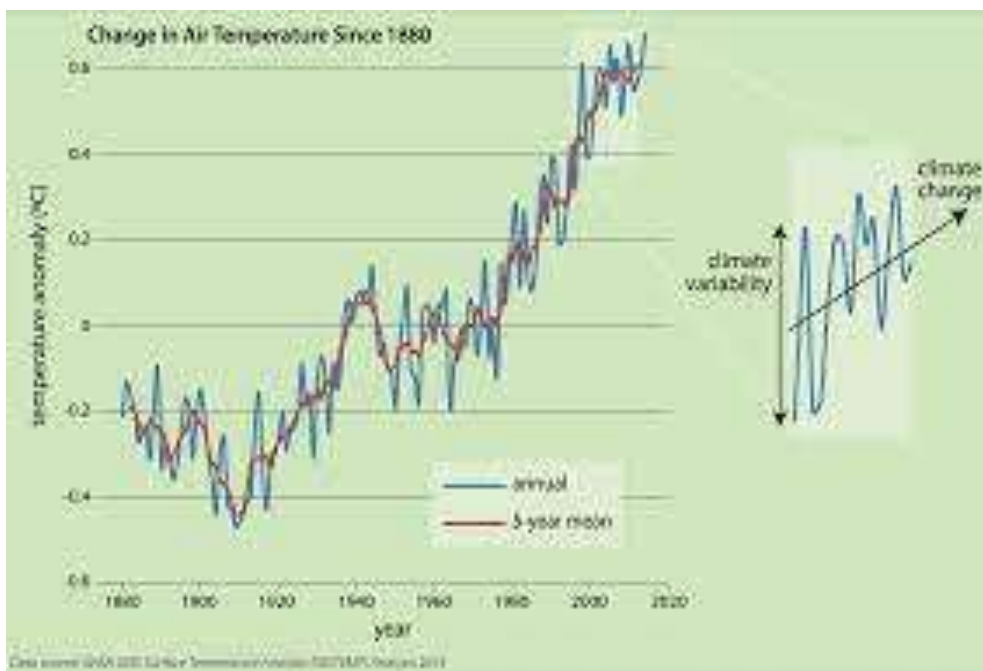
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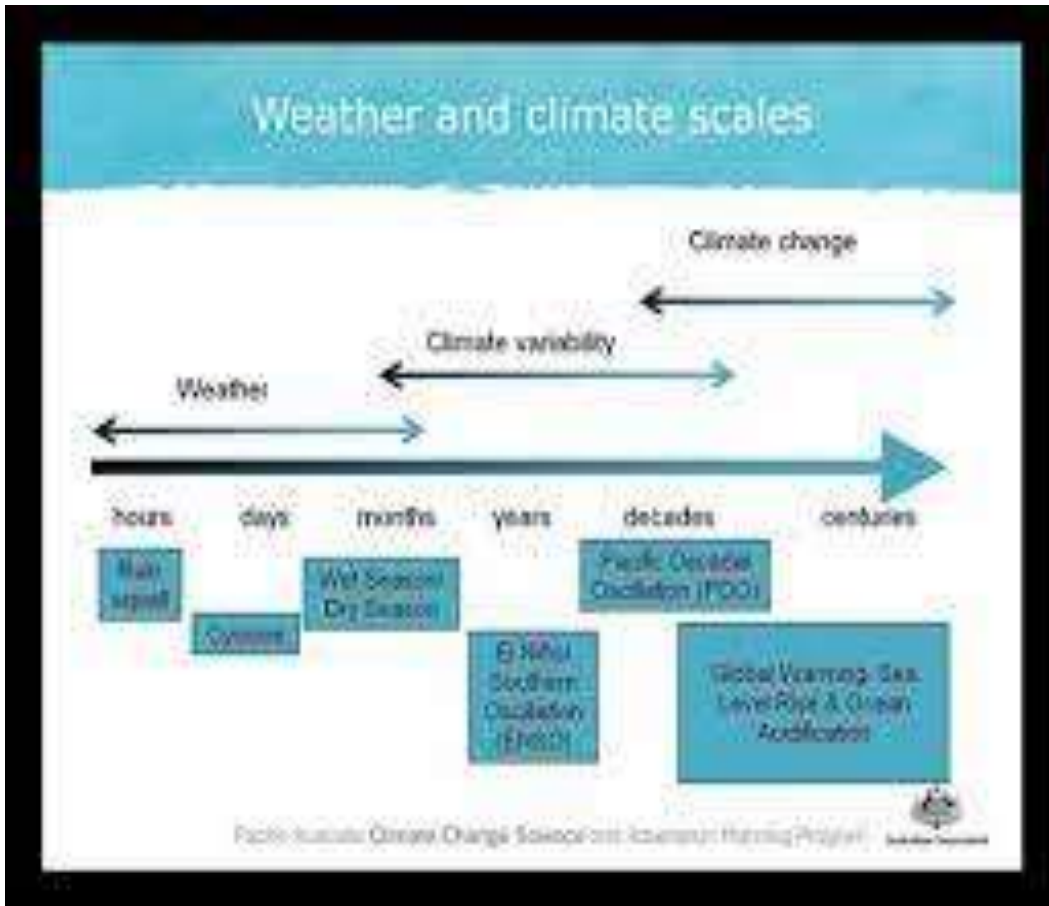
- (a) The normal focus of biomass for 140 marine fish and invertebrate species has moved toward the north by around 20 miles and moved a normal of 21 feet more profound somewhere in the range of 1982 and 2018.
- (b) Monetarily significant Atlantic species off the northeastern U.S. coast (American lobster, red hake, and dark ocean bass) have moved toward the north by a normal of 110 miles since the mid 1970s.
- (c) In the Bering Sea, Alaska pollock, snow crab, and Pacific halibut have commonly moved away from the coast since the mid 1980s and moved toward the north by a normal of 19 miles.
- (d) Water temperature isn't the main component that can make marine creature populaces shift. Connections with different species, reaping, sea flow designs, living space change, and species' capacity to scatter and adjust can likewise impact marine populaces. Thus, species may have moved toward the north because of reasons other than, or as well as, changing ocean temperatures.
- (e) Marine species are an especially decent sign of warming seas since they are delicate to environment and on the grounds that they have been read up and followed for a long time.
- (f) Marine fisheries and fishing networks are at high danger from environment driven changes in the appropriation, timing, and usefulness of fishery-related species.

- (g) Fisheries the board that consolidates environment information can assist with decreasing effects, advance strength, and increment the worth of marine assets despite changing sea conditions.

Environment variability/climate change

Environment changeability remembers every one of the varieties for the environment that last longer than individual climate occasions, though the term environmental change just alludes to those varieties that endure for a more drawn out timeframe, regularly many years or more





Acidification and Coral Reefs causes environmental change

Coral reefs are among the most different environments on the planet. This biodiversity focuses on them for preservation. The splendid corals of Sogod Bay, above, live in one of in excess of 400 marine secured regions (MPAs) in the Philippines.

MPAs help to save biodiversity by forestalling rehearses like coral collecting and explosive fishing. Sadly, there are additionally worldwide perils confronting coral reef living spaces that can't be kept by MPA limits.

The effect of sea fermentation on corals is one of these risks. Seas ingest carbon dioxide (CO₂) from the air. Carbon dioxide responds with seawater to frame carbonic corrosive. Because of expansions in fossil fuel byproducts, more CO₂ is entering the world's seas, which makes extra carbonic corrosive in the water.

The more acidic seawater turns into, the less calcium carbonate it can hold. Numerous marine species, including coral, need calcium carbonate to construct their defensive shells and exoskeletons. Without it, shells develop gradually and become powerless. Coral reefs with fragile, slow-developing corals dissolve more rapidly than they accumulate. Reefs can vanish, and the annihilation of whole species is conceivable.

Endeavors are being made in the Philippines to build consciousness of the likely effects of sea fermentation. In any case, it will make a worldwide move to diminish our fossil fuel byproducts and assist with securing the world's delicate coral reef environments.

-

Unequal Climate Change Is Shifting Earth's Ecosystems

Softening Iceberg

Glacial masses are vanishing, softening quicker than they can be renewed, similar to this icy mass situated in Greenland. Softening is going on quicker in Greenland and the remainder of the Arctic than elsewhere on Earth.

- Icy masses are softening, ocean levels are rising, and tempests are more exceptional. These are a portion of the noticeable effects of an Earth-wide temperature boost, brought about by rising degrees of carbon dioxide and other ozone depleting substances that are because of warming in the air and sea.

In a 2018 report, the Intergovernmental Panel on Climate Change (IPCC) expressed that the normal worldwide temperature has ascended around 1°C (1.8°F) since pre-modern times. Assuming that the current pace of warming proceeds, this number is relied upon to almost twofold in a somewhat brief time frame, arriving at 1.5°C (2.7°F) somewhere in the range of 2030 and 2052. This could effectsly affect environments all over the planet, from tropical coral reefs to the frigid Arctic Ocean.

The Ocean Is Feeling the Heat

In excess of 80% of a worldwide temperature alteration is consumed by the sea, which has a monstrous ability to store and delivery heat. Raised ocean surface temperatures are making long haul harm coral reefs. Corals are fading and biting the dust. The IPCC report extends that up to 90 percent of coral reefs could vanish if the a dangerous atmospheric deviation arrives at 1.5°C (2.7°F). Another explanation corals are in a difficult situation is a result of sea fermentation. Higher carbon dioxide levels have moved the science of the sea, making it more acidic, and corals and shelled ocean animals experience difficulty filling in acidic conditions.

Ocean Levels Are Rising

At the point when sea water warms, it grows in volume. This is a significant reason for the ascent in ocean levels, alongside the water added to the sea by the liquefying of land-based glacial masses. The ocean level has risen a normal of 20 centimeters (8 inches) since the late nineteenth century, and examination by researchers concentrating on the most recent 25 years of satellite information observed that the sea water is rising quicker and quicker. In the event that it proceeds at its flow pace of speed increase, the ascent in ocean level by 2100 will be beyond twofold momentum gauges. Ocean level ascent prompts the obliteration of waterfront wetlands, salt bogs, and mangrove swamps, just as flooding and harm to amphibian biological systems.

Dry spell to Deluge: The Impacts of Shifting Temperature and Precipitation

Temperature and precipitation are key elements of environment. A hotter environment implies that more water vanishes from both the land and sea, and a hotter air holds a greater amount of that water. Researchers have seen that weighty precipitation occasions are expanding. Also, higher water temperature in streams, lakes, and repositories lead to bring down degrees of broken up oxygen in the water, which impacts the endurance and populaces of fish and other sea-going life.

Particularly disturbing are the super climate occasions that are going on more frequently all over the planet. Storms are inclining up in power, especially in the North Atlantic. The year 2017 was a bustling one for Atlantic storms. Storms Harvey, Irma, and Maria released their horrendous power on Texas, Florida, and Puerto Rico. A gathering of researchers utilizing high-goal PC displaying established that the primary explanation the 2017 tropical storm season was so fierce was because of warm ocean surface conditions in the North Atlantic. This prompted a better approach for anticipating what's in store every year. The power of the Atlantic typhoon season relies upon how much the tropical Atlantic warms in contrast with the remainder of the worldwide sea.

In the interim, in the western United States, the province of California has had unrivaled dry season conditions, which started in 2012. Scientists breaking down the historical backdrop of California's dry spells observed that the state is bound to encounter dry season when low precipitation consolidates with warm climate conditions. Stretched out dry spell periods can prompt a higher fire hazard. Today, enormous flames are multiple times more normal and fire season is three months longer than it was 40 years prior. Other than the undeniable loss of natural surroundings for untamed life, new examination has found that biological systems wore out by an out of control fire presently not recover and skip back to life the manner in which they used to.

Liquefying Away: What Is Happening to the World's Ice?

Snow pack, ocean ice, and icy masses are dissolving all over the planet. One of the most noticeable impacts of environmental change is the quick vanishing of icy masses. Researchers from Glacier National Park in Montana, U.S., have reported the consistent decrease of the recreation area's notorious ice sheets with photos. Glacial masses all over the planet are liquefying quicker than snow and ice can recharge them. Indeed, the Arctic is warming quicker than some other put on Earth, at a pace of a few times the worldwide normal. This has prompted a 40 percent decline in the base summer ocean ice cover beginning around 1978. At the point when ice softens in the sea, fresher and less thick water is added toward the North Atlantic, which might actually upset an example of sea course that is driven by the sinking of cool, pungent water in the North Atlantic, known as thermohaline dissemination.

The Arctic environment is particularly helpless against an Earth-wide temperature boost. Polar bears, narwhals, and walrus are altogether notable species local to the Arctic, however as the ice liquefies, they might need to adjust to a better approach for life, or hazard vanishing. In a meeting distributed in the British paper, *The Guardian*, marine biologist Tom Brown said, "The Arctic pecking order depends on a steady ocean ice stage and that is currently vanishing, putting the locale's untamed life in danger."

The Harmful Effects of Climate Change on Life Below the Sea

Environmental change is effectsly affecting the sea. Environmental change is an adjustment of worldwide or local environment designs, specifically, a change evident from the late twentieth century onwards and ascribed generally to the expanded degrees of carbon dioxide delivered by the utilization of petroleum derivatives. This is causing hotter water temperatures, rising ocean levels, and sea fermentation. Environmental change is obliterating the sea and making it impractical for people in the future. To start with, warming sea temperatures are harming marine life. Sea warming is the point at which the sea retains heat from ozone harming substance outflows causing the temperature of the sea water to become hotter. As indicated by National Geographic, a worldwide not-for-profit association focused on investigating and ensuring our planet, "The highest piece of the sea, down to around 2,300 feet (700 meters), has retained the main part of the additional hotness. The last scarcely any thousand feet of the sea are not invulnerable; they've sucked up one more third of that overabundance warmth. In any case, the highest skin of the ocean, down to around 250 feet, is heating up the quickest, warming up by a normal of around 0.11 degrees Celsius every ten years since the 1970s. This has upset the improvement of fish and furthermore making marine life relocate to track down conditions that they can get by in. This has left numerous region of the sea that were once loaded up with marine life to be appalling.

Additionally, sea fermentation is hurting marine life. Sea fermentation is a substance response that happens when carbon dioxide is consumed by saltwater (Pacific Marine Environmental Laboratory [PMEL]). Carbon dioxide is the aftereffect of consuming non-renewable energy sources like oil, coal, and gas. At the point when carbon dioxide is assimilated into the water it changes the seawater pH to have less calcium carbonate minerals which makes harm calcifying life forms (PMEL). Calcifying life forms are marine organic entities that utilization calcium carbonate minerals to construct their shells and external designs. Sea fermentation is making a few region of the sea be undersaturated with these minerals which are influencing the calcifying life form's capacity to make and fix their shells (PEML). This has affected types of fish, for example, salmon and whales who depend on them as a food source (PMEL). The absence of good food sources from sea fermentation straightforwardly influences the number of inhabitants in fish causing more tight limitations on business and sporting fishing

CONCLUSION

- All in all, the impacts of contamination are hurting life beneath the ocean and making it an unreasonable asset for people in the future. The hotter water temperatures, rising ocean levels, and sea fermentation from environmental change are annihilating the sea. In any case, this doesn't need to be the manner in which the story closes. On the off chance that we make the move now and follow everything science says to us we can fix this issue, so the sea is an economical asset for people in the future.
- This brings up the issue, with environmental change destructively affecting marine life, how can we go to save the assets of the sea for people in the future? In the first place, we should lessen the contamination that is causing the harm since it's the best way to fix the issue. Then, we should fix the harm that we have caused to the sea to speed the recuperation cycle. Then, at that point, we should teach the world on marine preservation so everybody can do their part to secure the sea and the marine life that calls it home. I accept assuming we follow these means and act now the sea will be smart for people in the future.

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Emerging Challenges and Strategic Implications for Indian Mutual Fund Industry in Post Covid-19 Regime

Prof. (Dr.) Angad Tiwary* and Rajeev Kumar Sinha**

ABSTRACT

Mutual fund returns have taken a sharp hit due to the Coronavirus epidemic. But history has shown that markets and mutual fund returns have always come back stronger. Mutual funds have invested just Rs 1,230 crore in stock markets during the lockdown and industry experts believe they are still waiting for a good “entry point” and maintaining high liquidity for any possible redemptions by corporate houses. Essentials for investment into mutual funds to create a strong resilient portfolio- Investment Portfolios are built to support us in difficult times and not the other way around!! Selection of category and scheme in that category is most important decision for retail investors therefore please follow the below process to Sanitise your portfolio with Smart Switch wherever required. In this research paper, economy of India and investment in mutual funds in the phase of COVID-19 is analyzed with. Further, on the basis of quantitative data and annual reports of financial institutions (like RBI, SEBI) NBFC, credit rating agency (like CRISIL, ICRA, S&P, Moody’s etc.) and business associations, bring out deliberate inference and recommend premeditated map for coating the mutual funds on escalation pathway in post-COVID-19 for the outstanding quarters of financial year 2020-2021. The financial analysis was highlighted, by assessing a lot of financial experiment likes, Sharpe Ratio, Treynor Ratio, Jensen Measures, Standard Deviation, Variance, Alpha, Beta in CAPM and Coefficient of Determination (R²).

Keywords: Mutual Fund, Average Return, Standard Deviation, Beta, Coefficient of Determination, NAV, Performance Evaluation, Sharpe Measure, Treynor Measure

INTRODUCTION

The Mutual Fund Industry recorded an AUM of INR 13,460 billion as of December 2015, a year on year growth of over 21%. The industry itself has been evolving over the years. Though, traditional primary contributor to AUM have been corporate, in 2015 retail segment emerged as the fastest growing segment in terms of contribution to AUM growth.

While a large population, which is moving towards economic wellbeing, promises for a strong customer base for financial services, it also poses a challenge to service providers in tapping resources, a large proportion of which sit beyond major cities. Mutual funds face a double challenge – firstly, increasing their share of the pie in the urban markets that have seen crowding of products and vendors, and secondly, capturing the attention of investors in sub-urban and rural markets that have been largely averse to complex financial instruments, and are often unreachable through

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traditional distribution channels. Mutual funds will have to leverage technology to drive innovation in products, and adopt alternate distribution channels to be successful in the Indian market.

<https://www2.deloitte.com/in/en/pages/financial-services/articles/mutual-fund-industry-in-india.html>

GROWTH IN MUTUAL FUND ASSETS 2020

Assets Under management (Rs.Cr.)

Mutual Funds	Dec 2019	June 2020	Change	% Change
SBI Mutual fund	352632	364,363	11,731	3.33
HDFC Mutual fund	382,517	356,183	-26,334	-6.88
ICICI Prudential Mutual fund	361,507	326,291	-35,215	-9.74
Aditya Birla Sun life mutual fund	249,926	214,592	-35,334	-14.14
Nippon India Mutual fund	204,371	180,061	-24,310	-11.90
Kotak Mahindra mutual fund	176,961	167,326	-9,636	-5.45
Axis Mutual Fund	122,867	134,316	11,449	9.32
IDFC mutual fund	104,630	101,770	-2,860	-2.73
UTI mutual fund	157,119	133,631	-23,488	-14.95
Franklin Templeton Mutual fund	126,475	79,808	-46,667	-36.90

<https://www.moneycontrol.com/mutual-funds/amc-assets-monitor>

COVID-19 PANDEMIC

Investing in capital markets has become a challenge for most investors in the wake of the novel coronavirus outbreak. The pandemic's economic impact has left existing mutual fund investors in the country spooked as well.

The recent closure of six debt mutual funds by global giant Franklin Templeton is a stark example of how Covid-19 has worsened India's credit situation, with liquidity becoming a major issue at Non-banking financial companies (NBFC), who offer many mutual fund schemes. Panicked investors are now believed to be pulling out their investments from mutual funds due to widespread negativity in markets around the globe, including India.

The widespread fear in the market, which also includes aversion from investing in mutual funds and other capital investments, has left the MF segment in deep shock.

Experts say that the **six Franklin Templeton mutual funds schemes**, which were closed were high-risk funds and other MF schemes do not face redemption risks. The Association of Mutual Funds of India (AMFI) assured investors that it was a one-off incident and that it will have no contagion effect on other credit-risk funds.

So, what does it mean for existing mutual fund investors and is it advisable to go for fresh investments in MFs? Here are three key points you need to know

STATUS OF MUTUAL FUNDS INDUSTRY IN INDIA FOR THE PERIOD APRIL 1, 2020 - NOVEMBER 30, 2020 (INR in crore)

<https://www.sebi.gov.in/statistics/mutual-fund/mf-investment-objectives.html>

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
A	Open ended Schemes					
I	Income/Debt Oriented Schemes					
1	Overnight Fund	116364	2104639.35	2128913.02	-24273.67	57514.60
2	Liquid Fund	2164701	2519811.65	2489861.98	29949.67	375646.63
3	Ultra Short Duration Fund	733257	126788.71	98375.85	28412.87	104930.96
4	Low Duration Fund	1134891	189117.05	125051.84	64065.21	150945.44
5	Money Market Fund	458938	173602.96	134561.87	39041.09	99003.22
6	Short Duration Fund	612061	114421.64	62556.04	51865.58	153019.42
7	Medium Duration Fund	291821	9610.93	11708.32	-2097.40	27375.56
8	Medium to Long Duration Fund	121753	4094.73	2706.90	1387.83	11980.95
9	Long Duration Fund	30569	1235.48	536.39	699.09	2516.95
10	Dynamic Bond Fund	286866	11946.23	6232.40	5713.83	25061.81
11	Corporate Bond Fund	639905	96923.39	37458.69	59464.70	149604.31
12	Credit Risk Fund	372020	1902.05	30001.45	-28099.40	28545.08
13	Banking and PSU Fund	358114	96709.36	52928.80	43780.57	123449.37
14	Gilt Fund	217987	19583.62	9544.28	10039.34	20301.89
15	Gilt Fund with 10 year constant duration	57593	937.31	443.17	494.14	1525.16
16	Floater Fund	204728	47687.30	27199.59	20487.71	55707.62

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
	Sub total - I (1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16)	7801568	5519011.76	5218080.59	#####	1387128.97
II	Growth/Equity Oriented Schemes					
17	Multi Cap Fund	9495460	20950.79	27808.76	-6857.96	160052.73
18	Large Cap Fund	10316712	24380.65	27681.11	-3300.46	163104.47
19	Large & Mid Cap Fund	4834111	10630.38	9862.81	767.57	66391.80
20	Mid Cap Fund	6441713	12727.49	15036.33	-2308.83	100696.95
21	Small Cap Fund	4959637	8915.37	9566.42	-651.06	59209.50
22	Dividend Yield Fund	448580	165.14	404.19	-239.05	4409.67
23	Value Fund/Contra Fund	3886059	5189.96	9434.16	-4244.20	56573.12
24	Focused Fund	3753444	11693.74	9407.46	2286.28	60524.70
25	Sectoral/Thematic Funds	7029274	15757.82	13598.88	2158.93	75594.15
26	ELSS	12385407	8176.64	6934.57	1242.08	110953.34
	Sub total - II (17+18+19+20+21+22+23+24+25+26)	63550397	118587.97	129734.68	-11146.69	857510.44
III	Hybrid Schemes					
27	Conservative Hybrid Fund	377917	1727.37	2670.79	-943.42	11826.38
28	Balanced Hybrid Fund/Aggressive Hybrid Fund	4918476	7984.85	24197.66	-16212.81	118310.29

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
29	Dynamic Asset Allocation/Balanced Advantage	2674916	11275.48	15685.79	-4410.31	94088.57
30	Multi Asset Allocation	721631	2564.93	2271.40	293.53	13533.38
31	Arbitrage Fund	397903	49915.58	35593.61	14321.98	62781.39
32	Equity Savings Fund	298466	759.54	3866.67	-3107.14	10032.17
	Sub total - III (27+28+29+30+31+32)	9389309	74227.75	84285.91	-10058.17	310572.18
IV	Solution Oriented Schemes					
33	Retirement Fund	2546069	1173.85	923.82	250.03	11407.90
34	Childrens' Fund	2890935	473.34	220.27	253.07	9866.12
	Sub total - IV (33+34)	5437004	1647.19	1144.10	503.10	21274.02
V	Other Schemes					
35	Index Funds	775616	6388.37	4785.86	1602.50	14301.14
36	GOLD ETFs	838149	5871.13	1161.52	4709.61	13239.88
37	Other ETFs	3248481	60521.21	39247.70	21273.50	233668.70
38	Fund of funds investing overseas	464020	4495.71	1123.34	3372.37	7641.97
	Sub total - V (35+36+37+38)	5326266	77276.41	46318.43	30957.99	268851.70
	Total A-Open ended Schemes	91504544	5790751.09	5479563.71	#####	2845337.31
B	Close Ended Schemes					

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
I	Income/Debt Oriented Schemes					
i	Fixed Term Plan	521582	76.44	30110.07	-30033.63	118458.77
ii	Capital Protection Oriented Schemes	59827	0.00	1867.84	-1867.84	2628.95
iii	Infrastructure Debt Fund	89	0.00	0.00	0.00	2328.01
iv	Other Debt	18947	0.00	2875.94	-2875.94	779.43
	Sub total (i+ii+iii+iv)	600445	76.44	34853.85	-34777.41	124195.16
II	Growth/Equity Oriented Schemes					
i	ELSS	457228	0.00	150.49	-150.49	4438.92
ii	Others	1113484	0.00	3202.03	-3202.03	26547.92
	Sub total (i+ii)	1570712	0.00	3352.53	-3352.53	30986.84
III	Other Schemes	0	0.00	0.00	0.00	0.00
	Total B -Close ended Schemes	2171157	76.44	38206.38	-38129.93	155181.99
C	Interval Schemes					
I	Income/Debt Oriented Schemes	3632	3.61	43.75	-40.14	385.14
II	Growth/Equity Oriented Schemes	0	0.00	0.00	0.00	0.00
III	Other Schemes	0	0.00	0.00	0.00	0.00
	Total C -Interval Schemes	3632	3.61	43.75	-40.14	385.14

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
	Grand Total (A+B+C)	93679333	5790831.14	5517813.83	#####	3000904.44
	Fund of Funds Scheme (Domestic)	1015460	10253.76	3697.60	6556.16	21934.62

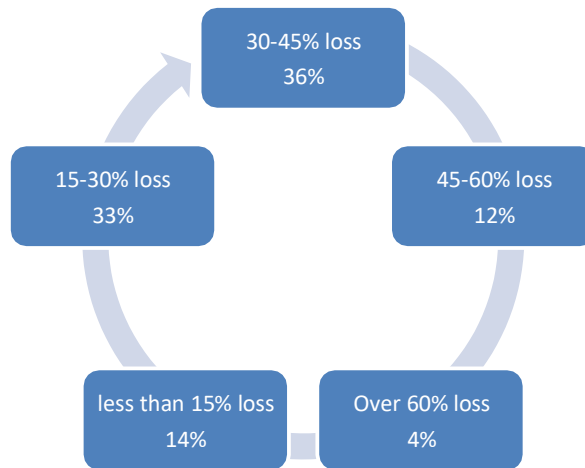
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STRATEGY OVER PANIC

The recent closure of six capital debt funds of Franklin Templeton has negatively impacted sentiments of mutual fund investors. Panicked investors are now looking to pull out their money in existing mutual fund schemes.

Experts say a decision made in panic may not be accurate and that it is better to strategise at the moment. Part of the strategy involves equating credit risk and investing in safer mutual fund schemes.

However, the Templeton episode has not gone down well with mutual fund investors, who usually prefer safety over gains.



Corona virus impact on equity: buy, sell or stay
How much have equity investors lost in 2020
(The Economics Times)

It is worth mentioning that the six high-yield debt schemes packed up by Templeton were long overdue and early signs of distress in these funds were seen as early as the IL&FS crisis in 2018. The funds also suffered due to the gradual economic slowdown and were later amplified by Yes Bank fiasco.

Since Friday, mutual fund houses in India have jumped in to reassure investors -- which include corporates and individuals -- that the entire debt fund market is not at risk, and urged them to stay patient and invested.

AMFI also told investors that debt schemes of most mutual funds have “superior credit quality” and “fairly liquid”. It also called it an isolated event.

Experts have also assured that there is sufficient liquidity in the system. However, they have asked investors to take a different approach to deal with challenges in a virus-affected market.

Experts have advised fundholders to assess investment portfolios and go for options that are relatively safer with little or no exposure to low-rated securities offering high yields.

RBI'S ASSURANCE

The Reserve Bank of India (RBI) has stepped in to **support stressed mutual funds** with a special liquidity window of Rs 50,000 crore, reassuring investors that it is actively monitoring the situation and that there is no reason to worry.

Its decision came just a couple of days after Franklin Templeton decided to wind up its six mutual fund schemes.

RBI's instant action is an assurance that the central bank is monitoring the situation proactively and it would introduce further measures to give mutual funds adequate liquidity support.

Many experts had already recommended RBI to offer additional liquidity support to the mutual fund houses, who are facing major liquidity challenges amid the Covid-19 pandemic.

While fresh investors should maintain caution while investing in any new scheme, those already invested need to equate their portfolios and make informed choices.

Only high-risk capital debt funds, which hold low rated securities will be impacted. Therefore, checking the credit risk profile can be good practice for those who want to invest.

TRIM THE RISK

While fund managers have assured investors to stay patient for the time, the mutual fund houses, a bulk of which are NBFCs, are currently facing major liquidity stress due to delinquencies amid the Covid-19 lockdown.

The situation in the MF space could worsen if there are more job losses or business shutdowns. As it would threaten more defaults at NBFCs.

These financial institutions will be left with little liquidity in case of big defaults in future and may be forced to delay or default on payments made to investors of debt fund schemes. Those funds which invest in low-rated high yields are at most risk, say experts.

UNION BUDGET PROPOSALS 2020

Mutual fund income over ₹5,000 will now be subject to 10 per cent tax deducted at source (TDS), according to a proposal by the Ministry of Finance under the Union Budget 2020. According to a proposal included in Clause 80 of the Finance Bill 2020, the Ministry has proposed to insert a new section, 194K, below 194J of the existing Income Tax Act, proposing to tax income earned from mutual funds at 10 per cent.

MUTUAL FUND INVESTMENT: HOW BUDGET 2020 WILL IMPACT MUTUAL FUND INVESTORS

<https://www.financialexpress.com/money/mutual-funds/mutual-fund-investment-how-budget-2020-will-impact-mutual-fund-investors/1860756/>

While some announcements made by FM Nirmala Sitharaman are being welcomed by mutual fund investors, there are a few new decisions that can have a negative impact. Let's take a closer look at these moves.

Mutual Fund Investment: How Budget 2020 will impact mutual fund investors

While some announcements made by FM Nirmala Sitharaman are being welcomed by mutual fund investors, there are a few new decisions that can have a negative impact. Let's take a closer look at these moves.

Budget 2020 has proposed to introduce Tax Deduction at Source (TDS) at 10% on the dividend income above Rs 5000 before it is distributed to the investors.

Budget announcements usually have some bearing on how we strategise to reach our financial goals through our investments. However, Budget 2020 is likely to have a far-reaching impact on mutual fund investments for a host of reasons. While some announcements made by Finance Minister Nirmala Sitharaman are being welcomed by mutual fund investors, there are a few new decisions that can have a negative impact. Let's take a closer look at these moves.

New tax regime: A positive for mutual fund investments

Budget 2020 introduced a new tax system effective from FY20-21 wherein taxpayers can benefit from lower slab rates by forgoing a majority of tax-deduction benefits to lower their tax burden. Taxpayers will also have the option to continue with the existing tax system. However, the new tax regime would allow taxpayers to invest freely in instruments of their choice without having to worry about tax-saving pressures, and they can explore mutual fund products that don't necessarily save taxes. In the existing tax regime, investors need to invest in tax-saving instruments, wait for the lock-in periods to get over to use their funds and, at times, compromise with ROI for saving taxes. Tax-saving compulsions often force investors to pick instruments that aren't necessarily in their financial interest. In the new tax regime, they can simply invest to create wealth as per their risk appetite, financial goals, and liquidity needs. So, the new tax system will suit such investors who don't like to be stuck with long lock-ins and forced investments to save taxes.

TDS on mutual fund gains: A negative for mutual fund investments

Budget 2020 has proposed to introduce Tax Deduction at Source (TDS) at 10% on the dividend income above Rs 5000 before it is distributed to the investors. So, if the investor falls in higher tax slab, they would now adjust the TDS payment from their tax obligation while filing the tax returns, whereas if the investor falls in a lower tax slab, they may be required to claim the TDS refund by filing their tax returns, which is an inconvenience. Dividend-generating investments are normally suited to older investors. Young investors who don't need to rely on the liquidity provided by dividends should opt for growth schemes for faster appreciation of their wealth.

DDT in the hand of mutual fund investors: A mixed impact

In the existing system, the dividend on equity mutual funds and debt funds is taxed at 11.65% and 29.12%, respectively, while distributing it to the shareholders. However, in Budget 2020, it has

been proposed to levy DDT in the hands of the mutual fund investors as per their applicable tax rate. So, for example, if the investor falls in the 30% tax bracket, they will pay tax on the dividend at a 30% rate. So, when the DDT becomes applicable in the hands of investors, those in higher tax brackets will pay more in taxes. At the same time, investors in lower tax brackets will pay lesser tax. This announcement will have a mixed impact on investors.

Now, it would be advisable for investors to switch their existing mutual fund investments to growth options to save DDT outgo. Similarly, instead of the dividend payout option, investors can save tax by opting for a systematic withdrawal option (after considering the exit load, if any) to avoid TDS and DDT.

There was confusion in the minds of many investors after the budget announcement that TDS will also be applicable to the capital gains on fund redemption. However, the government has clarified that the 10% TDS will be applicable only on the dividend paid by the mutual funds and not on capital gains.

As mentioned, the TDS proposed in Budget 2020 can be claimed back if your tax liability is lower than the deducted amount, and the DDT in the hand of investors will impact them if they depend on regular dividend income. So mutual fund investments are at a crossroad, and it's time for you to make your choice of either investing in schemes with dividends or schemes with growth.

Mutual Funds Capital Gains Taxation for FY 2019-2020

A capital gain refers to the difference between the value at which an investor purchased the units of a mutual fund scheme and the value at which he/she sold or redeemed them. For instance, Mr. X invested Rs. 1 lakh in a mutual fund scheme on April 1, 2016, and the value of his investment on April 1, 2019, is Rs. 1.5 lakh. Then, he has earned a capital gain of Rs. 50,000.

The mutual funds capital gains taxation depends on the type of mutual fund scheme and the investment tenure. On the basis of investment tenure, there are two types of capital gains tax – Short Term Capital Gains Tax (STCG) and Long Term Capital Gains Tax (LTCG).

Type of Schemes	Particulars	Short Term capital gains tax	Long term capital gain tax
Equity oriented Schemes	Holding Period	Up to 12 months	More than 12 months
	Tax rate	15 %	10%
Non-Equity oriented Schemes	Holding Period	Up to 36 months	More than 36 months
	Tax rate	Income tax Slab rate of investor	

<https://www.paisabazaar.com/mutual-funds/tax-benefit-of-mutual-fund/>

Long-term capital gains on equity mutual funds are exempt up to Rs. 1 lakh per annum. For example, if your long-term capital gain in FY 2018-19 is Rs 1.5 lakh, only Rs. 50,000 will be taxable as LTCG.

Mutual Funds Dividends Taxation for FY 2020-2021

Dividend is a part of the profit that a company earns and distributes amongst its investors. Dividend Distribution Tax is a liability that a company must pay to the government according to the dividend paid to the company's investors.

As of FY 2019-20, DDT is payable to the government not by the investor but by the fund house managing the mutual fund. In most schemes, DDT rate is around 30%. However, according to the recent budget for FY 2020-21, Dividend is taxable at the hands of the investor and not the fund house. Hence, as it stands DDT has been abolished under the new tax regime.

Tax Benefit of Mutual Funds

Equity-Linked Savings Scheme (ELSS) is a type of equity fund and the only mutual fund scheme which qualifies for a tax deduction of Rs. 1.5 lakh per annum under Section 80C of the Income Tax Act. An ELSS comes with a lock-in period of 3 years which means an investment made in it cannot be withdrawn before 3 years.

Securities Transaction Tax (STT)

A Securities Transaction Tax (STT) is applicable at the rate of 0.001% on equity oriented mutual funds at the time of redemption of units. An investor is not required to pay STT separately as it is deducted from the mutual fund returns.

List of Top tax Saving (ELSS) Mutual Funds for FY 2020

Fund name	3 years return	5 years return
Mirae Asset Tax saver	19.82%	-
Axis Long term Equity fund	19.21%	13.20%
Tata india Tax saving Fund	17.50 %	13.76%
Motilal Oswal Long term equity funds	17.13%	
Inversco India Tax plan	15.52%	11.98%
DSP tax saving Fund	15.25%	12.08%
Aditya Birla sun life tax relief 96	14.83%	11.54%
Kotak tax saver	14.57%	11.03%

<https://www.paisabazaar.com/mutual-funds/tax-benefit-of-mutual-fund/>

Dividend Distribution Tax (DDT) in the hand of mutual fund investors

Investors	Resident /Individual/HUF	Domestic Company	NRI
Dividend			
All Schemes	Tax Free in the hands of Investors		
Tax on distributed income (payable by the scheme) rates			

Investors	Resident /Individual/HUF	Domestic Company	NRI
Equity oriented scheme	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess
	11.648 %	11.648 %	11.648 %
Infrastrure debt funds	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	5%+12% Surcharge+4% Cess
	29.12%	34.944%	5.824%
Other than equity oriented scheme and IDF	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	25%+12% Surcharge+4% Cess
	29.12%	34.944%	29.12%

Source: taxrockon 2018-19/ FY 2018-19

ECONOMIC OUTLOOK FOR FY 2020-21

Goldman Sachs has revised India's GDP forecast for the ongoing financial year as the global investment bank expects economic activity in Asia's third-largest economy to normalise faster than estimated, provided an effective Covid-19 vaccine is available. The global financial services provider expects India's gross domestic product to contract 10.3% in 2020-21 against a contraction of 14.8% forecast according to a report published on Tuesday. GDP growth is estimated at 13% in FY22 compared with 15.7% projected

"We expect that the broad-based availability of an effective vaccine in India could allow containment policies and mobility to normalise by mid-2022," said Jonathan Sequeira and Andrew Tilton, economists at Goldman Sachs. "This should allow a meaningful activity rebound in 2021, particularly in consumer-facing services sectors, where activity remains significantly below pre-covid levels."

The pace of rebound, however, will be restrained by some economic scarring and factors such as a weak labour market, the hit to private sector incomes and balance sheets, tighter credit supply conditions and a limited impetus from fiscal policy, the economists

India's fiscal deficit is estimated at 8% of the GDP in FY21 and is expected to narrow to 6.5% of the GDP in FY22, according to Goldman Sachs. The central government's plus states' fiscal deficit is estimated to narrow from 11.5% to 9.5% of the GDP in the same duration, the report said. "This suggests that the total fiscal policy contribution to growth will decline further in FY22."

Inflation as measured by the Consumer Price Index is estimated at 6.2% in FY21, and is likely to decline to 4.6% in FY22 as food prices fall on easing supply restrictions, a benign monsoon, and favourable base effect, according to the report. Core inflation could also moderate given low manufacturing capacity utilisation and rupee appreciation.

<https://www.bloombergquint.com/economy-finance/goldman-sachs-raises-india-gdp-forecast-for-2020-21>

NDIAN STOCK MARKET OUTLOOK

Why Stock Markets Are Booming When Economic Chips Are Down

The disconnect between rallying stock prices and gloomy economic data is probably the most noticeable in India, and it has left a lot of people searching for answers. While the Indian stock market has been rising despite Covid pandemic, the economic data paints a grim picture for India. It is also becoming apparent that people at the top of the economic pyramid are making millions, while many others are losing jobs due to the crashing economic fundamentals.

Markets in India are reflecting worldwide trends. Reports say that almost 46 million Americans filed for unemployment during March-June 2020. The US GDP tanked to a negative 4.8% in the first quarter, the first negative reading since Q1 of 2014. However, the equity market showed a different story. Between March 18-June 17, the US NASDAQ Composite rose by 40%. India witnessed a similar situation.

The stock market movements have never mirrored economic downturn or recovery. Stock markets are always futuristic in nature. In simple terms, this means that the stock markets always crash at the slightest indication of economic downturn and latches on any positive sentiment/news to move towards recovery. This is what has happened during the current bullish recoveries in Indian, US and European stock markets.

Indian NSE crashed and touched 7500 levels on 23 March on the indication of Covid lockdown in the country. It has historically been observed that companies perform well during March, the last quarter of the Indian financial year. Hence, the markets knew that there were no fundamental issues in the current stock market indices/pricing and touched its peak during early part of the year. However, it crashed much before the pandemic reached its peak.

Countries across the world announced lockdowns. In India, the first lockdown was imposed on March 25. The lockdown had a severe impact on the first quarter of the Financial Year 2020-21, and it was projected that India will perform poorly in April-June and July-September quarter due to drop in manufacturing and service activities. However, what followed was completely ironical as Indian stock markets witnessed a rise. So was the case with Dow Jones, it moved towards V-shaped recovery at the back contracted GDP estimates, falling economic data and other KPI's.

The above only confirms that markets do not react on immediate news unless it is a surprise event. What this means is that the crashed indices during March already factored in the bad news. The V-shaped recovery that followed was not due to the expected economic fallout but due to the fiscal stimulus packages, lockdown measures etc. announced during this time.

However, the short-term bullish reversal and sudden spurts of correction are not helping either. To understand this and to anticipate the future outlook, let us first evaluate the historical reference points. These historical reference points will show how the markets reacted in the earlier economic downturns.

During the 2008 financial crisis, Indian unemployment rate was 5.3% whereas US unemployment rate was 9.3%. Indian GDP had a positive growth rate of 3.09% whereas US had a negative growth rate of -2.5%. During this time, BSE Sensex reached the 21,000-mark on 9 January 2008 and it reached 8200 level on 9 March 2009. This means that the market took 425 days to achieve its bottom during this period. During these 425 days, the market did have few short-term bull runs.

Let us refer to the Great Depression in 1929 and evaluate the US indices in this example. US Dow Jones stood at 381 on 3 September 1929 and touched 41 on 8 July 1932. Hence, it took the markets almost 2 year and 10 months to touch its bottom. Again, during this period, the indices saw short-term bull runs.

Let us compare these KPI's with the current economic indicators. In 2020, both Indian and US unemployment rate touched 23% and 13% respectively whereas the GDP has been projected to contract by 4.5% and 7% respectively. This shows that the economic indicators are worse than 2008.

Hence, if the past holds true, these indices cannot rebound within four months. So does that mean that the recovery only a bull trap? Well, historical indicators can offer guidance but cannot be completely relied upon as the present situation is slightly different. It is important to understand that: 1) With every recession and corresponding economic recovery, markets gain more resilience, and 2) the current economic downturn is primarily due to the pandemic. Any positive news such as a vaccine or drug, or a decrease in Covid cases can create optimism and recovery trend. This is different from the earlier crisis where several other variables affected the economy.

We also need to be mindful that a major part of this recovery rally has been caused due to the influx of liquidity in the economy. This liquidity is not backed by earning potentials and may cause a reversal pattern if the earnings don't follow and match the liquidity infused.

Lowering of interest rates by both the Fed and the RBI has also helped maintain this momentum.

Historical trend suggests that we are still in a bear phase since we have never experienced such a fast recovery during the past economic downturns. However, the current economic recovery factors, government intervention and medical advancements suggest that the current downturn will not last like the earlier ones.

It is equally important to have a sector specific and a stock specific view rather than assuming that the economic recessionary trend has completely reversed. For e.g- hospitality or entertainment industry will take time to revive. Similarly, banking and financial sector may have higher NPAs that may impact its future results. Hence, it is imperative to adopt a combination of fundamental and technical parameters and not just a number driven technical view.

<https://www.outlookindia.com/website/story/opinion-why-are-stock-markets-booming-when-economic-chips-are-down/358511>

OBJECTIVES

The objectives of the paper are given below:

- (a) To analyze the current economic scenario induced by COVID virus and the economic outlook that is likely to unfold for the remaining period of financial year 2020=21.
- (b) To analyze the mutual fund investments in India during the month Nov' 2020 (lockdown periods 1 and 2) as compared to the pre-pandemic period (Nov, 2019).
- (c) To draw strategic implications for mutual fund investments in the post pandemic period (remaining period of financial year 2020-21).

METHODOLOGY

The study being analytical in nature the data available at the website of Association of Mutual Funds in India (AMFI) has been used to compute the following for the two data points 2019 Nov, 2020 Nov. Composition of Mutual Fund Assets - Scheme wise, Investor Type, Scheme wise and Investor Type, Investors' Holdings, Investing Methods (Direct and Distributor oriented) – Investor Type and Scheme wise Other variables used for study are – Growth in Assets, Average Ticket Size Average Holding period of Investment The above analyses are presented in a series of Tables, which are self-explanatory.

ANALYSIS OF MUTUAL FUND INVESTMENTS IN NOV 2019 AND NOV 2020

Net AUMs as on November 30, 2020, increased for both, debt funds and equity funds. The inflows for debt mutual funds nearly halved in November 2020 from the previous month while outflows from equity funds continue to rise

SCHEME WISE COMPOSITION OF MUTUAL FUND ASSETS

The proportionate share of equity-oriented schemes is now 41.1% of the industry assets in February 2019, up from 40.8% in February 2018. The proportionate share of debt-oriented schemes is 29.1% of industry assets in February 2019, down from 35.1% in February 2018.

Total Assets (Rs. Trillion)

Months (COVID-19 effects)	Total Assets (Rs. Trillion)
Nov'19	26.94
Dec'19	27.26
Jan'20	28.19
Feb'20	28.29
Mar'20	24.71
April'20	23.53
May'20	24.28
June.20	26.07
July'20	27.28
Aug'20	27.28
Sept'20	27.74
Oct'20	28.34
Nov'20	29.83

Assets are measured as average assets for the month. Rs. Trillion is equivalent to Rs. Lakh Cr
Assets managed by the Indian mutual fund industry has increased from Rs. 26.94 trillion in November 2019 to Rs. 29.83 trillion in November 2020. That represents 10.73% increase in assets over November 2019

Scheme wise Composition of Assets

Months	Debt oriented scheme (in %)	Equity oriented scheme (in %)	ETFs & FoFs (in %)	Liquid/Money market (in %)
Nov'19	28.4	42.5	6	22.7
Dec'19	28.8	42.3	6	22.5
Jan'20	28.6	42.0	7	22.8

Months	Debt oriented scheme (in %)	Equity oriented scheme (in %)	ETFs & FoFs (in %)	Liquid/Money market (in %)
Feb'20	29.0	42.1	7	22.0
Mar'20	31.7	39.7	7	21.8
April'20	31.0	38.8	7	23.3
May'20	29.3	38.9	7	24.9
June.20	28.5	39.4	7	25.0
July'20	30.1	39.3	7	23.1
Aug'20	30.3	40.1	8	21.6
Sept'20	31.0	40.0	8	20.9
Oct'20	32.1	39.6	8	20.1
Nov'20	32.8	39.7	8	19.3

<https://www.amfiindia.com/Themes/Theme1/downloads/home/industry-trends.pdf>

The proportionate share of equity-oriented schemes is now 39.7% of the industry assets in November 2020, down from 42.5% in November 2019. The proportionate share of debt-oriented schemes is 32.8% of industry assets in November 2020, up from 28.4% in November 2019.

Investor Type-wise Composition of Mutual Fund Assets

Individual investors now hold a lower share of industry assets, i.e. 51.5% in November 2020, compared with 53.7% in November 2019. Institutional investors account for 48.5% of the assets, of which corporates are 94%. The rest are Indian and foreign institutions and banks.

Months	Individuals (in %)	Institutions(in %)
Nov'19	53.7	46.3
Dec'19	53.4	46.6
Jan'20	52.7	47.3
Feb'20	53.7	47.3
Mar'20	52.2	47.8
April'20	52.1	47.9
May'20	50.7	49.3
June.20	50.5	49.5
July'20	52.9	47.1
Aug'20	51.5	48.5
Sept'20	52.0	48.0
Oct'20	51.7	48.3
Nov'20	51.5	48.5

Institutions include domestic and foreign institutions and banks. HNIs are investors who invest with a ticket size of Rs.2 lakhs or above.

Investor Categories Across Scheme Types

Equity-oriented schemes derive 88% of their assets from individual investors (Retail + HNI) Institutional investors dominate liquid and money market schemes (84%), debt-oriented schemes (61%) and ETFs, FOFs (91%).

Institutions include domestic and foreign institutions and banks. HNIs are investors who invest with a ticket size of Rs. 2 lakhs or above. Equity-oriented schemes include equity and balanced funds.

Composition of Investors' Holdings

Individual investors primarily hold equity-oriented schemes while institutions hold liquid and debt-oriented schemes. 68% of individual investor assets are held in equity-oriented schemes. 75% of institutions assets are held in liquid / money market schemes and debt-oriented schemes.

Institutions include domestic and foreign institutions and banks. Individuals include HNIs or investors who invest with a ticket size of Rs. 2 lakhs or above. Equity-oriented schemes include equity and balanced funds. Composition of Investors' Holdings 5

GROWTH IN ASSETS

The value of assets held by individual investors in mutual funds increased from Rs.14.47 lakh cr in November 2019 to Rs. 15.37 lakh cr in November 2020, an increase of 6.21%. The value of Institutional assets has increased from Rs.12.47 lakh cr in November 2019 to Rs.14.46 lakh cr in November 2020, an increase of 15.97%.

Months	Individuals (Rs. Cr.)	Institutions (Rs. Cr.)	Grand Total (Rs. Cr.)
Nov'19	14,47,198	12,47,087	26,94,385
Nov'20	15,37,124	14,46,296	29,83,420

<https://www.amfiindia.com/Themes/Theme1/downloads/home/industry-trends.pdf>

Institutions include domestic and foreign institutions and banks. Rs. Lakh cr is equivalent to Rs. Trillion

NET INFLOW OF MUTUAL FUND SCHEMES

Net Equity Inflows (Rs crore)

Net investments into such stock plans have been dwindling for months as investors reduce holdings amid worries that the worst impact of the coronavirus may not have passed even as equities continue their ascent. Indian benchmarks have jumped more than 50% of their March low. The Nifty 50 gained 3% in August. All segments witnessed an outflow in August. Among schemes, investors pulled out the most <https://www.bloombergquint.com/mutual-funds/equity-mutual-funds-witness-outflow-for-second-straight-month>

MUTUAL FUND INVESTMENTS – GEOGRAPHICAL DISPERSION

Mutual fund investors, especially stock market debutants, have become very aggressive. Despite a sharp slowdown in economic activity across the globe, mutual funds have made a net investment of Rs 39,498 crore in stocks in the first six months of 2020, more than four-times (Rs 8,735 crore) the amount infused a year ago. Of this, over Rs 30,000 crore was invested in March alone, latest data available with Sebi showed. The healthy flow into equity-oriented mutual funds comes even as the pandemic has decimated revenues across sectors.

Fund managers say that this only displays a more mature investor behaviour wherein participants are viewing market corrections as an opportunity rather than a threat. “The sharp sell-off in the equity market by foreign investors led to cheaper valuations driving domestic mutual funds to do value buying,” according to Bajaj Capital. The four-fold higher inflow in the first half of 2020 can be explained by the rising popularity of asset allocation funds, which in turn used them to pick up stocks at attractive valuations after the steep fall in March.

MFs invested a net Rs 1,384 crore in equities in January this year, Rs 9,863 crore in February, and a staggering Rs 30,285 crore in March. While they pulled out Rs 7,965 crore in April, the trend reversed in May investing Rs 6,522 crore. In June, flows have reversed again, with an outflow of Rs 612 crore, the data showed.

Dynamic asset allocation funds, a category with a cumulative AUM of Rs 98,000 crore as of February, and carrying net equity exposure of 40-45 per cent on average, had increased their equity allocation to about 60 per cent by March-end, capitalising on the attractive valuations. They have maintained net equity exposure of 55-60 per cent since then.

Even the aggressive hybrid mutual funds had increased equity allocation in March, Bajaj Capital noted. However, funds struggled to grow assets under management (AUM). Mutual funds’ asset base dropped eight per cent in the quarter ended June. Average industry AUM of 45 players, stood at Rs 24.82 lakh crore in April-June period as compared to Rs 27 lakh crore in the preceding quarter.

CAPITAL INFLOW

Rs 39.5 thousand crore invested in the markets by mutual funds in H1 2020

Rs 30.3 thousand crore invested in the markets by MFs in March 2020 alone Dynamic asset allocation funds had increased equity allocations to 60 per cent by March-end

<https://www.newindianexpress.com/business/2020/jul/06/despite-covid-19-pandemic-mutual-funds-investments-rise-four-fold-2165977.html>

Mutual Fund Assets of T30 and B30 Locations

T30 refers to the top 30 geographical **locations** in India and **B30** refers to the **locations** beyond the top 30. **B30 locations** tend towards **equity assets**. In November 2020, 25% of **assets** held by individual investors is from the **B30 locations**. 5.89% of institutional **assets** come from **B30 locations**.

B30 and T30 - Asset Mix

B30 locations tend towards equity assets. 64% of the assets from B30 locations are in equity schemes For T30 locations, equity-oriented schemes accounted for 35% of assets

Month	Equity oriented Schemes	Non-Equity oriented Schemes
Oct'20 (B-30)	62%	38%
Oct'20 (T-20)	35%	65%
Nov'20 (B-30)	64%	36%
Nov'20 (T-20)	35%	65%

Equity-oriented schemes include equity and balance funds. Non-equity-oriented schemes include liquid and money market schemes and debt and debt-oriented funds. T30 refers to the top 30 geographical locations in India and B30 refers to the locations beyond the top 30.

<https://www.amfiindia.com/Themes/Theme1/downloads/home/B30vsT30.pdf>

GROWTH IN INVESTOR ACCOUNTS

Growth investing is an **investment** style and **strategy** that is focused on increasing an investor's capital. **Growth** investors typically **invest** in **growth** stocks—that is, young or small companies whose earnings are expected to increase at an above-average rate compared to their industry sector or the overall market

Net AUMs as on November 30, 2020, increased for both, debt funds and equity funds. The inflows for debt mutual funds nearly halved in November 2020 from the previous month while outflows from equity funds continue to rise.

Read more on Groww: <https://groww.in/blog/amfi-mutual-fund-monthly-performance/>

STRATEGIC IMPLICATIONS AND CONCLUSION

Ratings agency Crisil on December 17' 20 said the mutual fund industry will post double-digit growth for the next few years and its assets under management will cross Rs 50 lakh crore by 2025. Crisil's research wing said the increase in inflows is bound to be fuelled by investments into equities as against other asset classes.

Investor interest in the mutual funds segment has been changing lately because of market volatility, and the average assets under management stood at around Rs 30 lakh crore as of November 2020.

“Over the five years through 2025, we expect the industry's assets under management (AUM) to continue its double-digit growth and cross the Rs 50 lakh crore mark,” Crisil's Managing Director and Chief Executive Officer Ashu Suyash said.

She said equities, whose share stands at 42 percent at present, will drive the increase over the next five years and contribute 47 percent of the AUM by 2025. The increase in the pie for equities is in line with global experiences, she added.

India's favourable demographics, increased financialisation of savings, an inflation-targeting regime, and rising per-capita income will be the primary growth drivers to pull flows into the segment, Suyash noted. In the last 20 years, the AUMs of the industry have grown at a compounded growth rate of 18.5 percent per annum, Crisil said, adding that they stood at Rs 1.4 lakh crore as of 2003.

Scope For Better Market Returns

By capitalizing on multiple economies or markets simultaneously, your portfolio can fetch higher returns. Aside from mitigating risks by diversifying, overseas investing also boost your portfolio quality. But these all advantages come with a fair amount of risks. Here are some of the risk associated with International funds:

There is a risk of volatility in currency exchange rates. In the case of an international mutual fund, you may find it difficult to get information on how the companies linked with those funds are performing, are there any regulatory or change in business plan happening, etc. The upcoming markets can be affected by the economic and political changes of those countries.

Mutual Funds in India have grown over the years. As a result, the best performing mutual funds in the market keep on changing. There are various rating systems in place to judge MF schemes, such as CRISIL, Morning Star, ICRA. These systems evaluate funds based on qualitative and quantitative factors such as returns, asset size, expense ratio, Standard Deviation, etc. The summation of all these factors leads to the rating of the best performing mutual funds in India. However, to make the

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process of Investing easier for investors, we have shortlisted the best performing Mutual Funds in India along with guidelines to choose the best fund in this article..

Smart Tips to Invest in Best Mutual Funds: Lump Sum & SIP Investments A perfect way to invest in the best performing mutual funds is by looking at both its qualitative and quantitative measures, such as: 1. Scheme Asset Size Investors should always go for a fund that is neither too big nor too small in size. While there is no perfect definition and relation between the size of the fund, it is said that both too small or too large, can hinder a fund's performance. Less Asset Under Management (AUM) in any scheme is very risky as you don't know who the investors are & what quantum of investments they have in a particular scheme. Thus, while choosing a fund, it is advisable to go for the one whose AUM is approximately the same as the category. 2. Fund Performance To invest in the best performing mutual funds, the investors should do a fair assessment of the fund's performances for over a period of time. Also, it is suggested to go for a scheme that consistently beats its benchmark over 4-5 years, additionally, one should see each period to check if the fund is able to beat the benchmark. 3. Total Expense Ratio Investors who want to make investments in mutual funds have to bear certain charges like management fees, operation costs, etc., charged by the Asset Management Company (AMC). Many times, investors go for a fund that has a lower expense ratio, but it is something that should not supersede other important factors such as fund performance, etc.. Read more at: <https://www.fincash.com/l/best-performing-mutual-funds>

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APPENDICES

QUESTIONNAIRE

"Performance Analysis of Growth Mutual Funds and Tax-Saving Mutual Funds (ELSS) in India"

Dear Respondent,

I am conducting a pilot survey to "Performance Analysis of Growth Mutual Funds and Tax-Saving Mutual Funds (ELSS) in India" as a part of my Doctoral Program at ARKA JAIN UNIVERSITY JHARKHAND. Kindly fill in the following form. Thank you so much for your time and consideration.

(i) Email _____

(ii) Name _____

(iii) Gender _____

(iv) Contact No.

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(v) Age (Please Tick)

Below 20	21-30	31-40	41-50	51-60	Above 60

(vi) Educational Qualification (Please Tick)

Upto Higher Secondary (12th Std.)	Graduate	Post-Graduate	Professional	Doctoral	Post-Doctoral	Research Scholar

(vii) Occupation (Please Tick)

Salaried - Public Service	Salaried - Private	Salaried - Government Employees	Business / Self Employed	Agriculture Sector	Retired Person	Student
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	Sector					

(viii) Marital Status (Please Tick)

Married	Unmarried / Single

(ix) Monthly Average Savings (Please Tick)

Below Rs 10000	Rs 11000 - 15000	Rs 16000- 30000	Rs 31000- 50000	Above Rs 50000

Questionnaire- Investor Category

1. which of the following is the best investments in your Investment Preference (Please Tick)

Equity Shares	Mutual Funds	Post Office Savings	Bank Fixed Deposits	Life Insurance	Gold / Silver	

2. According to your point of view which investment attributes has more weightage in term of investment in ELSS funds. (Please Tick)

Return	Risk	Liquidity	Awareness of the Investment Product	Tax Benefit	Convenience / Flexibility

3. According to your point of view which investment attributes has more weightage in term of investment in Growth mutual funds (Please Tick)

Return	Risk	Liquidity	Awareness of the Investment Product	Convenience / Flexibility	Tax Benefit

4. Previously anytime you have invested in an Equity Linked Savings Scheme (ELSS) Mutual Fund in India ? (Please Tick)

Yes	No

5. Previously anytime you have invested in an Growth Mutual Fund in India ? (Please Tick)

Yes	No

6. How long have you been investing in Equity Linked Savings Scheme (ELSS) ? (Please Tick)

Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years

7. How long have you been investing in Growth Mutual Funds ? (Please Tick)

Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years

8. In Which ELSS Investment Plan Option do you plan to invest ? (Please Tick)

Growth Option	Dividend Option	Dividend Growth Option	Others

9. what is your preference while investing in Growth mutual funds scheme in India? (Please Tick)

Diversified Equity Funds	Index Funds	Gold Funds	Balance d Funds	Debt Funds	Liquid Funds	Exchange Traded Funds (ETF's)	Others

10. How much amount you are investing in ELSS Funds in a year ? (Please Tick)

Below Rs 5000	Rs 5000 - 15000	Rs 15000-40000	More than 40000

11. How much amount you are investing in Growth Mutual Funds in a year ? (Please Tick)

Below Rs 5000	Rs 5000 - 15000	Rs 15000- 40000	More than 40000

12. What kind of Investment Objectives do you think can be met while investing in ELSS Funds ? (Please Tick)

Tax Benefit	Capital Appreciation	Retirement Planning Needs	Children Education / Marriage Needs	others

13. What kind of Investment Objectives do you think can be met while investing in ELSS Funds ? (Please Tick)

Tax Benefit	Capital Appreciation	Retirement Planning Needs	Children Education / Marriage Needs	others

14. How long will you remain invested in ELSS Funds ? (Please Tick)

Just 1 Years	1 - 3 Years	3-5 Years	Over 5 Years

15. How long will you remain invested in Growth Mutual Funds ? (Please Tick)

Just 1 Years	1 - 3 Years	3-5 Years	Over 5 Years

16. What is your source of information in selecting the ELSS Tax Saving funds for Investment?

Personal Research	Fund Star Ratings (Value Research / Crisil Ratings	Asset Management Company / Fund Manager	News Paper / Magazine Recommendations	Financial Planner / Advisor Recommendation

	etc.			

17. What is your source of information in selecting the Growth Mutual funds for Investment ? (Please Tick)

Personal Research	Fund Star Ratings (Value Research / Crisil Ratings etc.	Asset Management Company / Fund Manager	News Paper / Magazine Recommendations	Financial Planner / Advisor Recommendation

18. According to your point of view what is the risk factors while investing in ELSS Funds(Please Tick)

Less Risky	Risky	Neutral	More Risky	Highly Risky

19. According to your point of view what is the risk factors while investing in Growth mutual Funds ? (Please Tick)

Less Risky	Risky	Neutral	More Risky	Highly Risky

20. What is your expectation of Average Annual Returns from ELSS Funds ? (Please Tick)

Less than 10% pa	10 - 15% pa	15 - 20% pa	Greater than 20% pa

21. What is your expectation of Average Annual Returns from Growth Mutual Funds ? (Please Tick)

Less than 10% pa	10 - 15% pa	15 - 20% pa	Greater than 20% pa

22. What is your expectation of Average Annual Returns from Diversified Equity Funds ? (Please Tick)

Less than 10% pa	10 - 15% pa	15 - 20% pa	Greater than 20% pa

23. What do you consider are the additional risk factors in ELSS Funds as compared to Diversified Equity Funds ? (Please Tick)

3 Year Lock In Period	Higher Equity Allocation	Both	None

24. How will you allocate an amount of Rs 10,000 in the below given Tax Saving Investments or Growth Funds? (Please Tick)

ELSS mutual funds	Growth Mutual Funds	National Savings Certificate (NSC)	Public Provident Fund	Insurance Plans	National Pension Scheme (NPS)	5 Year Bank FD

25. How do you rate your satisfaction with regard to the Returns performance of ELSS Funds ? (Please Tick)

Highly Satisfied	satisfied	Neutral	Dissatisfied	Highly Unsatisfied

26. How do you rate your satisfaction with regard to the Returns performance of Growth Mutual Funds ? (Please Tick)

Highly Satisfied	satisfied	Neutral	Dissatisfied	Highly Unsatisfied

27. What changes would you like to see in the ELSS Fund Regulations ? (Please Tick)

Lower Lock In Period	Higher Lock In Period	Lower Equity Allocation	Dedicated Deduction U/s 80 C for ELSS

28. What changes would you like to see in the Growth Mutual Fund Regulations ? (Please Tick)

























Lower Lock In Period	Higher Lock In Period	Lower Equity Allocation	Dedicated Deduction U/s 80 C for ELSS

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Organized by Centre for Management Studies, ICFAI Law School, ICFAI Foundation for Higher Education, Hyderabad and
presented a paper titled **“Impact of Digitalization on Mutual Funds in India”** in the Technical Session **Dynamics of New Age
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Coordinator, NABTL, 2021
Assistant Professor
ICFAI Law School, IFHE, Hyderabad



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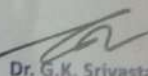
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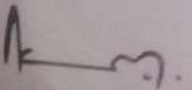
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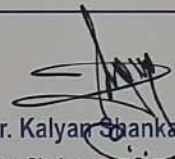
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EMERGING TRENDS OF MUTUAL FUNDS IN INDIA: A STUDY ACROSS CATEGORY AND TYPE OF SCHEMES

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Abstract

The current paper aims to bring out the modern trends in mutual fund industry in India. The emerging circumstances and escalation of mutual funds have been analyzed crossways category, segment and type of assortment. annual percent transform, compound annual growth rate (CAGR) and proportionate market share are the foremost apparatus functional for analyzing enlargement in numeral of schemes, assets under management and capital mobilized.

This situation is at once a threat and an opportunity. It is threat because of the vulnerability of large players who built their business in protected environment and under-developed regulation. To some extent, it is a historical baggage they are carrying which can crush them and the industry if not thrown away carefully and decisively. It is an opportunity because there is room for growth as the large players right-size and as the market also grows. While this happens, all service providers will have to master the first principles of fund management.

The mention phase ranges from 2015-2020, i.e. period of 5th generation financial sector reforms. The Industry's AUM crossed the milestone of ₹10 Trillion (₹10 Lakh Crore) for the first time as on 31st May 2014 and in a short span of about three years the AUM size had increased more than two folds and crossed ₹ 20 trillion (₹20 Lakh Crore) for the first time in August 2017..There are as many as 44 AMFI (Association of Mutual Funds in India) registered fund houses in India which together offer more than 2,500 mutual fund schemes.

Four MF trends that will catch up in 2021

Global investing and roll-down strategy became popular in 2020.

More and more AMCs are launching funds with ESG investing philosophy, and risk meter is a big development. The wide array of funds often makes it a little difficult for investors to choose the best scheme for them. The learning brings out that the mutual fund investors in India at present have as many as 2500 schemes with diversity of features such as dividend, growth, cumulative interest income, monthly income plans, sectoral plans, equity linked schemes, money market schemes, etc. Though both open-end and close-end schemes have registered excellent growth in fund mobilization, but currently the former category of schemes is more popular among the investors. Portfolio-wise analysis has brought that income schemes have an edge over growth schemes in terms of assets under management.

Moreover *Indian Mutual Fund* industry's *Average Assets Under Management* (AAUM) stood at ₹ 32.30 Lakh Crore (INR 32.30 Trillion) The *MF* Industry's AUM has grown from ₹ 12.63 trillion as on February 29, 2016 to ₹31.64 trillion as on February 28, 2021, about 2 ½ fold increase in a span of 5 years. Such are the emerging trends in mutual funds in India and such is the shape of the subjective and the objective subjective conditions in our rapidly transforming markets.

Key Words: Mutual Fund, Open ended Scheme , UTI, ELSS, Assets Under Management (AUM)

Introduction

The purchaser is the Mutual Fund Industry's "Shared Services" inventiveness shaped by the Asset Management Companies (AMCs) of SEBI (Securities & Exchange Board of India, the regulator for securities markets in India) registered Mutual Funds under the protection of AMFI (Association of Mutual Funds of India, an industry standards organization in India in the mutual funds sector), with an purpose of investor empowerment, distributor expediency, consolidation of in sequence to a variety of agencies, operational effectiveness for RTAs and benefits to AMCs, thereby benefiting all stakeholders in the industry.

The client did not have an breathing communications which could facilitate investors to deal transversely mutual fund portfolios accessible by a variety of fund houses in the nation. The procedure worn by investors to devote in mutual fund schemes concerned a lot of official procedure and laid off manual processes, which complete it error-prone, unwieldy and multifaceted to manage. throughout the MFU System (powered by Intellect Fund Distribution), the customer realized its apparition of reaching out to the complete investing purchaser support during a single functioning. MFU System provided noteworthy reimbursement to all stakeholders in the Mutual Fund Industry (investors, MF distributors / RIAs and Fund Houses / AMCs). AMCs could efficiently influence MFU system's POS (Point of Service) system to enlarge their arrive at and occurrence to beforehand inaccessible locations. MFU scheme functioning enabled the customer, to get rid of duplicities in attendance in the mutual fund speculation structure and minimized intrinsic risks within the Mutual Fund Industry.

Digital methods comprise company sites, external portals, social-media, smartphone applications, web-chat, IVR phone facility, presence on web-aggregators, SMS, email, etc. These can be Own-Media, Paid-Media or Earned-Media. Own media means own sites. Earned media resources reviews, mentions, posts and shares which customers make willingly on social-media assets. remunerated media means paid advertisements/promotions.

In terms of plans, smartphones is the largest and fastest growing medium. Tablets are also growing. Computers are reducing in relevance. The purpose of digital methods is to inform, engage and execute clients/prospects with their business. It underway as an 'add-on', but has enthused to a 'must-have'. In financial services, it has become an significant distribution channel. The objective for financial product producers is to reduce the costs as well as increase revenues. For financial product agents, it is really to increase the revenues.

But first-mover advantage need not always translate into brand stickiness. For that, digital methods need to provide a great experience to clients across usability, content and access. Today, customers are not so fixated with brands, as much as with convenience and value. Firms also have to go to the next-level by creating features that compel repeat-visits and client stickiness.

Activities where Digital is making impact in the Financial Services Value-Chain From Customer Engagement to Customer Fulfillment -

Engaging with Existing client → prospect Engagement → Lead Generation → New Client Acquisition → Product promotion & comparision → Buying decision & purchase Completion → Device-Agonstic across and preference - storage → Reporting and Notification → Client servicing and client feedback → Data collection for Management Decision -making.

The MFU structure manages the complete logistics of executing MF dealings, enabling distributors to spotlight additional on provided that excellence suggestion to their clients. It provides a solitary aim for time-stamping dealings and eliminates repetition of certification / processes. MFU scheme is the winner of the Banking Technology Award for the year 2016 in the „Best Industry communications Initiative“ category. This credit is an additional plume in the cap for the MFU classification whose member AMCs explanation for about 92 per cent of the industry Assets Under Management (AUM) and about 94 per cent of industry transactions. presently, the markets are facing opportunities both on the home and the worldwide front. Namely, increasing tensions brought on by the US-China trade disagreement, reduction in international trade quantity and a slower universal as well as Indian growth rate. This economic state of affairs attached with the congregation of changes that SEBI had introduced for the mutual fund Industry has brought on an noticeable difference between expansion and

augmentation potential for the Industry. Getting new customers and growing case share from the breathing ones must be the first main concern for the MF industry. many of initiatives have been engaged, not only by SEBI, AMFI but also by entity companies to accomplish this outline. specified the stretched periphery structure that all stakeholders function in, the spotlight ought to be on structure distribution (enabling and showing the business Prospects to breathing large impending setups like PSU Banks, creating new ARN holders while collaborating with governments through skill development programs and creating employment. Digital boundary is the outlook which desires to be embraced by all active stakeholders and should develop into an essential part of the voyage for anyone amalgamation in currently.in view of the fact that mutual funds are classically sold and not bought, distributors participate a input function in channelizing money in excess of the years, the distributors and IFAs have played an significant role in the explosion of mutual fund schemes as an best deal avenue among primarily, the retail investors, which in twist has resulted in a important payment by them in the largely AUM garnered by the mutual fund industry.

although the rising allocation strength is a strong symbol, the industry requirements to do a great deal more to provide to India's huge inhabitants, particularly to arrive at out to people who are not digitally ability. We can be trained from our close social group in the financial services industry (Life Insurance), the way they have enlarged distribution path crossways the surroundings and leveraged the active Banking framework/infrastructure throughout banc assurance channel. One of the main public life insurance companies has concluded 63 years of operations in India in 2018 and has about 11 lakhs agents. accomplishment still 50% of this huge circulation force can go a extensive method in increasing the arrive at of mutual funds surrounded by households.

Technology is disrupting and it is positively impacting the mutual fund industry. It has enormous reimbursement, chiefly for the investors, along with the AMCs and the distributors. Digitisation and the growth of allotment are where the aggressive benefit will be in the next to future of the mutual fund industry. a lot of distributors are implementation these changes and with them to cultivate their business too. In fact, with internet connectivity improving in B30 towns, usage of digital interfaces has enhanced considerably. The next step would be to educate the customers concerning the expediency of by means of digital intermediate and serving them experiences it.The technological developments are expected to bring increased efficiency and a 'customer delight' factor amongst our investors while increasing the efficiency. This will, I believe turn to be a blessing in disguise for us as the AMC, and the distributors in making us move towards being a more customer centric industry.

Literature review

The world is going digital, and the pace of conversion is rising. India has ~300 mn internet users. Within this, Google estimates it took 20 years for India to notch its first 100 mn users, while the next 100 mn took 2 years and 1.3 years respectively. This is expected to reach 600 mn by 2020, with users across gender and age-groups. Comscore's Sept 2014 figures may be more relevant for financial services. It estimates ~170 mn Males of age 25+ years visited financial websites. While financial services is not a Male-domain in any sense, the absolute numbers are eye-catching by themselves. Digitization has played an essential role in distribution of information and that as well in an appealing way foremost to better information and in rank about the developments in the mutual fund industry and capital markets. The government also has played a important function in digitization throughout widespread efforts in financial inclusion - dispersal financial consciousness to the furthest parts of country and bridging geographical dissimilarity.

Digital methods comprise corporation sites, outside portals, social-media, smartphone applications, web-chat, IVR phone facility, being there on web-aggregators, SMS, email, etc. These can be Own-Media, Paid-Media or Earned-Media. Own media means own sites. Earned media means reviews, mentions, posts and shares which clients make voluntarily on social-media assets. Paid media means paid advertisements/promotions.

In terms of devices, smartphones is the largest and fastest growing medium. Tablets are also growing. Computers are reducing in relevance. The purpose of digital methods is to inform, engage and execute clients/prospects with their business. It started as an 'add-on', but has moved to a 'must-have'. In financial services, it has become an important distribution channel. The objective for financial product producers is to reduce the costs as well as increase revenues. For financial product agents, it is really to increase the revenues.

Prasada Rao et al. (2018) in their research consider that Blockchain technology can assist the entire the stakeholders in the mutual funds industry with its intelligibility, devolution, tamper-resistance, answerability and solitude. With amplified lucidity, the self-confidence level in the middle of the investors will enlarge; as well it will show the way to augmented effectiveness of work, with minor paper-work through digitalization. Daniel O'Keefe et al. (2016) from KPMG surveyed fifteen hundred bank clients about their consciousness of and attention in digital prosperity management. Their unearthing was astonishing, consciousness concerning robo-advisory was 8 to 15 percent, but it was uniformly amazing that 51.8% of the investors were conscious of intelligent portfolio management, and 48% of the investors were aware of Personal Advisor Services. They moreover quoted an amplified swing in new and accessible investors towards robo-advisory, according to their research, robo-advisory could be worth \$2.2 trillion by the year 2020. The financial services business is customer-facing, competitive, distribution-sensitive and turnaround-time sensitive. If the company's target universe is increasingly going digital, it makes sense to adopt digital as the Backbone, rather than a Support. This may give it a 'first-mover advantage', which can have bearing on its success in a market like India, which is still evolving in terms of sophisticated financial products. It also depends on the industry it is in. For example: it can be a support in insurance but it is a must in broking. But first-mover advantage need not always translate into brand stickiness. For that, digital methods need to provide a great experience to clients across usability, content and access. Today, customers are not so fixated with brands, as much as with convenience and value. Firms also have to go to the next-level by creating features that compel repeat-visits and client stickiness.

The world is departing digital, and the speed of adaptation is increasing. India has ~300 million internet users. Within this, Google estimates it took 20 years for India to indentation its first 100 million users, while the next 100 million took 2 years and 1.3 years respectively. This is accepted to reach 600 million by 2020, with users crossways femininity and age-groups. Comscore's Sept 2014 data may be additional pertinent for financial services. It estimates ~170 million Males of age 25+ years visited financial websites. While financial services is not a Male-domain in any sense, the complete information are eye-catching by themselves.

Objective of the study

- i. To study the current trends in growth of mutual fund industry in India
- ii. To examine the emergence of technology in mutual funds industry
- iii. To study the impact of technology on mutual funds and financial markets
- iv. To study the current regulatory considerations regarding use of Artificial Intelligence and machine learning, and lastly,
- v. To study the implications of artificial intelligence for financial stability

Research Methodology

- (a) To examine the mutual fund schemes performance, 10 schemes were selected Mutual Fund.
- (b) Daily NAVs of these schemes are collected for period of five years i.e., August 2015 to July 2020 from amfiindia website.
- (c) For benchmarking and comparison purpose BSE-Sensex and NSE-Nifty is used.
- (d) To consider risk free return yield on 91-day Treasury bills is accepted which 8.52% , during my study period.

Data Analysis

Recent trend in growth of mutual fund industry in India

The industry added 44.2 million folios between March 2014 and June 2019. Almost the entire growth in folios came from the individual investors' segment (retail & HNI), which logged a CAGR of 15.5% over this period. Their average ticket size, too, increased from 102,000 INR in March 2014 to 169,000 INR in June 2019.

The industry added 44.2 million folios between March 2014 and June 2019. Almost the entire growth in folios came from the individual investors' segment (retail & HNI), which logged a CAGR of 15.5% over this period. Their average ticket size, too, increased from 102,000 INR in March 2014 to 169,000 INR in June 2019. A Securities Transaction Tax (STT) is applicable at the rate of 0.001% on equity oriented mutual funds at the time of redemption of units. An investor is not required to pay STT separately as it is deducted from the mutual fund returns.

List of Top tax Saving (ELSS) Mutual Funds for FY 2020

Fund name	3 years return	5 years return
Mirae Asset Tax saver	19.82%	-
Axis Long term Equity fund	19.21%	13.20%
Tata india Tax saving Fund	17.50 %	13.76%
Motilal Oswal Long term equity funds	17.13%	
Inversco India Tax plan	15.52%	11.98%
DSP tax saving Fund	15.25%	12.08%
Aditya Birla sun life tax relief 96	14.83%	11.54%
Kotak tax saver	14.57%	11.03%

<https://www.paisabazaar.com/mutual-funds/tax-benefit-of-mutual-fund/>

Dividend Distribution Tax (DDT) in the hand of mutual fund investors

Investors	Resident /Individual/H UF	Domestic Company	NRI
Dividend			
All Schemes	Tax Free in the hands of Investors		
Tax on distributed income (payable by the scheme) rates			
Equity oriented scheme	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess
	11.648 %	11.648 %	11.648 %
Infrastruture debt funds	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	5%+12% Surcharge+4% Cess
	29.12%	34.944%	5.824%
Other than equity oriented scheme and	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	25%+12% Surcharge+4% Cess

IDF	29.12%	34.944%	29.12%
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Indian investors have shown three times jump in the contribution to Asset Under Management (AUM) in mutual funds over the last three to five years. Year 2017 has proved to be one of the highest grosser by reaching a total corpus of Rs. 17 trillion, despite the poor show by equity and capital markets due to the demonetization and global surge in oil prices. Around Rs. 3.71 trillion contributions came in the year 2017 only, the highest ever contribution till date. The Systematic Investment Plans (SIP) monthly contribution has hit a record high of Rs. 4,500 crore, which is expected to rise even further high. ETFs have also seen a sharp rise in contribution by investors. Rs. 40,000 to Rs. 45,000 crores were invested through the ETFs and arbitrage funds, which represents almost 10% of total contribution. Another reason for sharp rise in mutual fund contribution is scrapping of entry load from the mutual funds. With rising incomes and good economic policies, mutual funds industry saw a surge in mutual funds AUM and several fund houses were formed. One of the reasons for sudden rise in mutual fund contribution is technology. Technology has made it possible for the asset management companies to expand its territory to places, where it doesn't have any physical presence. People are now able to get information, suggestion and even they can invest in mutual funds without visiting the representative offices of the AMC. Mutual Fund industry has adapted itself to the changing technological environment in and around itself. And it has seen a positive response from the investors. Investors can now even get the e-KYC done online, without even the physical contact with any of the representatives of the mutual fund industry. Also, SEBI (Securities Exchange Board of India) the regulatory body of the MF industry, has made necessary changes in the regulations, so that it can take proper advantage of the new technologies into the mutual fund industry.

Impact of technology on mutual funds and financial markets

Artificial Intelligence has been into the mainstream news, as it is always making headlines, every time it's something new and remarkable. Stephen Hawking's warning on the Artificial Intelligence cannot be ignored, whereas there are still people and government who can't stop working on Artificial Intelligence. AI has already created its space in the industry, with its applicability into many aspects. It has helped company to reduce inaccuracy and increase efficiency. It is already used in ECM (Enterprise Content Management) by mutual fund companies. AI does the job of processing large data, arranging, classifying, checking for error, and thus reducing the redundancy and duplication of data.

Computers is known for analyzing and processing huge amount of data within fraction of seconds, combined with intelligence, smart analyzing and interpretation of data could help fund managers to do the historical analysis of the stocks. With greater intelligence AI is utilized for making security analysis and arriving at an optimum portfolio with risk-reward ratio. It can also be used to customize the needs of the investors and suggest the best possible investment options. Here Robo-Advisors are being developed, which can work based on certain algorithms to understand individual customers, its needs, risk parameters, etc. and then can process the data to suggest right products for the investors. Since it will be automated, chances of inaccuracy are minimized.

Growth in Mutual Fund Assets 2020- Assets Under management (Rs.Cr.)

Mutual Funds	Dec 2019	June 2020	Change	% Change
SBI Mutual fund	352632	364,363	11,731	3.33
HDFC Mutual fund	382,517	356,183	-26,334	-6.88
ICICI Prudential Mutual fund	361,507	326,291	-35,215	-9.74

Aditya Birla Sun life mutual fund	249,926	214,592	-35,334	-14.14
Nippon India Mutual fund	204,371	180,061	-24,310	-11.90
Kotak Mahindra mutual fund	176,961	167,326	-9,636	-5.45
Axis Mutual Fund	122,867	134,316	11,449	9.32
IDFC mutual fund	104,630	101,770	-2,860	-2.73
UTI mutual fund	157,119	133,631	-23,488	-14.95
Franklin Templeton Mutual fund	126,475	79,808	-46,667	-36.90

<https://www.moneycontrol.com/mutual-funds/amc-assets-monitor>

With next generation technology, entire investment process is now paperless, efficient and easy to invest. It has helped the fund houses to increase its efficiency in distribution channel, it is now possible to reach places, which was earlier difficult to reach. With e-commerce platforms, mutual funds would be under the reach of vast majority of the investors. Technology is transforming the asset management companies, it is now being reorganized and more centralized than before. Mobile, social media, cloud computing, Blockchain mechanism, big-data, analytics and Fin Tech is now redefining the future of asset management. Since AI has the potential to enhance the efficiency of the information processing, thus reduces the asymmetries, application of AI. AI may process large information for the investor and can come up with most probable recommendations, which may be helpful for the investor in taking investment decision. It can reduce the overall trading cost for the investors, can suggest most appropriate trading strategies for the investors according to the changing scenarios. AI can be used to target specific customer segment and come up with better recommendation.

Regulatory considerations regarding use of artificial intelligence and machine learning

Regulating artificial intelligence, is also termed as supervision. As AI and machine learning is already adopted by financial institutions in some areas like automated customer interactions, risk assessment, credit risk analysis, optimize capital, identify trading opportunities and optimizing trading execution. Regulations is required in areas where there is a third-party dependency, for example if an AI, developed by third party, incurs loss, then who is to be blamed? The third party, or the service provider or the investor. Regulatory authorities worldwide have imposed stricter and various regulations on asset management companies. The proposed measures to increase regulations on the financial services sector:

More regulations on reporting norms, and also put more stress on asset management companies to discourage investors to redeem funds at distressed situation in financial market. ii. Just like banks undertake stress testing more often, the financial services sectors should also frequently do stress testing of all the funds they manage. iii. Low tolerance for regulatory breaches by asset management companies, leading to increased fines and increased cost of regulations. This could lead to increased burden of regulation on asset management companies and is going to significantly impact the small players. iv. Minimum qualifications for investment professionals, so that the minimum competency level should be achieved in order to work in an investment advisory firms as well as fund management house. v. Complete ban on commissions on sale of mutual funds in order to protect consumers. vi. Increased reporting in order to bring more transparency into the system.

Robo-advisors could offer tailor-made customized products for the investors, creating individual tailor-made customized products, could create low correlation among the various other trading strategies, which could lead to greater market diversity in market movements. Low cost of trading and increased efficiency in processing of information could help reduce price misalignments and hence build-up of macro-financial price imbalances. More

use of machine learning could lead to lack of data transparency to the consumers, and hence it would be more difficult to explain on how a credit or insurance decision was reached

Conclusion

Since the inception of the digital era, accessing anything and everything has become easier compared to the good old days of manual intervention. Digitization has touched upon various aspects of our lives. It all started with digitizing our social networks, purchase of goods online, transactions on the net, lifestyle enhancements and now our finances too.

A few years back, an investor residing in a small town could not have imagined having access to wealth advisory. He would typically have had his money in a savings bank account or fixed deposit. Digitization has changed this scenario. Companies can now utilize their digital strengths and processes to tap this customer segment which was earlier under the radar and difficult to reach. Technology can help one with a wider geographical reach, providing relevant and unbiased advisory and customer delight, all at the same time.

The government too has played a significant role in digitization through extensive efforts in financial inclusion - spreading financial awareness to the remotest parts of country and bridging geographical difference. Demonetization gave the much needed push to those who were sitting on the fence - whether to go digital or stay offline.

The technology sector is continuously growing, so it's true that some of your investments may face some near-term headwinds. However, experts project that in the coming days, technology mutual funds will have the capacity to outperform global equity funds. Hence, if there is one sector you need to keep your eyes peeled for, then this is it!

Digitization has been transforming the investment landscape in the following ways:

Information revolution - The internet is replete with information and educative articles highlighting the importance of investing and financial planning. A new investor who is indecisive about whether to and where to invest can get a lot of guidance and take informed decision after comparing various options.

Simple is the new smart - What's making the biggest difference in the life of new investors is the simplification that digitization has introduced. Turn-around-time has reduced dramatically, processes are made paper less and advisory is devoid of any error or bias.

The world is now Mobile First - In today's digital world, smartphones have become our most important gadget - they can do literally everything for us and help us invest anytime and from anywhere. In an endeavor to digitize, various mobile applications became available for easy payments, from monthly bills to bank transactions, or for investing in financial instruments like Mutual Funds, ELSS, Fixed deposits or even pension plans.

E-wallets - E-wallets turned it around to - 'Money in time!' Linking your bank details to the e-wallets makes it easier to transfer the money from one bank account to another. Also, the monthly bills can be paid by just one swipe on your mobile phone. Trading and investing in stocks and bonds has become much easier through robust mobile applications and easier money transfer support.

I strongly believe wealth creation and investments cannot happen in isolation. It is a journey in which the service providers and investors are equal partners. Companies who are investing in digitization are doing so with two-fold benefit - that of empowering their employees to deliver better solutions to customers and more importantly empowering the customers to take informed decisions with ease.

AI is now being adapted by increasing number of companies worldwide, and when it comes to financial industry, the asset management companies have already started making use of AI and machine learning. It has led to increased efficiency in operations of the financial institutions and also it has increased overall efficiency of the financial system and economy. More efficient risk management of the investment portfolio, helps to appropriate allocation of funds, also reduce cost of transactions and increase speed of the transactions. With adaptation of

digitalization in mutual funds, it has shown a very positive sign of increased participation by the investors. Demonetization may have initially hampered the financial markets, but soon it witnessed highest ever contributions towards asset base of mutual funds, in the year 2017 as compared to over a decade. Investors can now make direct investments, without involvement of any broker or distributor, soon ecommerce platform will make it even more easier for the investors to invest in mutual funds. New technologies like Blockchain mechanism, robo-analytics, robo-advisors will help the asset management companies to increase their efficiency and performance in future. Distribution channels will utilize more of advanced technologies to make their work efficient and investor friendly. Technologies like robo-advisory can help the customer to have access to wealth of information and they can get personalized advisory at their convenience. However, there would be some challenges, which can be tackled by the active involvement of regulators, in bringing the necessary changes in regulations to be in the favor of the investors, by safeguarding the interest of the investors

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CLIMATE CHANGE IMPACTS ON MARINE ECOSYSTEMS

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ABSTRACT

In marine environments, rising barometrical CO₂ and environmental change are related with simultaneous changes in temperature, dissemination, definition, supplement input, oxygen content, and sea fermentation, with possibly wideranging organic impacts. Populace level movements are happening a direct result of physiological narrow mindedness to new conditions, modified dispersal examples, and changes in species associations. Along with neighborhood environment driven attack and eradication, these cycles bring about modified local area construction and variety, including conceivable development of novel biological systems. Impacts are especially striking for the shafts and the jungles, as a result of the responsiveness of polar environments to the ocean ice retreat and poleward species relocations just as the awareness of coral-algal advantageous interaction to minor expansions in temperature. Midlatitude upwelling frameworks, similar to the California Current, display solid linkages among environment and species appropriations, phenology, and demography. Amassed impacts might adjust energy and material streams just as biogeochemical cycles, in the end affecting the general environment working and administrations whereupon individuals and social orders depend

Keywords trophic structure, hypoxia, diversity, food webs.

INTRODUCTION

From tropical waters in Hawai'i and Florida, to calm waters in New England and the Pacific Northwest, to cold Arctic oceans off of Alaska, the United States has the absolute generally assorted and useful sea biological systems on the planet. Americans depend on sea biological systems for food, occupations, diversion, energy, and other crucial administrations, and waterfront provinces of the United States are home to north of 123 million individuals, or 39% of the U.S. populace (Ch. 8: Coastal).⁸ The fishing area alone offers more than \$200 billion in financial movement every year and supports 1.6 million jobs.⁹ Coastal environments like coral and shellfish reefs, kelp woods,

mangroves, and salt swamps give natural surroundings to numerous species and coastline insurance from tempests, and they have the ability to sequester carbon.

The seas assume a critical part in the worldwide environment framework by engrossing and rearranging both hotness and carbon dioxide.^{14,15} Since the Third National Climate Assessment (NCA3),¹⁶ comprehension of the physical, compound, and natural conditions in the seas has expanded, taking into consideration further developed identification, attribution, and projection of the impact of human-caused fossil fuel byproducts on seas and marine assets.

Human-caused fossil fuel byproducts impact sea biological systems through three principle processes: sea warming, fermentation, and deoxygenation. Warming is the clearest and all around recorded effect of environmental change on the sea. Sea surface waters have warmed on normal $1.3^{\circ} \pm 0.1^{\circ}\text{F}$ ($0.7^{\circ} \pm 0.08^{\circ}\text{C}$) each century all around the world somewhere in the range of 1900 and 2016, and over 90% of the additional hotness connected to fossil fuel byproducts is contained in the ocean.¹⁵ This warming effects ocean levels, sea flow, definition (thickness contrast between the surface and more profound waters), efficiency, and, at last, whole environments. Changes in temperature in the sea and in the climate modify sea flows and wind designs, which impact the irregularity, overflow, and variety of phytoplankton and zooplankton networks that help sea food webs.^{17,18}

As well as warming, overabundance carbon dioxide (CO₂) in the air has an immediate and free impact on the science of the sea. At the point when CO₂ disintegrates in seawater, it changes three parts of sea chemistry.^{15,19,20,21} First, it increments broke down CO₂ and bicarbonate particles, which are utilized by green growth and plants as the fuel for photosynthesis, conceivably helping a considerable lot of these species. Second, it expands the centralization of hydrogen particles, acidifying the water. Acridity is estimated with the pH scale, with lower esteems showing more acidic conditions. Third, it diminishes the centralization of carbonate particles. Carbonate is a basic part of calcium carbonate, which is utilized by numerous marine creatures to shape their shells or skeletons. The immersion condition of calcium carbonate is communicated as the term Ω . At the point when the convergence of carbonate particles in sea water is low to the point of yielding $\Omega < 1$ (alluded to as undersaturated conditions), uncovered calcium carbonate structures start to break down. For straightforwardness, the terms sea fermentation and acidifying will allude to the set-up of compound changes talked about above.

Expanded CO₂ levels in the climate are additionally causing a decrease in sea oxygen concentrations.¹⁵ Deoxygenation is connected to sea warming through the immediate impact of temperature on oxygen dissolvability (warm water holds less oxygen). Warming of the sea surface makes an improved vertical thickness contrast, which diminishes the exchange of oxygen beneath the surface. Biological system changes connected with temperature and delineation further impact oxygen elements by modifying photosynthesis and respiration.^{22,23}

Each of the three of these cycles warming, fermentation, and deoxygenation-collaborate with each other and with different stressors in the sea climate. For instance, nitrogen manure running off the land and entering the Gulf of Mexico through the Mississippi River invigorates algal sprouts that ultimately rot, making an enormous no man's land of water with extremely low oxygen^{24,25} and, at the same time, low pH.²⁶ Warmer conditions at the surface lull the rate at which oxygen is renewed, amplifying the effect of the no man's land. Changes in temperature in the sea and in the climate influence sea flows and wind designs that can modify the elements of phytoplankton blooms,¹⁷ which then, at that point, drive low-oxygen and low-pH occasions in beach front waters.

Changes in sea biological systems are as of now affecting the U.S. economy and the waterfront networks, societies, and organizations that rely upon sea environments (Key Message 1). Fisheries give the most substantial financial advantage of the sea. While the effect of warming on fish stocks is turning out to be more serious, there has additionally been progress in adjusting fisheries the board to an evolving environment (Key Message 2). At last, the

capacity for environment related changes in sea conditions to affect the United States was made particularly clear by significant marine hotness wave occasions that happened along the Northeast Coast in 2012 and along the whole West Coast in 2014-2016 (Key Message 3). During these occasions, the districts experienced high sea temperatures like the normal conditions anticipated not long from now under future environment situations. Biological system changes incorporated the presence of warm-water species, expanded mortality of marine well evolved creatures, and an exceptional unsafe algal blossom, and these elements joined to deliver financial pressure in a portion of the Nation's most significant fisheries.

Marine species are delicate to the physical and substance states of the sea; consequently, warming, fermentation, deoxygenation, and other environment related changes can straightforwardly influence their physiology and performance.^{27,28,29} Differences in how species react to states of being lead to changes in their overall overflow inside a biological system as species decay or expansion in overflow, colonize new areas, or leave spots where conditions are no longer favorable.^{30,31,32,33} Such redesign of species in marine networks can bring about certain species losing assets they rely upon for their endurance (like prey or sanctuary). Different species might be presented to hunters, contenders, and illnesses they have seldom experienced previously and to which they have not advanced conduct reactions or other defenses.^{34,35,36} Climate change is making networks that are naturally unique in relation to those that as of now exist in sea biological systems. Redesign of these networks would change the environment administrations given by marine biological systems in manners that impact local economies, fisheries collect, hydroponics, social legacy, and coastline security (Figure 9.1) (see likewise Ch. 7: Ecosystems, KM 1; Ch. 8: Coastal, KM 2

Marine Ecosystem Services

A round graph shows an assortment of marine biological systems and the administrations they give to human networks. Imagined at focus are four marine biological system types found in the United States, including tropical coral reefs, ocean ice environments in the Arctic, uninhibitedly floating tiny fish, and creatures and kelp that live on the sea base. The administrations these environments give to individuals incorporate hydroponics, fishing, the travel industry, means gather, coastline assurance, and social personality.

While environment driven biological system changes are inescapable, the most evident effects are happening in tropical and polar biological systems, where sea warming is causing the deficiency of two weak natural surroundings: coral reef and ocean ice ecosystems.^{41,42} Warming is prompting an expansion in coral fading occasions around the globe,⁷ and mass dying and additionally episodes of coral illnesses have happened off the shorelines of Puerto Rico, the U.S. Virgin Islands, Florida, Hawai'i, and the U.S.- Affiliated Pacific Islands.^{43,44} Loss of reef-building corals modifies the whole reef environment, prompting changes in the networks of fish and spineless creatures that occupy reefs.^{45,46} These progressions straightforwardly sway waterfront networks that rely upon reefs for food, pay, storm insurance, and different administrations (Figure 9.1) (see likewise Ch. 27: Hawai'i and Pacific Islands, KM 4).

The degree of ocean ice in the Arctic is diminishing, further worsening temperature changes and expanding destructiveness in the Arctic Ocean (Ch. 26: Alaska, KM 1).¹⁵ The decrease in ocean ice addresses an immediate loss of significant living space for creatures like polar bears and ringed seals that utilize ice for hunting, haven, movement, and proliferation, making their overflows decline.^{47,48,49} The Arctic Ocean food web is filled by exceptional blossoms of green growth that happen at the ice edge. Loss of ocean ice is likewise moving the area and timing of these sprouts, affecting the food web up to fisheries and top hunters like executioner whales (Ch. 26: Alaska, Figure 26.4).^{50,51,52} Surface waters around Alaska have or will before long turn out to be forever undersaturated regarding calcium carbonate, further focusing on these biological systems (Ch. 26: Alaska, Figure 26.3).

Projected Impacts

Most of marine biological systems in the United States and all over the planet currently experience fermented conditions that are completely not quite the same as conditions before the modern transformation (Ch. 7: Ecosystems).^{14,53,54} Models gauge that by 2050 under the higher outflows situation (RCP8.5) (see the Scenario Products segment of Appendix 3 for additional on situations) most environments (86%) will encounter blends of temperature and pH that have until recently never been capable by present day species.⁵⁴ Regions of the sea with low oxygen focuses are relied upon to extend and to progressively encroach on waterfront ecosystems.^{15,55,56} Warming and sea fermentation present extremely high dangers for some, marine living beings, including seagrasses, warm water corals, pteropods, bivalves, and krill throughout the following 85 years.⁵⁷ Ocean fermentation and hypoxia (low oxygen levels) that co-happen in seaside zones will probably represent a more serious danger than if species were encountering either independently.⁵⁸ Furthermore, under the higher situation (RCP8.5), before this current century's over, essentially all coral reefs are projected to be encircled by fermented seawater that will challenge coral growth.⁵⁹

Changes in biodiversity in the sea are in progress, and throughout the following not many years will probably change marine ecosystems.³³ The species variety of calm environments is relied upon to increment as conventional assortments of species are supplanted by more different networks like those found in hotter water.⁶⁰ Diversity is relied upon to decrease in the hottest biological systems; for instance, one review projects that virtually all current species will be avoided from tropical reef networks by 2115 under the higher situation (RCP8.5).⁶¹

Environment instigated interruption to sea biological systems is projected to prompt decreases in significant biological system administrations, like hydroponics and fishery usefulness (Key Message 2) and sporting open doors (Figure 9.1) (Ch. 7: Ecosystems, KM 1). Eelgrass, saltmarsh, and coral reef biological systems additionally assist with shielding shorelines from waterfront disintegration by disseminating the energy in sea waves (Ch. 8: Coastal, KM 2). The deficiency of the sporting advantages alone from coral reefs in the United States is relied upon to reach \$140 billion by 2100 (limited at 3% in 2015 dollars).⁶² Reducing ozone depleting substance outflows (for instance, under RCP4.5) could diminish these aggregate misfortunes by as much as \$5.4 billion yet won't stay away from numerous biological and monetary impacts.

Open doors for Reducing Risk

Warming, fermentation, and decreased oxygen conditions will communicate with other non-environment related stressors like contamination or overfishing (Key Message 2). Preservation measures, for example, endeavors to ensure more seasoned people inside species,^{63,64} keep up with solid fish stocks (Key Message 2),⁶⁵ and set up marine secured regions can build strength to environment impacts.^{66,67,68} However, these methodologies are innately restricted, as they don't address the underlying driver of warming, fermentation, or deoxygenation. There is developing proof that numerous environment changes can be kept away from just with significant decreases in the worldwide normal air CO₂ concentration.^{57,69,70}

Arising Issues and Research Gaps

Species can adjust or adjust to changing physical and synthetic conditions, however little is had some significant awareness of species' versatile limit and regardless of whether the pace of transformation is quick to the point of staying aware of the exceptional pace of progress to the environment.^{71,72,73} Furthermore, sea biological systems are turning out to be progressively novel, implying that information on ebb and flow biological systems will be a less solid aide for future independent direction (Ch. 28: Adaptation, KM 2). Kept observing to gauge the impacts of warming, fermentation, and deoxygenation on marine environments, joined with research center and field tests to comprehend the components of progress, will empower further developed projections of future change and ID of powerful protection procedures for changing sea biological systems.

Fluctuation in sea conditions can essentially affect the circulation and usefulness (development, endurance, and conceptive achievement) of fisheries species.^{74,75} For stocks close to the warm finish of their reach, (for example, cod in the Gulf of Maine),⁷⁶ expansions in temperature for the most part lead to efficiency decays; interestingly, warming can upgrade the efficiency of stocks at the virus end of their reach, (for example, Atlantic croaker).⁷⁷ These progressions in efficiency have direct financial and social effects. For instance, warming water temperatures in the Gulf of Maine exacerbated overfishing of Gulf of Maine cod, and the ensuing low standards have brought about financial pressure in New England.⁷⁶ Reductions in the overflow of Pacific cod connected with the new hotness wave in the Gulf of Alaska prompted a failure of the fishery to collect the Pacific cod share in 2016 and 2017, and to a roughly 80% decrease in the admissible amount in 2018.⁷⁸

Changes in efficiency, enrollment, survivorship, and, sometimes, dynamic developments of target species to follow their favored temperature conditions are prompting shifts in the dispersion of numerous financially and casually important fish and spineless creatures, with most moving poleward or into more profound water with warming oceans.^{31,79,80,81,82} Shifts in fish stock conveyances can have huge ramifications for fisheries the board, fisheries, and fishing-subordinate networks. Fishers might be relied upon to move with their objective species; in any case, fishing costs, port areas, guidelines, and different elements can oblige the capacity of the fishing business to intently follow changes in the ocean.⁸³ Shifts across administration limits are now making the executives challenges in certain locales and can become trans-limit issues for fish stocks close to public boundaries (Ch. 16: International, KM 4).⁸⁴

Changes in the circumstance of occasional natural occasions can likewise affect the circumstance and area of fisheries exercises. The circumstance of pinnacle phytoplankton and zooplankton biomass is impacted by oceanographic conditions (like definition and temperature).^{85,86} Since adolescent fish endurance and development are subject to food accessibility, changeability in the circumstance of tiny fish blossoms influences fish usefulness (e.g., Malick et al. 2015⁸⁷). Movement and generating, occasions that frequently rely upon temperature conditions, are additionally changing.^{1,88,89,90} For instance, the board of the Chesapeake Bay striped bass fishery depends on a decent fishing season that is intended to abstain from getting huge egg-bearing females relocating right off the bat in the season. As temperatures rise, more females will generate right off the bat in the season, decreasing their accessibility to fishers.⁸⁹ The area and size of waterfront hypoxic zones (which are reasonable exacerbated by temperature and sea acidification)⁵⁶ can influence the spatial elements of fisheries, for example, the Gulf of Mexico shrimp fishery, with expected financial repercussions.

Projected Impacts

The productivity, distribution, and phenology of fisheries species will continue to change as oceans warm and acidify. These changes will challenge the ability of existing U.S. and international frameworks to effectively manage fisheries resources and will have a variety of impacts on fisheries and fishing-dependent sectors and communities. Projected increases in ocean temperature are expected to lead to declines in maximum catch potential under a higher scenario (RCP8.5) in all U.S. regions except Alaska (Figure 9.2).⁹² Because tropical regions are already some of the warmest, there are few species available to replace species that move to cooler water.⁶¹ This means that fishing communities in Hawai'i and the Pacific Islands, the Caribbean, and the Gulf of Mexico are particularly vulnerable to climate-driven changes in fish populations. Declines of 10%–47% in fish catch potential in these warm regions, as compared to the 1950–1969 level, are expected with a 6.3°F (3.5°C) increase in global atmospheric surface temperature relative to preindustrial levels (reached by 2085 under RCP8.5).⁹² In contrast, total fish catch potential in the Gulf of Alaska is projected to increase by approximately 10%, while Bering Sea catch potential may increase by 46%.⁹² However, species-specific work suggests that catches of Bering Sea pollock, one of the largest fisheries in the United States, are expected to decline,⁹³ although price increases may mitigate some of the economic impacts.⁹⁴ Similarly, abundance of the most valuable fishery in the United States, American lobster, is projected to decline under RCP8.5.⁶⁴ Ocean acidification is expected to reduce harvests of U.S. shellfish, such as the Atlantic sea scallop;⁹⁵ while future work will better refine impacts, cumulative consumer losses of \$230 million (in 2015 dollars) across all U.S. shellfish fisheries are anticipated by 2099 under the higher scenario (RCP8.5).⁶²

Projected Changes in Maximum Fish Catch Potential

Two guides are shown; one is inset in the base left corner of the other. The bigger guide shows North America, and the inset map shows Hawai'i and the U.S.- Affiliated Pacific Islands. The guides show how most extreme fish get potential is projected to change (in percent) along the coasts for the period 2041 to 2060, comparative with 1991 to 2010, under a higher RCP8.5 situation. Along most of coasts, decays of up to 10 percent are normal. The most articulated decays (20% or more) are anticipated for the U.S. Atlantic shore and the U.S.- Affiliated Pacific Islands. Greatest catch potential increments are anticipated for Arctic Alaska and Greenland, with Greenland bragging expands in excess of 30%.

The ramifications of the extended changes in fisheries elements on revenue^{94,96} and limited scope Indigenous fisheries remain uncertain.⁹⁷ Indigenous people groups rely upon salmon and other fishery assets for both food and social worth, and decreases in these species would present critical difficulties to certain networks (e.g., Krueger and Zimmerman 2009⁹⁸) (Ch. 15: Tribes, KM 2; Ch. 24: Northwest). Also, western Alaska people group get a critical portion of the incomes created by Alaska groundfish fisheries through the Western Alaska Community Development Quota program.⁹⁹ This program gives a significant wellspring of fishery-determined pay for these networks. Where there is solid dependence of fish stocks on explicit natural surroundings, movements might prompt fish turning out to be more focused when water temperature or different changes in sea conditions push species against an actual

limit, for example, ice or the sea bottom.⁸³ Alternatively, changes in species disseminations are probably going to drive vessels farther from port, expanding fishing costs and conceivably affecting vessel safety.¹⁰⁰ Under such conditions, there will likewise be new open doors that outcome from species turning out to be more bountiful or spatially accessible. Advance information and projections of expected changes permit fish makers to foster new business sectors and gatherers the capacity to adjust their stuff and fishing conduct to exploit new opportunities.^{84,101,102}

Open doors for Reducing Risk

A significant decrease of ozone harming substance outflows would diminish environment driven sea changes and essentially lessen hazard to fisheries.¹⁰³ Warming, fermentation, and deoxygenation interface with fishery the board choices, from occasional and spatial terminations to yearly amount setting, designations, and fish stock modifying plans. Representing these variables is the foundation of environment prepared fishery management.^{84,104,105} Modeling concentrates on show that environment prepared, biological system based fisheries the board can assist with diminishing the effects of a few expected changes and increment versatility under changing conditions.^{93,106,107} There is presently a public technique for coordinating environment data into fishery choice making,¹⁰⁵ and the North Pacific Fishery Management Council is currently straightforwardly fusing sea conditions and environment projections in its preparation and choice making.^{108,109}

Public and territorial endeavors have been in progress to describe local area weakness to environmental change and sea acidification.^{38,110,111} The advancement of environment prepared fisheries will be especially significant for beach front networks, particularly those that are exceptionally subject to fish stocks for food and for money. Focusing on and taking an interest in an expanded variety of fisheries with more species can work on monetary strength of reapers and fishing communities.^{112,113,114} Current strategies can make obstructions that block diversification,¹¹² yet more unique administration can empower better adaptation.¹¹⁵ Even without straightforwardly representing environment impacts, preparatory fishery the board and better motivators can increment financial advantages and improve resilience.^{64,65,116}

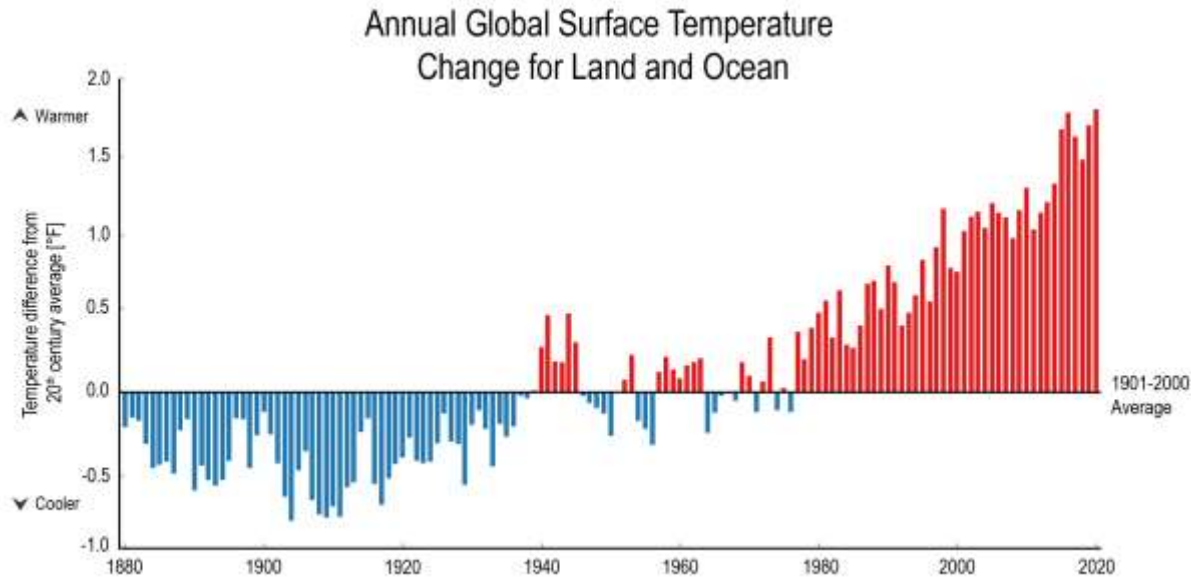
causes and effects of climate change

The planet is warming, from North Pole to South Pole. Beginning around 1906, the worldwide normal surface temperature has expanded by more than 1.6 degrees Fahrenheit (0.9 degrees Celsius)- significantly more in touchy polar locales. Furthermore the effects of rising temperatures aren't hanging tight for some remote the impacts of an unnatural weather change are showing up this moment. The hotness is softening ice sheets and ocean ice, moving precipitation examples, and setting creatures progressing.

Land and sea surface temperatures are expanding

Since the 1880's, the normal worldwide temperature has expanded by 1.8°F. Since the last part of the 1970's, normal temperatures have surpassed the last century's normal consistently.

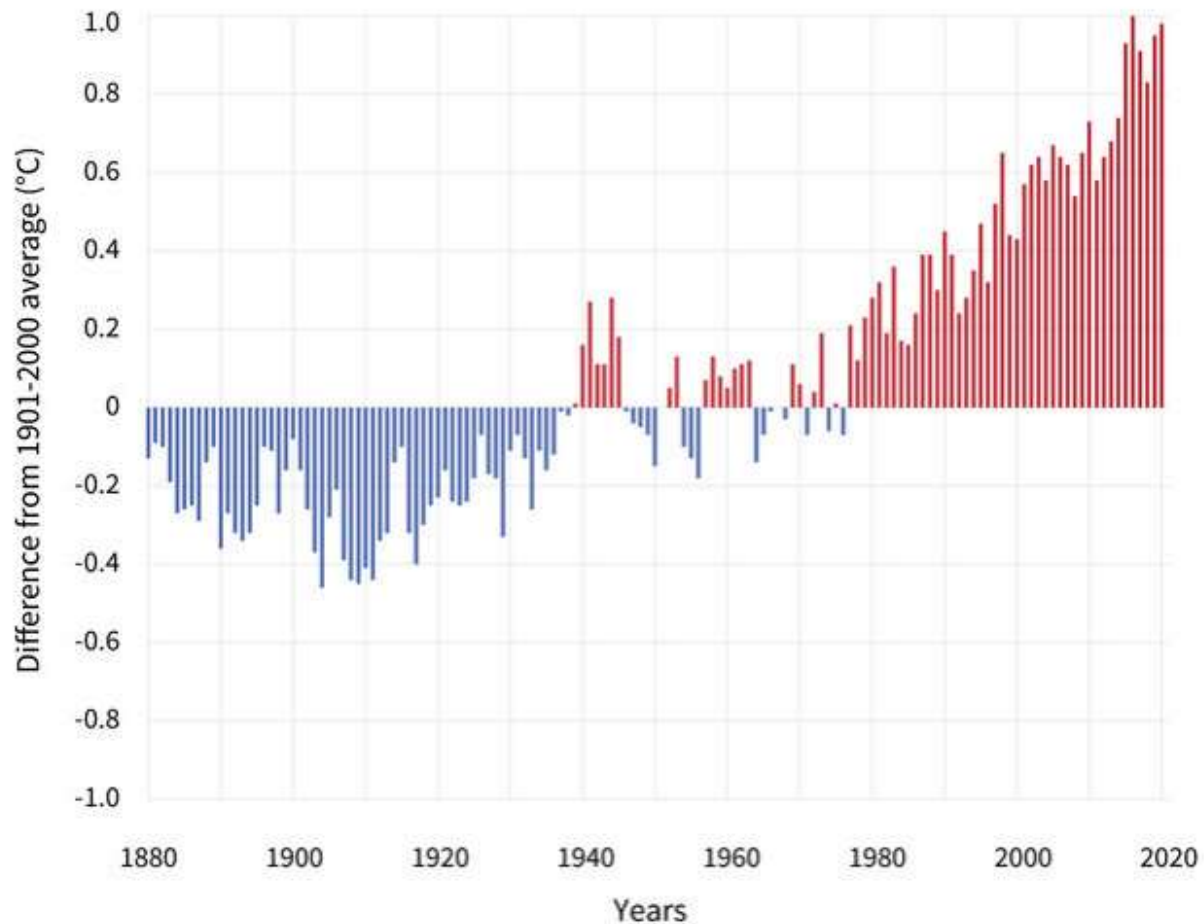
The bars on the diagram show the quantity of degrees by which the normal worldwide temperature for every year contrasts from the normal worldwide temperature during the last century (1901-2000).



Climate Change: Global Temperature

- • Earth's temperature has ascended by 0.14° F (0.08° C) each ten years beginning around 1880, and the pace of warming throughout the course of recent years is over two times that: 0.32° F (0.18° C) each ten years starting around 1981.
- • 2020 was the second-hottest year on record in view of NOAA's temperature information, and land regions were record warm.
- • Found the middle value of across land and sea, the 2020 surface temperature was 1.76° F (0.98° Celsius) hotter than the 20th century normal of 57.0°F (13.9°C) and 2.14° F (1.19° C) hotter than the pre-modern time frame (1880-1900).
- • Notwithstanding a late-year La Niña occasion that cooled a wide area of the tropical Pacific Ocean, 2020 came simply 0.04° Fahrenheit (0.02° Celsius) short of tying 2016 for hottest year on record.
- • The 10 hottest years on record have happened beginning around 2005.
- • From 1900 to 1980 another temperature record was set on normal each 13.5 years; from 1981-2019, another record was set at regular intervals.

GLOBAL AVERAGE SURFACE TEMPERATURE

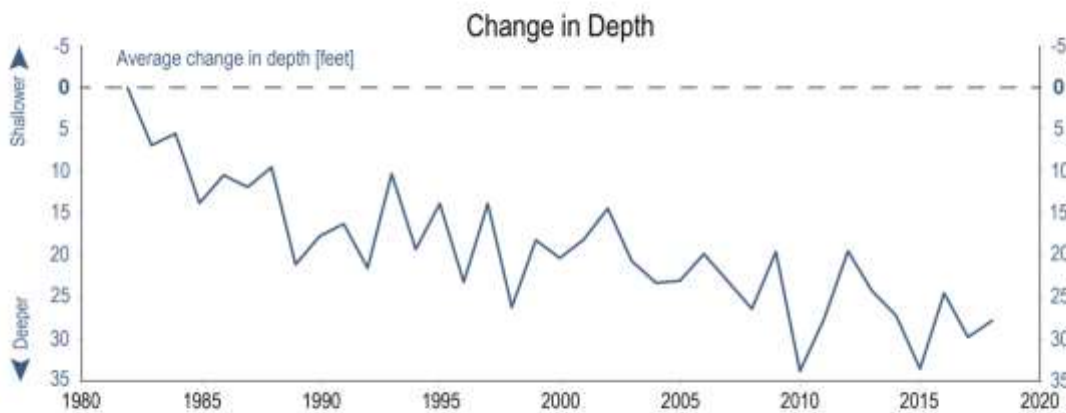
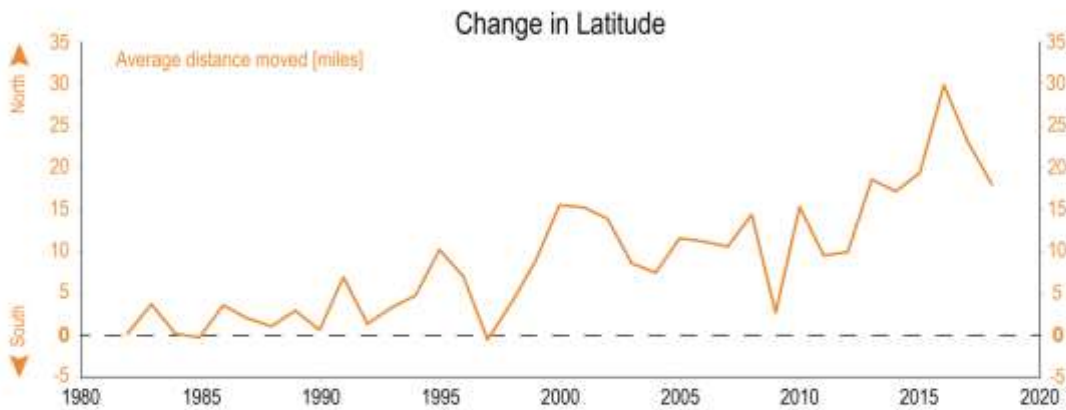


- Given the colossal size and hotness limit of the worldwide seas, it takes a gigantic measure of hotness energy to raise Earth's normal yearly surface temperature even a modest quantity. The about 2-degree Fahrenheit (1 degrees Celsius) expansion in worldwide normal surface temperature that has happened since the pre-modern time (1880-1900) might appear to be little, however it implies a huge expansion in amassed heat.
- That additional hotness is driving provincial and occasional temperature limits, diminishing snow cover and ocean ice, strengthening weighty precipitation, and changing natural surroundings ranges for plants and creatures growing some and contracting others. As the guide underneath shows, most land regions have warmed quicker than most sea regions, and the Arctic is warming quicker than most different areas

Marine species are moving to cooler waters

Changes in water temperature can influence the conditions where fish, shellfish, and other marine species live. Certain fish species normally move in light of occasional temperature changes, moving toward the north or more profound to cooler waters-in the mid year and relocating back throughout the colder time of year. As environmental change makes the seas become hotter all year, in any case, populaces of certain species adjust by moving away from regions that have become excessively warm. Along U.S. coasts, perceptions demonstrate that marine species are moving toward the north or to more profound waters that have a more appropriate temperature. As more modest prey species move their territories, bigger hunter species might follow them.

Marine Species Distribution



Average Location of Select Fish and Shellfish Species



The diagrams show the yearly change in scope (orange line; development in miles) and profundity (blue line; profundity change in feet) of 140 marine species along the northeastern U.S. coast and in the eastern Bering Sea. Changes in the focuses of biomass have been accumulated across each of the 140 species. The guides show the yearly habitats of biomass for three species (Alaska pollock, snow crab, and Pacific halibut) in the eastern Bering Sea from 1982 to 2018 (left) and for three species (American lobster, red hake, and dark ocean bass) along the northeastern U.S. coast from 1973 to 2018 (right). Spots are concealed from light to dull to show change after some time. Information sources: NOAA NMFS and Rutgers University.

About Marine Species Distribution

This pointer tracks marine creature species in view of their "focal point of biomass," which is a point that addresses the focal point of every species' dispersion by absolute biomass (or weight) as far as their geographic area (i.e., scope, longitude, and profundity). Assuming a fish populace were to move commonly toward the north, the focal point of biomass would move toward the north too. Fish are particularly portable, and consequently will quite often move their area more effectively than species ashore in light of the fact that they face less actual hindrances. Additionally, numerous marine species, particularly fish, don't have fixed settling spots or abodes that may somehow constrain them to remain in one spot.

Information for this pointer were gathered by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA NMFS), who screen marine species populaces by directing yearly overviews in which they fish the sea at standard stretches along the coast. By recording what they get at every area, researchers can ascertain every species' focal point of biomass. These information have been handled and made freely accessible by Rutgers University at: <https://oceanadapt.rutgers.edu>(link is outer).

This pointer centers around two review locales that have the most persistent and longest-running examining: the Atlantic Ocean off the northeastern U.S. coast and the eastern Bering Sea off the shore of Alaska. The upper charts show the normal change in the focal point of biomass across 140 species in these areas. Following information from numerous species is helpful, since, supposing that an adjustment of conduct or dispersion happens across an enormous scope of animal categories, it is almost certain the consequence of a more precise or normal reason. For consistency, these information are restricted to species that were recognized each year. The lower maps show these progressions topographically for three species in every district. These species were picked in light of the fact that they address an assortment of living spaces and species types (a combination of fish and shellfish) and in light of the fact that they will more often than not be genuinely plentiful. A portion of these animal varieties support significant fisheries that are assumed not to be vigorously affected by overfishing, lessening the opportunity that fishing is unduly impacting the noticed patterns. Extra detail connected with this marker can be found as a feature of the U.S. Ecological Protection Agency's Marine Species Distribution marker.

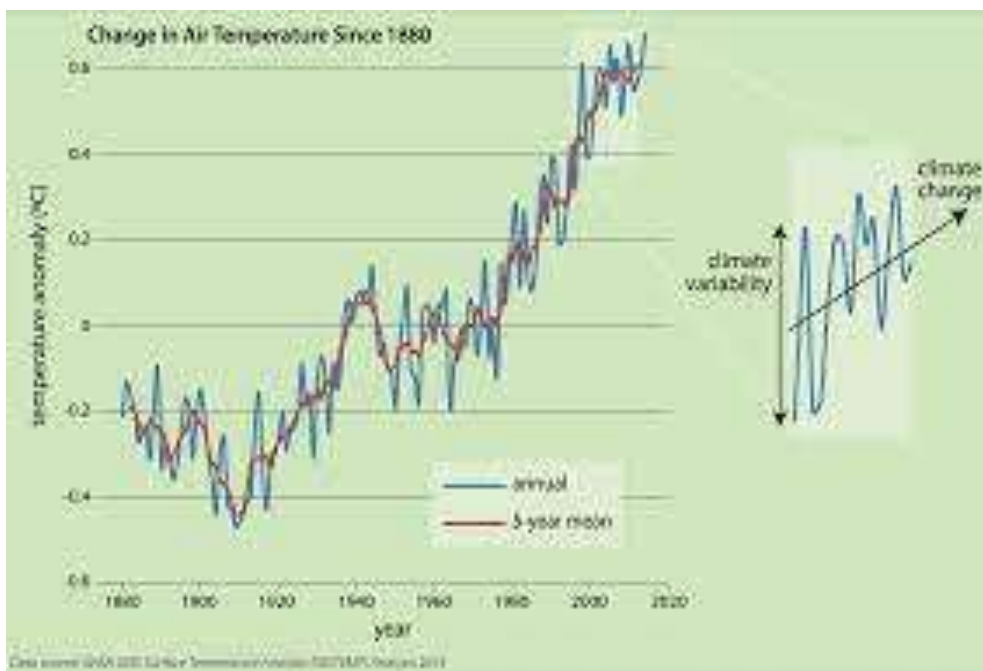
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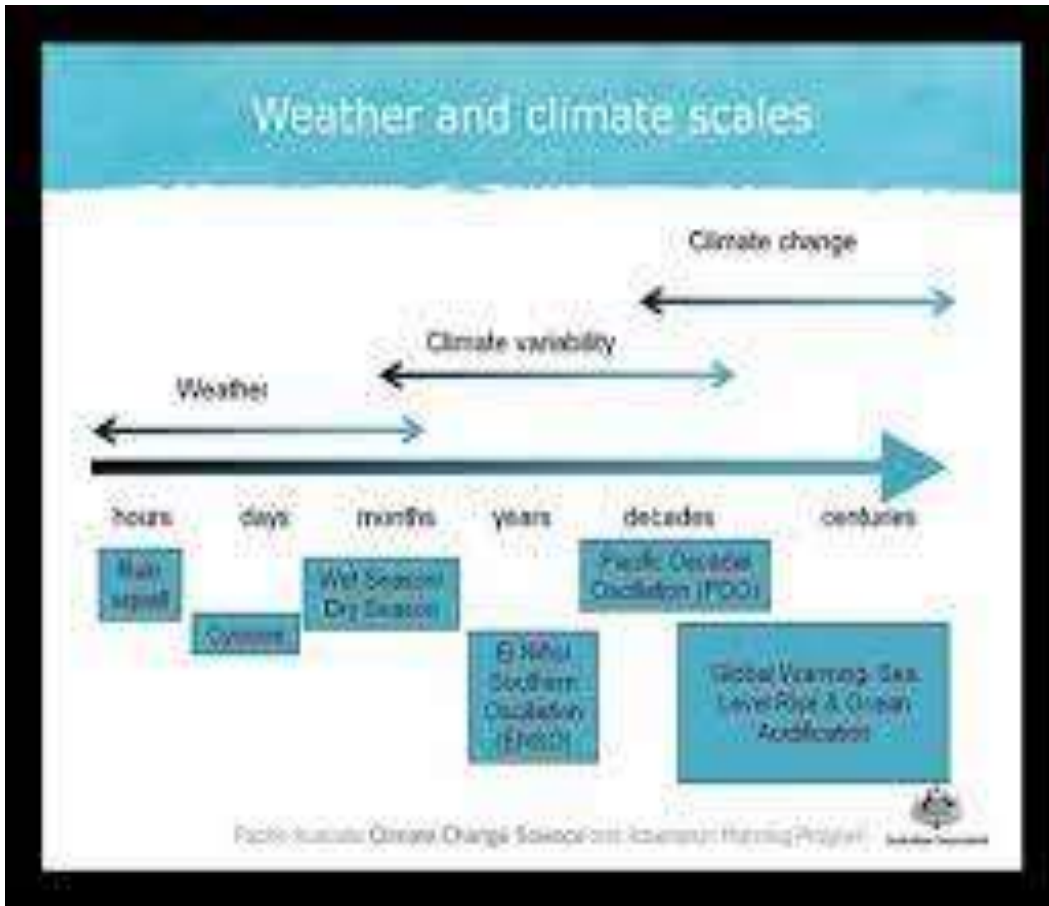
- (a) The normal focus of biomass for 140 marine fish and invertebrate species has moved toward the north by around 20 miles and moved a normal of 21 feet more profound somewhere in the range of 1982 and 2018.
- (b) Monetarily significant Atlantic species off the northeastern U.S. coast (American lobster, red hake, and dark ocean bass) have moved toward the north by a normal of 110 miles since the mid 1970s.
- (c) In the Bering Sea, Alaska pollock, snow crab, and Pacific halibut have commonly moved away from the coast since the mid 1980s and moved toward the north by a normal of 19 miles.
- (d) Water temperature isn't the main component that can make marine creature populaces shift. Connections with different species, reaping, sea flow designs, living space change, and species' capacity to scatter and adjust can likewise impact marine populaces. Thus, species may have moved toward the north because of reasons other than, or as well as, changing ocean temperatures.
- (e) Marine species are an especially decent sign of warming seas since they are delicate to environment and on the grounds that they have been read up and followed for a long time.
- (f) Marine fisheries and fishing networks are at high danger from environment driven changes in the appropriation, timing, and usefulness of fishery-related species.

- (g) Fisheries the board that consolidates environment information can assist with decreasing effects, advance strength, and increment the worth of marine assets despite changing sea conditions.

Environment variability/climate change

Environment changeability remembers every one of the varieties for the environment that last longer than individual climate occasions, though the term environmental change just alludes to those varieties that endure for a more drawn out timeframe, regularly many years or more





Acidification and Coral Reefs causes environmental change

Coral reefs are among the most different environments on the planet. This biodiversity focuses on them for preservation. The splendid corals of Sogod Bay, above, live in one of in excess of 400 marine secured regions (MPAs) in the Philippines.

MPAs help to save biodiversity by forestalling rehearses like coral collecting and explosive fishing. Sadly, there are additionally worldwide perils confronting coral reef living spaces that can't be kept by MPA limits.

The effect of sea fermentation on corals is one of these risks. Seas ingest carbon dioxide (CO₂) from the air. Carbon dioxide responds with seawater to frame carbonic corrosive. Because of expansions in fossil fuel byproducts, more CO₂ is entering the world's seas, which makes extra carbonic corrosive in the water.

The more acidic seawater turns into, the less calcium carbonate it can hold. Numerous marine species, including coral, need calcium carbonate to construct their defensive shells and exoskeletons. Without it, shells develop gradually and become powerless. Coral reefs with fragile, slow-developing corals dissolve more rapidly than they accumulate. Reefs can vanish, and the annihilation of whole species is conceivable.

Endeavors are being made in the Philippines to build consciousness of the likely effects of sea fermentation. In any case, it will make a worldwide move to diminish our fossil fuel byproducts and assist with securing the world's delicate coral reef environments.

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Unequal Climate Change Is Shifting Earth's Ecosystems

Softening Iceberg

Glacial masses are vanishing, softening quicker than they can be renewed, similar to this icy mass situated in Greenland. Softening is going on quicker in Greenland and the remainder of the Arctic than elsewhere on Earth.

- Icy masses are softening, ocean levels are rising, and tempests are more exceptional. These are a portion of the noticeable effects of an Earth-wide temperature boost, brought about by rising degrees of carbon dioxide and other ozone depleting substances that are because of warming in the air and sea.

In a 2018 report, the Intergovernmental Panel on Climate Change (IPCC) expressed that the normal worldwide temperature has ascended around 1°C (1.8°F) since pre-modern times. Assuming that the current pace of warming proceeds, this number is relied upon to almost twofold in a somewhat brief time frame, arriving at 1.5°C (2.7°F) somewhere in the range of 2030 and 2052. This could effectsly affect environments all over the planet, from tropical coral reefs to the frigid Arctic Ocean.

The Ocean Is Feeling the Heat

In excess of 80% of a worldwide temperature alteration is consumed by the sea, which has a monstrous ability to store and delivery heat. Raised ocean surface temperatures are making long haul harm coral reefs. Corals are fading and biting the dust. The IPCC report extends that up to 90 percent of coral reefs could vanish if the a dangerous atmospheric deviation arrives at 1.5°C (2.7°F). Another explanation corals are in a difficult situation is a result of sea fermentation. Higher carbon dioxide levels have moved the science of the sea, making it more acidic, and corals and shelled ocean animals experience difficulty filling in acidic conditions.

Ocean Levels Are Rising

At the point when sea water warms, it grows in volume. This is a significant reason for the ascent in ocean levels, alongside the water added to the sea by the liquefying of land-based glacial masses. The ocean level has risen a normal of 20 centimeters (8 inches) since the late nineteenth century, and examination by researchers concentrating on the most recent 25 years of satellite information observed that the sea water is rising quicker and quicker. In the event that it proceeds at its flow pace of speed increase, the ascent in ocean level by 2100 will be beyond twofold momentum gauges. Ocean level ascent prompts the obliteration of waterfront wetlands, salt bogs, and mangrove swamps, just as flooding and harm to amphibian biological systems.

Dry spell to Deluge: The Impacts of Shifting Temperature and Precipitation

Temperature and precipitation are key elements of environment. A hotter environment implies that more water vanishes from both the land and sea, and a hotter air holds a greater amount of that water. Researchers have seen that weighty precipitation occasions are expanding. Also, higher water temperature in streams, lakes, and repositories lead to bring down degrees of broken up oxygen in the water, which impacts the endurance and populaces of fish and other sea-going life.

Particularly disturbing are the super climate occasions that are going on more frequently all over the planet. Storms are inclining up in power, especially in the North Atlantic. The year 2017 was a bustling one for Atlantic storms. Storms Harvey, Irma, and Maria released their horrendous power on Texas, Florida, and Puerto Rico. A gathering of researchers utilizing high-goal PC displaying established that the primary explanation the 2017 tropical storm season was so fierce was because of warm ocean surface conditions in the North Atlantic. This prompted a better approach for anticipating what's in store every year. The power of the Atlantic typhoon season relies upon how much the tropical Atlantic warms in contrast with the remainder of the worldwide sea.

In the interim, in the western United States, the province of California has had unrivaled dry season conditions, which started in 2012. Scientists breaking down the historical backdrop of California's dry spells observed that the state is bound to encounter dry season when low precipitation consolidates with warm climate conditions. Stretched out dry spell periods can prompt a higher fire hazard. Today, enormous flames are multiple times more normal and fire season is three months longer than it was 40 years prior. Other than the undeniable loss of natural surroundings for untamed life, new examination has found that biological systems wore out by an out of control fire presently not recover and skip back to life the manner in which they used to.

Liquefying Away: What Is Happening to the World's Ice?

Snow pack, ocean ice, and icy masses are dissolving all over the planet. One of the most noticeable impacts of environmental change is the quick vanishing of icy masses. Researchers from Glacier National Park in Montana, U.S., have reported the consistent decrease of the recreation area's notorious ice sheets with photos. Glacial masses all over the planet are liquefying quicker than snow and ice can recharge them. Indeed, the Arctic is warming quicker than some other put on Earth, at a pace of a few times the worldwide normal. This has prompted a 40 percent decline in the base summer ocean ice cover beginning around 1978. At the point when ice softens in the sea, fresher and less thick water is added toward the North Atlantic, which might actually upset an example of sea course that is driven by the sinking of cool, pungent water in the North Atlantic, known as thermohaline dissemination.

The Arctic environment is particularly helpless against an Earth-wide temperature boost. Polar bears, narwhals, and walrus are altogether notable species local to the Arctic, however as the ice liquefies, they might need to adjust to a better approach for life, or hazard vanishing. In a meeting distributed in the British paper, The Guardian, marine biologist Tom Brown said, "The Arctic pecking order depends on a steady ocean ice stage and that is currently vanishing, putting the locale's untamed life in danger."

The Harmful Effects of Climate Change on Life Below the Sea

Environmental change is effectsly affecting the sea. Environmental change is an adjustment of worldwide or local environment designs, specifically, a change evident from the late twentieth century onwards and ascribed generally to the expanded degrees of carbon dioxide delivered by the utilization of petroleum derivatives. This is causing hotter water temperatures, rising ocean levels, and sea fermentation. Environmental change is obliterating the sea and making it impractical for people in the future. To start with, warming sea temperatures are harming marine life. Sea warming is the point at which the sea retains heat from ozone harming substance outflows causing the temperature of the sea water to become hotter. As indicated by National Geographic, a worldwide not-for-profit association focused on investigating and ensuring our planet, "The highest piece of the sea, down to around 2,300 feet (700 meters), has retained the main part of the additional hotness. The last scarcely any thousand feet of the sea are not invulnerable; they've sucked up one more third of that overabundance warmth. In any case, the highest skin of the ocean, down to around 250 feet, is heating up the quickest, warming up by a normal of around 0.11 degrees Celsius every ten years since the 1970s. This has upset the improvement of fish and furthermore making marine life relocate to track down conditions that they can get by in. This has left numerous region of the sea that were once loaded up with marine life to be appalling.

Additionally, sea fermentation is hurting marine life. Sea fermentation is a substance response that happens when carbon dioxide is consumed by saltwater (Pacific Marine Environmental Laboratory [PMEL]). Carbon dioxide is the aftereffect of consuming non-renewable energy sources like oil, coal, and gas. At the point when carbon dioxide is assimilated into the water it changes the seawater pH to have less calcium carbonate minerals which makes harm calcifying life forms (PMEL). Calcifying life forms are marine organic entities that utilization calcium carbonate minerals to construct their shells and external designs. Sea fermentation is making a few region of the sea be undersaturated with these minerals which are influencing the calcifying life form's capacity to make and fix their shells (PEML). This has affected types of fish, for example, salmon and whales who depend on them as a food source (PMEL). The absence of good food sources from sea fermentation straightforwardly influences the number of inhabitants in fish causing more tight limitations on business and sporting fishing

CONCLUSION

- All in all, the impacts of contamination are hurting life beneath the ocean and making it an unreasonable asset for people in the future. The hotter water temperatures, rising ocean levels, and sea fermentation from environmental change are annihilating the sea. In any case, this doesn't need to be the manner in which the story closes. On the off chance that we make the move now and follow everything science says to us we can fix this issue, so the sea is an economical asset for people in the future.
- This brings up the issue, with environmental change destructively affecting marine life, how can we go to save the assets of the sea for people in the future? In the first place, we should lessen the contamination that is causing the harm since it's the best way to fix the issue. Then, we should fix the harm that we have caused to the sea to speed the recuperation cycle. Then, at that point, we should teach the world on marine preservation so everybody can do their part to secure the sea and the marine life that calls it home. I accept assuming we follow these means and act now the sea will be smart for people in the future.

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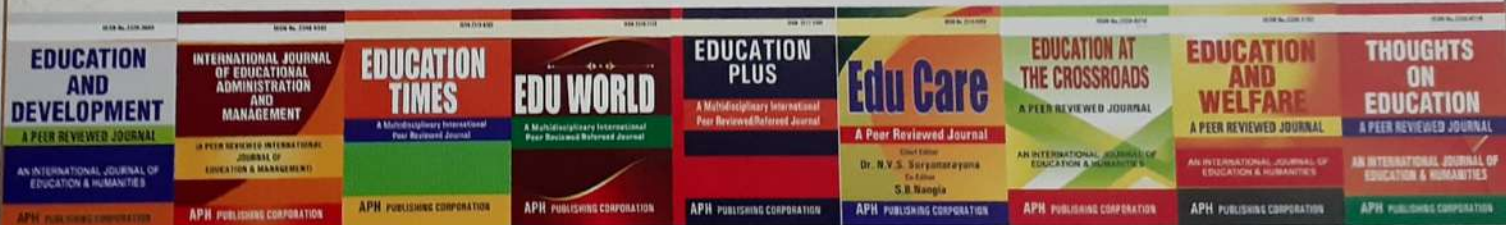
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Emerging Challenges and Strategic Implications for Indian Mutual Fund Industry in Post Covid-19 Regime

Prof. (Dr.) Angad Tiwary* and Rajeev Kumar Sinha**

ABSTRACT

Mutual fund returns have taken a sharp hit due to the Coronavirus epidemic. But history has shown that markets and mutual fund returns have always come back stronger. Mutual funds have invested just Rs 1,230 crore in stock markets during the lockdown and industry experts believe they are still waiting for a good “entry point” and maintaining high liquidity for any possible redemptions by corporate houses. Essentials for investment into mutual funds to create a strong resilient portfolio- Investment Portfolios are built to support us in difficult times and not the other way around!! Selection of category and scheme in that category is most important decision for retail investors therefore please follow the below process to Sanitise your portfolio with Smart Switch wherever required. In this research paper, economy of India and investment in mutual funds in the phase of COVID-19 is analyzed with. Further, on the basis of quantitative data and annual reports of financial institutions (like RBI, SEBI) NBFC, credit rating agency (like CRISIL, ICRA, S&P, Moody’s etc.) and business associations, bring out deliberate inference and recommend premeditated map for coating the mutual funds on escalation pathway in post-COVID-19 for the outstanding quarters of financial year 2020-2021. The financial analysis was highlighted, by assessing a lot of financial experiment likes, Sharpe Ratio, Treynor Ratio, Jensen Measures, Standard Deviation, Variance, Alpha, Beta in CAPM and Coefficient of Determination (R²).

Keywords: Mutual Fund, Average Return, Standard Deviation, Beta, Coefficient of Determination, NAV, Performance Evaluation, Sharpe Measure, Treynor Measure

INTRODUCTION

The Mutual Fund Industry recorded an AUM of INR 13,460 billion as of December 2015, a year on year growth of over 21%. The industry itself has been evolving over the years. Though, traditional primary contributor to AUM have been corporate, in 2015 retail segment emerged as the fastest growing segment in terms of contribution to AUM growth.

While a large population, which is moving towards economic wellbeing, promises for a strong customer base for financial services, it also poses a challenge to service providers in tapping resources, a large proportion of which sit beyond major cities. Mutual funds face a double challenge – firstly, increasing their share of the pie in the urban markets that have seen crowding of products and vendors, and secondly, capturing the attention of investors in sub-urban and rural markets that have been largely averse to complex financial instruments, and are often unreachable through

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traditional distribution channels. Mutual funds will have to leverage technology to drive innovation in products, and adopt alternate distribution channels to be successful in the Indian market.

<https://www2.deloitte.com/in/en/pages/financial-services/articles/mutual-fund-industry-in-india.html>

GROWTH IN MUTUAL FUND ASSETS 2020

Assets Under management (Rs.Cr.)

Mutual Funds	Dec 2019	June 2020	Change	% Change
SBI Mutual fund	352632	364,363	11,731	3.33
HDFC Mutual fund	382,517	356,183	-26,334	-6.88
ICICI Prudential Mutual fund	361,507	326,291	-35,215	-9.74
Aditya Birla Sun life mutual fund	249,926	214,592	-35,334	-14.14
Nippon India Mutual fund	204,371	180,061	-24,310	-11.90
Kotak Mahindra mutual fund	176,961	167,326	-9,636	-5.45
Axis Mutual Fund	122,867	134,316	11,449	9.32
IDFC mutual fund	104,630	101,770	-2,860	-2.73
UTI mutual fund	157,119	133,631	-23,488	-14.95
Franklin Templeton Mutual fund	126,475	79,808	-46,667	-36.90

<https://www.moneycontrol.com/mutual-funds/amc-assets-monitor>

COVID-19 PANDEMIC

Investing in capital markets has become a challenge for most investors in the wake of the novel coronavirus outbreak. The pandemic's economic impact has left existing mutual fund investors in the country spooked as well.

The recent closure of six debt mutual funds by global giant Franklin Templeton is a stark example of how Covid-19 has worsened India's credit situation, with liquidity becoming a major issue at Non-banking financial companies (NBFC), who offer many mutual fund schemes. Panicked investors are now believed to be pulling out their investments from mutual funds due to widespread negativity in markets around the globe, including India.

The widespread fear in the market, which also includes aversion from investing in mutual funds and other capital investments, has left the MF segment in deep shock.

Experts say that the **six Franklin Templeton mutual funds schemes**, which were closed were high-risk funds and other MF schemes do not face redemption risks. The Association of Mutual Funds of India (AMFI) assured investors that it was a one-off incident and that it will have no contagion effect on other credit-risk funds.

So, what does it mean for existing mutual fund investors and is it advisable to go for fresh investments in MFs? Here are three key points you need to know

STATUS OF MUTUAL FUNDS INDUSTRY IN INDIA FOR THE PERIOD APRIL 1, 2020 - NOVEMBER 30, 2020 (INR in crore)

<https://www.sebi.gov.in/statistics/mutual-fund/mf-investment-objectives.html>

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
A	Open ended Schemes					
I	Income/Debt Oriented Schemes					
1	Overnight Fund	116364	2104639.35	2128913.02	-24273.67	57514.60
2	Liquid Fund	2164701	2519811.65	2489861.98	29949.67	375646.63
3	Ultra Short Duration Fund	733257	126788.71	98375.85	28412.87	104930.96
4	Low Duration Fund	1134891	189117.05	125051.84	64065.21	150945.44
5	Money Market Fund	458938	173602.96	134561.87	39041.09	99003.22
6	Short Duration Fund	612061	114421.64	62556.04	51865.58	153019.42
7	Medium Duration Fund	291821	9610.93	11708.32	-2097.40	27375.56
8	Medium to Long Duration Fund	121753	4094.73	2706.90	1387.83	11980.95
9	Long Duration Fund	30569	1235.48	536.39	699.09	2516.95
10	Dynamic Bond Fund	286866	11946.23	6232.40	5713.83	25061.81
11	Corporate Bond Fund	639905	96923.39	37458.69	59464.70	149604.31
12	Credit Risk Fund	372020	1902.05	30001.45	-28099.40	28545.08
13	Banking and PSU Fund	358114	96709.36	52928.80	43780.57	123449.37
14	Gilt Fund	217987	19583.62	9544.28	10039.34	20301.89
15	Gilt Fund with 10 year constant duration	57593	937.31	443.17	494.14	1525.16
16	Floater Fund	204728	47687.30	27199.59	20487.71	55707.62

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
	Sub total - I (1+2+3+4+5+6+7+8+9+10+11+12+13+14+15+16)	7801568	5519011.76	5218080.59	#####	1387128.97
II	Growth/Equity Oriented Schemes					
17	Multi Cap Fund	9495460	20950.79	27808.76	-6857.96	160052.73
18	Large Cap Fund	10316712	24380.65	27681.11	-3300.46	163104.47
19	Large & Mid Cap Fund	4834111	10630.38	9862.81	767.57	66391.80
20	Mid Cap Fund	6441713	12727.49	15036.33	-2308.83	100696.95
21	Small Cap Fund	4959637	8915.37	9566.42	-651.06	59209.50
22	Dividend Yield Fund	448580	165.14	404.19	-239.05	4409.67
23	Value Fund/Contra Fund	3886059	5189.96	9434.16	-4244.20	56573.12
24	Focused Fund	3753444	11693.74	9407.46	2286.28	60524.70
25	Sectoral/Thematic Funds	7029274	15757.82	13598.88	2158.93	75594.15
26	ELSS	12385407	8176.64	6934.57	1242.08	110953.34
	Sub total - II (17+18+19+20+21+22+23+24+25+26)	63550397	118587.97	129734.68	-11146.69	857510.44
III	Hybrid Schemes					
27	Conservative Hybrid Fund	377917	1727.37	2670.79	-943.42	11826.38
28	Balanced Hybrid Fund/Aggressive Hybrid Fund	4918476	7984.85	24197.66	-16212.81	118310.29

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
29	Dynamic Asset Allocation/Balanced Advantage	2674916	11275.48	15685.79	-4410.31	94088.57
30	Multi Asset Allocation	721631	2564.93	2271.40	293.53	13533.38
31	Arbitrage Fund	397903	49915.58	35593.61	14321.98	62781.39
32	Equity Savings Fund	298466	759.54	3866.67	-3107.14	10032.17
	Sub total - III (27+28+29+30+31+32)	9389309	74227.75	84285.91	-10058.17	310572.18
IV	Solution Oriented Schemes					
33	Retirement Fund	2546069	1173.85	923.82	250.03	11407.90
34	Childrens' Fund	2890935	473.34	220.27	253.07	9866.12
	Sub total - IV (33+34)	5437004	1647.19	1144.10	503.10	21274.02
V	Other Schemes					
35	Index Funds	775616	6388.37	4785.86	1602.50	14301.14
36	GOLD ETFs	838149	5871.13	1161.52	4709.61	13239.88
37	Other ETFs	3248481	60521.21	39247.70	21273.50	233668.70
38	Fund of funds investing overseas	464020	4495.71	1123.34	3372.37	7641.97
	Sub total - V (35+36+37+38)	5326266	77276.41	46318.43	30957.99	268851.70
	Total A-Open ended Schemes	91504544	5790751.09	5479563.71	#####	2845337.31
B	Close Ended Schemes					

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/ Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
I	Income/Debt Oriented Schemes					
i	Fixed Term Plan	521582	76.44	30110.07	-30033.63	118458.77
ii	Capital Protection Oriented Schemes	59827	0.00	1867.84	-1867.84	2628.95
iii	Infrastructure Debt Fund	89	0.00	0.00	0.00	2328.01
iv	Other Debt	18947	0.00	2875.94	-2875.94	779.43
	Sub total (i+ii+iii+iv)	600445	76.44	34853.85	-34777.41	124195.16
II	Growth/Equity Oriented Schemes					
i	ELSS	457228	0.00	150.49	-150.49	4438.92
ii	Others	1113484	0.00	3202.03	-3202.03	26547.92
	Sub total (i+ii)	1570712	0.00	3352.53	-3352.53	30986.84
III	Other Schemes	0	0.00	0.00	0.00	0.00
	Total B -Close ended Schemes	2171157	76.44	38206.38	-38129.93	155181.99
C	Interval Schemes					
I	Income/Debt Oriented Schemes	3632	3.61	43.75	-40.14	385.14
II	Growth/Equity Oriented Schemes	0	0.00	0.00	0.00	0.00
III	Other Schemes	0	0.00	0.00	0.00	0.00
	Total C -Interval Schemes	3632	3.61	43.75	-40.14	385.14

Sr. No.	Scheme Category	No. of Folios as on November 30, 2020	Funds mobilized for the period (Since April 01, 2020 to November 30, 2020)	Repurchase/Redemption for the period (Since April 01, 2020 to November 30, 2020)	Net Inflow (+ve)/ Outflow (-ve) for the period (Since April 01, 2020 to November 30, 2020)	Net Assets Under Management as on November 30, 2020
	Grand Total (A+B+C)	93679333	5790831.14	5517813.83	#####	3000904.44
	Fund of Funds Scheme (Domestic)	1015460	10253.76	3697.60	6556.16	21934.62

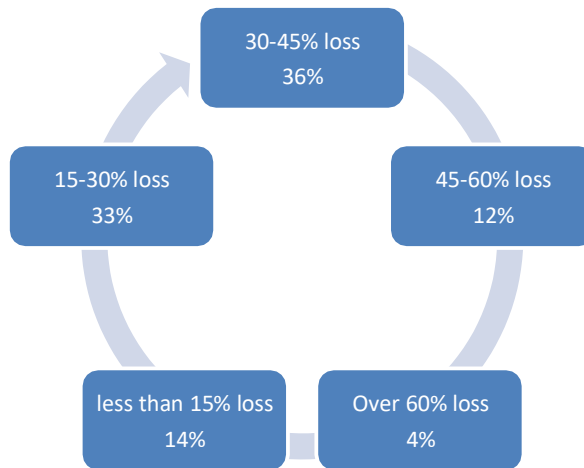
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STRATEGY OVER PANIC

The recent closure of six capital debt funds of Franklin Templeton has negatively impacted sentiments of mutual fund investors. Panicked investors are now looking to pull out their money in existing mutual fund schemes.

Experts say a decision made in panic may not be accurate and that it is better to strategise at the moment. Part of the strategy involves equating credit risk and investing in safer mutual fund schemes.

However, the Templeton episode has not gone down well with mutual fund investors, who usually prefer safety over gains.



Corona virus impact on equity: buy, sell or stay
How much have equity investors lost in 2020
(The Economics Times)

It is worth mentioning that the six high-yield debt schemes packed up by Templeton were long overdue and early signs of distress in these funds were seen as early as the IL&FS crisis in 2018. The funds also suffered due to the gradual economic slowdown and were later amplified by Yes Bank fiasco.

Since Friday, mutual fund houses in India have jumped in to reassure investors -- which include corporates and individuals -- that the entire debt fund market is not at risk, and urged them to stay patient and invested.

AMFI also told investors that debt schemes of most mutual funds have “superior credit quality” and “fairly liquid”. It also called it an isolated event.

Experts have also assured that there is sufficient liquidity in the system. However, they have asked investors to take a different approach to deal with challenges in a virus-affected market.

Experts have advised fundholders to assess investment portfolios and go for options that are relatively safer with little or no exposure to low-rated securities offering high yields.

RBI'S ASSURANCE

The Reserve Bank of India (RBI) has stepped in to **support stressed mutual funds** with a special liquidity window of Rs 50,000 crore, reassuring investors that it is actively monitoring the situation and that there is no reason to worry.

Its decision came just a couple of days after Franklin Templeton decided to wind up its six mutual fund schemes.

RBI's instant action is an assurance that the central bank is monitoring the situation proactively and it would introduce further measures to give mutual funds adequate liquidity support.

Many experts had already recommended RBI to offer additional liquidity support to the mutual fund houses, who are facing major liquidity challenges amid the Covid-19 pandemic.

While fresh investors should maintain caution while investing in any new scheme, those already invested need to equate their portfolios and make informed choices.

Only high-risk capital debt funds, which hold low rated securities will be impacted. Therefore, checking the credit risk profile can be good practice for those who want to invest.

TRIM THE RISK

While fund managers have assured investors to stay patient for the time, the mutual fund houses, a bulk of which are NBFCs, are currently facing major liquidity stress due to delinquencies amid the Covid-19 lockdown.

The situation in the MF space could worsen if there are more job losses or business shutdowns. As it would threaten more defaults at NBFCs.

These financial institutions will be left with little liquidity in case of big defaults in future and may be forced to delay or default on payments made to investors of debt fund schemes. Those funds which invest in low-rated high yields are at most risk, say experts.

UNION BUDGET PROPOSALS 2020

Mutual fund income over ₹5,000 will now be subject to 10 per cent tax deducted at source (TDS), according to a proposal by the Ministry of Finance under the Union Budget 2020. According to a proposal included in Clause 80 of the Finance Bill 2020, the Ministry has proposed to insert a new section, 194K, below 194J of the existing Income Tax Act, proposing to tax income earned from mutual funds at 10 per cent.

MUTUAL FUND INVESTMENT: HOW BUDGET 2020 WILL IMPACT MUTUAL FUND INVESTORS

<https://www.financialexpress.com/money/mutual-funds/mutual-fund-investment-how-budget-2020-will-impact-mutual-fund-investors/1860756/>

While some announcements made by FM Nirmala Sitharaman are being welcomed by mutual fund investors, there are a few new decisions that can have a negative impact. Let's take a closer look at these moves.

Mutual Fund Investment: How Budget 2020 will impact mutual fund investors

While some announcements made by FM Nirmala Sitharaman are being welcomed by mutual fund investors, there are a few new decisions that can have a negative impact. Let's take a closer look at these moves.

Budget 2020 has proposed to introduce Tax Deduction at Source (TDS) at 10% on the dividend income above Rs 5000 before it is distributed to the investors.

Budget announcements usually have some bearing on how we strategise to reach our financial goals through our investments. However, Budget 2020 is likely to have a far-reaching impact on mutual fund investments for a host of reasons. While some announcements made by Finance Minister Nirmala Sitharaman are being welcomed by mutual fund investors, there are a few new decisions that can have a negative impact. Let's take a closer look at these moves.

New tax regime: A positive for mutual fund investments

Budget 2020 introduced a new tax system effective from FY20-21 wherein taxpayers can benefit from lower slab rates by forgoing a majority of tax-deduction benefits to lower their tax burden. Taxpayers will also have the option to continue with the existing tax system. However, the new tax regime would allow taxpayers to invest freely in instruments of their choice without having to worry about tax-saving pressures, and they can explore mutual fund products that don't necessarily save taxes. In the existing tax regime, investors need to invest in tax-saving instruments, wait for the lock-in periods to get over to use their funds and, at times, compromise with ROI for saving taxes. Tax-saving compulsions often force investors to pick instruments that aren't necessarily in their financial interest. In the new tax regime, they can simply invest to create wealth as per their risk appetite, financial goals, and liquidity needs. So, the new tax system will suit such investors who don't like to be stuck with long lock-ins and forced investments to save taxes.

TDS on mutual fund gains: A negative for mutual fund investments

Budget 2020 has proposed to introduce Tax Deduction at Source (TDS) at 10% on the dividend income above Rs 5000 before it is distributed to the investors. So, if the investor falls in higher tax slab, they would now adjust the TDS payment from their tax obligation while filing the tax returns, whereas if the investor falls in a lower tax slab, they may be required to claim the TDS refund by filing their tax returns, which is an inconvenience. Dividend-generating investments are normally suited to older investors. Young investors who don't need to rely on the liquidity provided by dividends should opt for growth schemes for faster appreciation of their wealth.

DDT in the hand of mutual fund investors: A mixed impact

In the existing system, the dividend on equity mutual funds and debt funds is taxed at 11.65% and 29.12%, respectively, while distributing it to the shareholders. However, in Budget 2020, it has

been proposed to levy DDT in the hands of the mutual fund investors as per their applicable tax rate. So, for example, if the investor falls in the 30% tax bracket, they will pay tax on the dividend at a 30% rate. So, when the DDT becomes applicable in the hands of investors, those in higher tax brackets will pay more in taxes. At the same time, investors in lower tax brackets will pay lesser tax. This announcement will have a mixed impact on investors.

Now, it would be advisable for investors to switch their existing mutual fund investments to growth options to save DDT outgo. Similarly, instead of the dividend payout option, investors can save tax by opting for a systematic withdrawal option (after considering the exit load, if any) to avoid TDS and DDT.

There was confusion in the minds of many investors after the budget announcement that TDS will also be applicable to the capital gains on fund redemption. However, the government has clarified that the 10% TDS will be applicable only on the dividend paid by the mutual funds and not on capital gains.

As mentioned, the TDS proposed in Budget 2020 can be claimed back if your tax liability is lower than the deducted amount, and the DDT in the hand of investors will impact them if they depend on regular dividend income. So mutual fund investments are at a crossroad, and it's time for you to make your choice of either investing in schemes with dividends or schemes with growth.

Mutual Funds Capital Gains Taxation for FY 2019-2020

A capital gain refers to the difference between the value at which an investor purchased the units of a mutual fund scheme and the value at which he/she sold or redeemed them. For instance, Mr. X invested Rs. 1 lakh in a mutual fund scheme on April 1, 2016, and the value of his investment on April 1, 2019, is Rs. 1.5 lakh. Then, he has earned a capital gain of Rs. 50,000.

The mutual funds capital gains taxation depends on the type of mutual fund scheme and the investment tenure. On the basis of investment tenure, there are two types of capital gains tax – Short Term Capital Gains Tax (STCG) and Long Term Capital Gains Tax (LTCG).

Type of Schemes	Particulars	Short Term capital gains tax	Long term capital gain tax
Equity oriented Schemes	Holding Period	Up to 12 months	More than 12 months
	Tax rate	15 %	10%
Non-Equity oriented Schemes	Holding Period	Up to 36 months	More than 36 months
	Tax rate	Income tax Slab rate of investor	

<https://www.paisabazaar.com/mutual-funds/tax-benefit-of-mutual-fund/>

Long-term capital gains on equity mutual funds are exempt up to Rs. 1 lakh per annum. For example, if your long-term capital gain in FY 2018-19 is Rs 1.5 lakh, only Rs. 50,000 will be taxable as LTCG.

Mutual Funds Dividends Taxation for FY 2020-2021

Dividend is a part of the profit that a company earns and distributes amongst its investors. Dividend Distribution Tax is a liability that a company must pay to the government according to the dividend paid to the company's investors.

As of FY 2019-20, DDT is payable to the government not by the investor but by the fund house managing the mutual fund. In most schemes, DDT rate is around 30%. However, according to the recent budget for FY 2020-21, Dividend is taxable at the hands of the investor and not the fund house. Hence, as it stands DDT has been abolished under the new tax regime.

Tax Benefit of Mutual Funds

Equity-Linked Savings Scheme (ELSS) is a type of equity fund and the only mutual fund scheme which qualifies for a tax deduction of Rs. 1.5 lakh per annum under Section 80C of the Income Tax Act. An ELSS comes with a lock-in period of 3 years which means an investment made in it cannot be withdrawn before 3 years.

Securities Transaction Tax (STT)

A Securities Transaction Tax (STT) is applicable at the rate of 0.001% on equity oriented mutual funds at the time of redemption of units. An investor is not required to pay STT separately as it is deducted from the mutual fund returns.

List of Top tax Saving (ELSS) Mutual Funds for FY 2020

Fund name	3 years return	5 years return
Mirae Asset Tax saver	19.82%	-
Axis Long term Equity fund	19.21%	13.20%
Tata india Tax saving Fund	17.50 %	13.76%
Motilal Oswal Long term equity funds	17.13%	
Inversco India Tax plan	15.52%	11.98%
DSP tax saving Fund	15.25%	12.08%
Aditya Birla sun life tax relief 96	14.83%	11.54%
Kotak tax saver	14.57%	11.03%

<https://www.paisabazaar.com/mutual-funds/tax-benefit-of-mutual-fund/>

Dividend Distribution Tax (DDT) in the hand of mutual fund investors

Investors	Resident /Individual/HUF	Domestic Company	NRI
Dividend			
All Schemes	Tax Free in the hands of Investors		
Tax on distributed income (payable by the scheme) rates			

Investors	Resident /Individual/HUF	Domestic Company	NRI
Equity oriented scheme	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess	10%+12% Surcharge+ 4% Cess
	11.648 %	11.648 %	11.648 %
Infrastrure debt funds	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	5%+12% Surcharge+4% Cess
	29.12%	34.944%	5.824%
Other than equity oriented scheme and IDF	25%+12% Surcharge+4% Cess	30%+12% Surcharge+4% Cess	25%+12% Surcharge+4% Cess
	29.12%	34.944%	29.12%

Source: taxrockon 2018-19/ FY 2018-19

ECONOMIC OUTLOOK FOR FY 2020-21

Goldman Sachs has revised India's GDP forecast for the ongoing financial year as the global investment bank expects economic activity in Asia's third-largest economy to normalise faster than estimated, provided an effective Covid-19 vaccine is available. The global financial services provider expects India's gross domestic product to contract 10.3% in 2020-21 against a contraction of 14.8% forecast according to a report published on Tuesday. GDP growth is estimated at 13% in FY22 compared with 15.7% projected

"We expect that the broad-based availability of an effective vaccine in India could allow containment policies and mobility to normalise by mid-2022," said Jonathan Sequeira and Andrew Tilton, economists at Goldman Sachs. "This should allow a meaningful activity rebound in 2021, particularly in consumer-facing services sectors, where activity remains significantly below pre-covid levels."

The pace of rebound, however, will be restrained by some economic scarring and factors such as a weak labour market, the hit to private sector incomes and balance sheets, tighter credit supply conditions and a limited impetus from fiscal policy, the economists

India's fiscal deficit is estimated at 8% of the GDP in FY21 and is expected to narrow to 6.5% of the GDP in FY22, according to Goldman Sachs. The central government's plus states' fiscal deficit is estimated to narrow from 11.5% to 9.5% of the GDP in the same duration, the report said. "This suggests that the total fiscal policy contribution to growth will decline further in FY22."

Inflation as measured by the Consumer Price Index is estimated at 6.2% in FY21, and is likely to decline to 4.6% in FY22 as food prices fall on easing supply restrictions, a benign monsoon, and favourable base effect, according to the report. Core inflation could also moderate given low manufacturing capacity utilisation and rupee appreciation.

<https://www.bloombergquint.com/economy-finance/goldman-sachs-raises-india-gdp-forecast-for-2020-21>

NDIAN STOCK MARKET OUTLOOK

Why Stock Markets Are Booming When Economic Chips Are Down

The disconnect between rallying stock prices and gloomy economic data is probably the most noticeable in India, and it has left a lot of people searching for answers. While the Indian stock market has been rising despite Covid pandemic, the economic data paints a grim picture for India. It is also becoming apparent that people at the top of the economic pyramid are making millions, while many others are losing jobs due to the crashing economic fundamentals.

Markets in India are reflecting worldwide trends. Reports say that almost 46 million Americans filed for unemployment during March-June 2020. The US GDP tanked to a negative 4.8% in the first quarter, the first negative reading since Q1 of 2014. However, the equity market showed a different story. Between March 18-June 17, the US NASDAQ Composite rose by 40%. India witnessed a similar situation.

The stock market movements have never mirrored economic downturn or recovery. Stock markets are always futuristic in nature. In simple terms, this means that the stock markets always crash at the slightest indication of economic downturn and latches on any positive sentiment/news to move towards recovery. This is what has happened during the current bullish recoveries in Indian, US and European stock markets.

Indian NSE crashed and touched 7500 levels on 23 March on the indication of Covid lockdown in the country. It has historically been observed that companies perform well during March, the last quarter of the Indian financial year. Hence, the markets knew that there were no fundamental issues in the current stock market indices/pricing and touched its peak during early part of the year. However, it crashed much before the pandemic reached its peak.

Countries across the world announced lockdowns. In India, the first lockdown was imposed on March 25. The lockdown had a severe impact on the first quarter of the Financial Year 2020-21, and it was projected that India will perform poorly in April-June and July-September quarter due to drop in manufacturing and service activities. However, what followed was completely ironical as Indian stock markets witnessed a rise. So was the case with Dow Jones, it moved towards V-shaped recovery at the back contracted GDP estimates, falling economic data and other KPI's.

The above only confirms that markets do not react on immediate news unless it is a surprise event. What this means is that the crashed indices during March already factored in the bad news. The V-shaped recovery that followed was not due to the expected economic fallout but due to the fiscal stimulus packages, lockdown measures etc. announced during this time.

However, the short-term bullish reversal and sudden spurts of correction are not helping either. To understand this and to anticipate the future outlook, let us first evaluate the historical reference points. These historical reference points will show how the markets reacted in the earlier economic downturns.

During the 2008 financial crisis, Indian unemployment rate was 5.3% whereas US unemployment rate was 9.3%. Indian GDP had a positive growth rate of 3.09% whereas US had a negative growth rate of -2.5%. During this time, BSE Sensex reached the 21,000-mark on 9 January 2008 and it reached 8200 level on 9 March 2009. This means that the market took 425 days to achieve its bottom during this period. During these 425 days, the market did have few short-term bull runs.

Let us refer to the Great Depression in 1929 and evaluate the US indices in this example. US Dow Jones stood at 381 on 3 September 1929 and touched 41 on 8 July 1932. Hence, it took the markets almost 2 year and 10 months to touch its bottom. Again, during this period, the indices saw short-term bull runs.

Let us compare these KPI's with the current economic indicators. In 2020, both Indian and US unemployment rate touched 23% and 13% respectively whereas the GDP has been projected to contract by 4.5% and 7% respectively. This shows that the economic indicators are worse than 2008.

Hence, if the past holds true, these indices cannot rebound within four months. So does that mean that the recovery only a bull trap? Well, historical indicators can offer guidance but cannot be completely relied upon as the present situation is slightly different. It is important to understand that: 1) With every recession and corresponding economic recovery, markets gain more resilience, and 2) the current economic downturn is primarily due to the pandemic. Any positive news such as a vaccine or drug, or a decrease in Covid cases can create optimism and recovery trend. This is different from the earlier crisis where several other variables affected the economy.

We also need to be mindful that a major part of this recovery rally has been caused due to the influx of liquidity in the economy. This liquidity is not backed by earning potentials and may cause a reversal pattern if the earnings don't follow and match the liquidity infused.

Lowering of interest rates by both the Fed and the RBI has also helped maintain this momentum.

Historical trend suggests that we are still in a bear phase since we have never experienced such a fast recovery during the past economic downturns. However, the current economic recovery factors, government intervention and medical advancements suggest that the current downturn will not last like the earlier ones.

It is equally important to have a sector specific and a stock specific view rather than assuming that the economic recessionary trend has completely reversed. For e.g- hospitality or entertainment industry will take time to revive. Similarly, banking and financial sector may have higher NPAs that may impact its future results. Hence, it is imperative to adopt a combination of fundamental and technical parameters and not just a number driven technical view.

<https://www.outlookindia.com/website/story/opinion-why-are-stock-markets-booming-when-economic-chips-are-down/358511>

OBJECTIVES

The objectives of the paper are given below:

- (a) To analyze the current economic scenario induced by COVID virus and the economic outlook that is likely to unfold for the remaining period of financial year 2020=21.
- (b) To analyze the mutual fund investments in India during the month Nov' 2020 (lockdown periods 1 and 2) as compared to the pre-pandemic period (Nov, 2019).
- (c) To draw strategic implications for mutual fund investments in the post pandemic period (remaining period of financial year 2020-21).

METHODOLOGY

The study being analytical in nature the data available at the website of Association of Mutual Funds in India (AMFI) has been used to compute the following for the two data points 2019 Nov, 2020 Nov. Composition of Mutual Fund Assets - Scheme wise, Investor Type, Scheme wise and Investor Type, Investors' Holdings, Investing Methods (Direct and Distributor oriented) – Investor Type and Scheme wise Other variables used for study are – Growth in Assets, Average Ticket Size Average Holding period of Investment The above analyses are presented in a series of Tables, which are self-explanatory.

ANALYSIS OF MUTUAL FUND INVESTMENTS IN NOV 2019 AND NOV 2020

Net AUMs as on November 30, 2020, increased for both, debt funds and equity funds. The inflows for debt mutual funds nearly halved in November 2020 from the previous month while outflows from equity funds continue to rise

SCHEME WISE COMPOSITION OF MUTUAL FUND ASSETS

The proportionate share of equity-oriented schemes is now 41.1% of the industry assets in February 2019, up from 40.8% in February 2018. The proportionate share of debt-oriented schemes is 29.1% of industry assets in February 2019, down from 35.1% in February 2018.

Total Assets (Rs. Trillion)

Months (COVID-19 effects)	Total Assets (Rs. Trillion)
Nov'19	26.94
Dec'19	27.26
Jan'20	28.19
Feb'20	28.29
Mar'20	24.71
April'20	23.53
May'20	24.28
June.20	26.07
July'20	27.28
Aug'20	27.28
Sept'20	27.74
Oct'20	28.34
Nov'20	29.83

Assets are measured as average assets for the month. Rs. Trillion is equivalent to Rs. Lakh Cr
Assets managed by the Indian mutual fund industry has increased from Rs. 26.94 trillion in November 2019 to Rs. 29.83 trillion in November 2020. That represents 10.73% increase in assets over November 2019

Scheme wise Composition of Assets

Months	Debt oriented scheme (in %)	Equity oriented scheme (in %)	ETFs & FoFs (in %)	Liquid/Money market (in %)
Nov'19	28.4	42.5	6	22.7
Dec'19	28.8	42.3	6	22.5
Jan'20	28.6	42.0	7	22.8

Months	Debt oriented scheme (in %)	Equity oriented scheme (in %)	ETFs & FoFs (in %)	Liquid/Money market (in %)
Feb'20	29.0	42.1	7	22.0
Mar'20	31.7	39.7	7	21.8
April'20	31.0	38.8	7	23.3
May'20	29.3	38.9	7	24.9
June.20	28.5	39.4	7	25.0
July'20	30.1	39.3	7	23.1
Aug'20	30.3	40.1	8	21.6
Sept'20	31.0	40.0	8	20.9
Oct'20	32.1	39.6	8	20.1
Nov'20	32.8	39.7	8	19.3

<https://www.amfiindia.com/Themes/Theme1/downloads/home/industry-trends.pdf>

The proportionate share of equity-oriented schemes is now 39.7% of the industry assets in November 2020, down from 42.5% in November 2019. The proportionate share of debt-oriented schemes is 32.8% of industry assets in November 2020, up from 28.4% in November 2019.

Investor Type-wise Composition of Mutual Fund Assets

Individual investors now hold a lower share of industry assets, i.e. 51.5% in November 2020, compared with 53.7% in November 2019. Institutional investors account for 48.5% of the assets, of which corporates are 94%. The rest are Indian and foreign institutions and banks.

Months	Individuals (in %)	Institutions(in %)
Nov'19	53.7	46.3
Dec'19	53.4	46.6
Jan'20	52.7	47.3
Feb'20	53.7	47.3
Mar'20	52.2	47.8
April'20	52.1	47.9
May'20	50.7	49.3
June.20	50.5	49.5
July'20	52.9	47.1
Aug'20	51.5	48.5
Sept'20	52.0	48.0
Oct'20	51.7	48.3
Nov'20	51.5	48.5

Institutions include domestic and foreign institutions and banks. HNIs are investors who invest with a ticket size of Rs.2 lakhs or above.

Investor Categories Across Scheme Types

Equity-oriented schemes derive 88% of their assets from individual investors (Retail + HNI) Institutional investors dominate liquid and money market schemes (84%), debt-oriented schemes (61%) and ETFs, FOFs (91%).

Institutions include domestic and foreign institutions and banks. HNIs are investors who invest with a ticket size of Rs. 2 lakhs or above. Equity-oriented schemes include equity and balanced funds.

Composition of Investors' Holdings

Individual investors primarily hold equity-oriented schemes while institutions hold liquid and debt-oriented schemes. 68% of individual investor assets are held in equity-oriented schemes. 75% of institutions assets are held in liquid / money market schemes and debt-oriented schemes.

Institutions include domestic and foreign institutions and banks. Individuals include HNIs or investors who invest with a ticket size of Rs. 2 lakhs or above. Equity-oriented schemes include equity and balanced funds. Composition of Investors' Holdings 5

GROWTH IN ASSETS

The value of assets held by individual investors in mutual funds increased from Rs.14.47 lakh cr in November 2019 to Rs. 15.37 lakh cr in November 2020, an increase of 6.21%. The value of Institutional assets has increased from Rs.12.47 lakh cr in November 2019 to Rs.14.46 lakh cr in November 2020, an increase of 15.97%.

Months	Individuals (Rs. Cr.)	Institutions (Rs. Cr.)	Grand Total (Rs. Cr.)
Nov'19	14,47,198	12,47,087	26,94,385
Nov'20	15,37,124	14,46,296	29,83,420

<https://www.amfiindia.com/Themes/Theme1/downloads/home/industry-trends.pdf>

Institutions include domestic and foreign institutions and banks. Rs. Lakh cr is equivalent to Rs. Trillion

NET INFLOW OF MUTUAL FUND SCHEMES

Net Equity Inflows (Rs crore)

Net investments into such stock plans have been dwindling for months as investors reduce holdings amid worries that the worst impact of the coronavirus may not have passed even as equities continue their ascent. Indian benchmarks have jumped more than 50% of their March low. The Nifty 50 gained 3% in August. All segments witnessed an outflow in August. Among schemes, investors pulled out the most <https://www.bloombergquint.com/mutual-funds/equity-mutual-funds-witness-outflow-for-second-straight-month>

MUTUAL FUND INVESTMENTS – GEOGRAPHICAL DISPERSION

Mutual fund investors, especially stock market debutants, have become very aggressive. Despite a sharp slowdown in economic activity across the globe, mutual funds have made a net investment of Rs 39,498 crore in stocks in the first six months of 2020, more than four-times (Rs 8,735 crore) the amount infused a year ago. Of this, over Rs 30,000 crore was invested in March alone, latest data available with Sebi showed. The healthy flow into equity-oriented mutual funds comes even as the pandemic has decimated revenues across sectors.

Fund managers say that this only displays a more mature investor behaviour wherein participants are viewing market corrections as an opportunity rather than a threat. “The sharp sell-off in the equity market by foreign investors led to cheaper valuations driving domestic mutual funds to do value buying,” according to Bajaj Capital. The four-fold higher inflow in the first half of 2020 can be explained by the rising popularity of asset allocation funds, which in turn used them to pick up stocks at attractive valuations after the steep fall in March.

MFs invested a net Rs 1,384 crore in equities in January this year, Rs 9,863 crore in February, and a staggering Rs 30,285 crore in March. While they pulled out Rs 7,965 crore in April, the trend reversed in May investing Rs 6,522 crore. In June, flows have reversed again, with an outflow of Rs 612 crore, the data showed.

Dynamic asset allocation funds, a category with a cumulative AUM of Rs 98,000 crore as of February, and carrying net equity exposure of 40-45 per cent on average, had increased their equity allocation to about 60 per cent by March-end, capitalising on the attractive valuations. They have maintained net equity exposure of 55-60 per cent since then.

Even the aggressive hybrid mutual funds had increased equity allocation in March, Bajaj Capital noted. However, funds struggled to grow assets under management (AUM). Mutual funds’ asset base dropped eight per cent in the quarter ended June. Average industry AUM of 45 players, stood at Rs 24.82 lakh crore in April-June period as compared to Rs 27 lakh crore in the preceding quarter.

CAPITAL INFLOW

Rs 39.5 thousand crore invested in the markets by mutual funds in H1 2020

Rs 30.3 thousand crore invested in the markets by MFs in March 2020 alone Dynamic asset allocation funds had increased equity allocations to 60 per cent by March-end

<https://www.newindianexpress.com/business/2020/jul/06/despite-covid-19-pandemic-mutual-funds-investments-rise-four-fold-2165977.html>

Mutual Fund Assets of T30 and B30 Locations

T30 refers to the top 30 geographical **locations** in India and **B30** refers to the **locations** beyond the top 30. **B30 locations** tend towards **equity assets**. In November 2020, 25% of **assets** held by individual investors is from the **B30 locations**. 5.89% of institutional **assets** come from **B30 locations**.

B30 and T30 - Asset Mix

B30 locations tend towards equity assets. 64% of the assets from B30 locations are in equity schemes For T30 locations, equity-oriented schemes accounted for 35% of assets

Month	Equity oriented Schemes	Non-Equity oriented Schemes
Oct'20 (B-30)	62%	38%
Oct'20 (T-20)	35%	65%
Nov'20 (B-30)	64%	36%
Nov'20 (T-20)	35%	65%

Equity-oriented schemes include equity and balance funds. Non-equity-oriented schemes include liquid and money market schemes and debt and debt-oriented funds. T30 refers to the top 30 geographical locations in India and B30 refers to the locations beyond the top 30.

<https://www.amfiindia.com/Themes/Theme1/downloads/home/B30vsT30.pdf>

GROWTH IN INVESTOR ACCOUNTS

Growth investing is an **investment** style and **strategy** that is focused on increasing an investor's capital. **Growth** investors typically **invest** in **growth** stocks—that is, young or small companies whose earnings are expected to increase at an above-average rate compared to their industry sector or the overall market

Net AUMs as on November 30, 2020, increased for both, debt funds and equity funds. The inflows for debt mutual funds nearly halved in November 2020 from the previous month while outflows from equity funds continue to rise.

Read more on Groww: <https://groww.in/blog/amfi-mutual-fund-monthly-performance/>

STRATEGIC IMPLICATIONS AND CONCLUSION

Ratings agency Crisil on December 17' 20 said the mutual fund industry will post double-digit growth for the next few years and its assets under management will cross Rs 50 lakh crore by 2025. Crisil's research wing said the increase in inflows is bound to be fuelled by investments into equities as against other asset classes.

Investor interest in the mutual funds segment has been changing lately because of market volatility, and the average assets under management stood at around Rs 30 lakh crore as of November 2020.

“Over the five years through 2025, we expect the industry's assets under management (AUM) to continue its double-digit growth and cross the Rs 50 lakh crore mark,” Crisil's Managing Director and Chief Executive Officer Ashu Suyash said.

She said equities, whose share stands at 42 percent at present, will drive the increase over the next five years and contribute 47 percent of the AUM by 2025. The increase in the pie for equities is in line with global experiences, she added.

India's favourable demographics, increased financialisation of savings, an inflation-targeting regime, and rising per-capita income will be the primary growth drivers to pull flows into the segment, Suyash noted. In the last 20 years, the AUMs of the industry have grown at a compounded growth rate of 18.5 percent per annum, Crisil said, adding that they stood at Rs 1.4 lakh crore as of 2003.

Scope For Better Market Returns

By capitalizing on multiple economies or markets simultaneously, your portfolio can fetch higher returns. Aside from mitigating risks by diversifying, overseas investing also boost your portfolio quality. But these all advantages come with a fair amount of risks. Here are some of the risk associated with International funds:

There is a risk of volatility in currency exchange rates. In the case of an international mutual fund, you may find it difficult to get information on how the companies linked with those funds are performing, are there any regulatory or change in business plan happening, etc. The upcoming markets can be affected by the economic and political changes of those countries.

Mutual Funds in India have grown over the years. As a result, the best performing mutual funds in the market keep on changing. There are various rating systems in place to judge MF schemes, such as CRISIL, Morning Star, ICRA. These systems evaluate funds based on qualitative and quantitative factors such as returns, asset size, expense ratio, Standard Deviation, etc. The summation of all these factors leads to the rating of the best performing mutual funds in India. However, to make the

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process of Investing easier for investors, we have shortlisted the best performing Mutual Funds in India along with guidelines to choose the best fund in this article..

Smart Tips to Invest in Best Mutual Funds: Lump Sum & SIP Investments A perfect way to invest in the best performing mutual funds is by looking at both its qualitative and quantitative measures, such as: 1. Scheme Asset Size Investors should always go for a fund that is neither too big nor too small in size. While there is no perfect definition and relation between the size of the fund, it is said that both too small or too large, can hinder a fund's performance. Less Asset Under Management (AUM) in any scheme is very risky as you don't know who the investors are & what quantum of investments they have in a particular scheme. Thus, while choosing a fund, it is advisable to go for the one whose AUM is approximately the same as the category. 2. Fund Performance To invest in the best performing mutual funds, the investors should do a fair assessment of the fund's performances for over a period of time. Also, it is suggested to go for a scheme that consistently beats its benchmark over 4-5 years, additionally, one should see each period to check if the fund is able to beat the benchmark. 3. Total Expense Ratio Investors who want to make investments in mutual funds have to bear certain charges like management fees, operation costs, etc., charged by the Asset Management Company (AMC). Many times, investors go for a fund that has a lower expense ratio, but it is something that should not supersede other important factors such as fund performance, etc.. Read more at: <https://www.fincash.com/l/best-performing-mutual-funds>

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CHAPTER 6: CONCLUSION

CONCLUSION

6.1 Growth Mutual Funds- Primary data –Analysis

Correlation

Table 6.01

		Gender	Age	How long have you been investing in growth mutual funds	Monthly average saving	Educational qualification
Gender	Pearson's correlation	1	-0.30	-0.006	-0.039	0.21
	Sig (2 – tailed)		0.291	0.832	0.173	0.473
	N	1201	1201	1201	1201	1201
Age	Pearson's correlation	-0.30	1	0.087**	0.402**	0.011
	Sig (2 – tailed)	0.291		0.003	0	0.7
	N	1201	1201	1201	1201	1201
How long have you been investing in growth mutual funds	Pearson's correlation	-0.006	0.087**	1	0.091**	0.021
	Sig (2 – tailed)	0.832	0.003		0.002	0.464
	N	1201	1201	1201	1201	1201
Monthly average saving	Pearson's correlation	-0.039	0.402**	0.091**	1	0.024
	Sig (2 – tailed)	0.173	0	0.002		0.404
	N	1201	1201	1201	1201	1201
Educational qualification	Pearson's correlation	0.21	0.011	0.021	0.024	1
	Sig (2 – tailed)	0.473	0.7	0.464	0.404	
	N	1201	1201	1201	1201	1201

Source: Author Own research: IBM SPSS Web Report

Note: **Correlation is significant at the 0.01 level(2-tailed)

Correlation is significance at at the 0.01 level(2-tailed)

The above statistical data using SPSS shows that in term of karl Pearson's coefficient of correlation, there is a very weak negative correlation (-0.030) between gender and age factors. In gender and time duration for investing in growth mutual funds, there is a very weak negative (-0.006) correlation between them and the variables move in the opposite direction/, The correlation. In the present situation young generation are more focusing in the investment in growth mutual funds by taking risk and looking for capital appreciation and as older age group people are not taking any risk by investing in growth mutual funds and looking for some alternative investment attributes during the COVID-19 situation due to the highly volatile nature of the Indian mutual funds industry.

Karl Pearson's coefficient of correlation between the variables X and Y is given by

$$R = \text{Cov}(X,Y) / [\text{STDEV}(X) * \text{STDEV}(Y)]$$

Karl Pearson's coefficient of correlation is not affected by change in scale or by change in location. Unlike covariance it can be used to compare the relationship between two pairs of variable. It is a unit free measure of relationship between two variables and takes value in [-1,=1]. When r is close to +1 or -1, there is strong positive or negative relationship between the two variables.

6.2 ONE-WAY - ANOVA – GROWTH MUTUAL FUNDS

- (i) This states that there is an impact of gender in the investment in Growth mutual funds. Mutual funds investment to risk factors due to open market operation so that gender wise investment plays a vital role for the future investment.
- (ii) Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weight age in their future planning.
- (iii) Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weight age in their future planning in tax saving funds under section 80C of Income Tax Act
- (iv) Mutual funds investment to risk factors due to open market operation as well as risk appetite. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors. People are investing in 100% in equity funds for high returns and bearing a more risky fund. Three years locking period is also considered as a risk factor during the present situation of COVID-19 pandemic situation, if investors required money before the 3 year locking period.
- (v) A risk factor is involved in mutual funds investment, so that people prefer to invest for the longer period of time with diversification of the funds to minimize the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.
- (vi) Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different aggressive and highly risky funds for better return. By the way of diversification of funds, they minimize the risk factors involved in the investment of financial markets.
- (vii) A lot of derivative factors which influence the final outcome of the financial investment and increase capital appreciation with the diversification of the funds according to the upward and downward market trends of the funds.
- (viii) People invested a lump sum amount in Growth Mutual funds for capital appreciation purpose as well as high return also. If we saw the history of

mutual funds return in India , we are getting more than 30% returned in long term investment plan and due to this reason people are investing huge amount in the growth saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.

- (ix) Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.
- (x) People are looking for very high return and investing in the aggressive funds. They are taking the high risk involved in the open markets .The performance of growth mutual funds and their return play a vital role for their trust and further investment in the growth mutual funds .People are doing a lot of research in term of fundamental and technical analysis of the particular sectors as well as funds also.

6.3 IBM SPSS WEB REPORT – ONE WAY ANOVA – ELSS MUTUAL FUNDS

1. Mutual funds investment to risk factors due to open market operation so that genderwise investment plays a vital role for the future investment.
2. Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weightage in their future planning.
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6. People invested a lump sum amount in ELSS Mutual funds for tax saving purpose as well as capital appreciation also. If we saw the history of mutual funds return in India , more than 30% returned we are getting in long term investment plan and due to this reason people are investing huge amount in the tax saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.
7. Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation also with the diversification of the funds according to the upward and downward market trends of the funds.
8. Mutual funds investment to risk factors due to open market operation as well as risk appetite. People are generally looking for tax saving instruments while investing in An equity-linked savings scheme or ELSS funds ELSS funds provides tax benefits to the investors upto 1.50 lakh in one assessment year under the section of income tax act, 1961.so, people are given first preference to tax

benefits factors in ELSS mutual funds and after that looking for the others factors likes capital appreciation etc.

9. Net Inflow of Mutual Fund Schemes - Net Equity Inflows (Rs crore) (motilaloswal.com²¹⁸)

Net investments into such stock plans have been dwindling for months as investors reduce holdings amid worries that the worst impact of the coronavirus may not have passed even as equities continue their ascent. Indian benchmarks have jumped more than 50% of their March low. The Nifty 50 gained 3% in August. All segments witnessed an outflow in August. Among schemes, investors pulled out the most

10. Mutual Fund Investments – Geographical dispersion

Indian mutual fund industry have shown a net investment of Rs. 39,498 crore in financial stock from Jan 2020 to June 2020 which is more than 4 times from its base year (i.e. Previous year 2019) in the same period. As we know that mutual fund investors are very aggressive and this is one of reason to tremendous growth against a sharp decline due to COVID-19 pandemic situation. If we saw the Mutual fund movement in SEBI website , Rs. 30,000 crore was invested in March 2020 alone which show the huge potential and aggressive investors in mutual fund and perform upto to an remarkable growth in the equity mutual funds and portfolio management theory applied a continuously growth in the mutual fund agaist the any other investment in financial sectors. (thefinapolis.com/news²¹⁹)

11. Financial Analyst of Assets Management Company believed that the perception and investment behavior of potential investors find out the opportunity in the invenstment decision rather than taken as a thread in the present sitation of pandemic and better portfolio management reward them a high return in mutual funds . (personalfn.com/²²⁰)

12. There is a net Rs. 1,384 crore was invested in the mutual fund industry during the Jan, 2020, in Feb, 2020 it was Rs. 9,863 crore and showing a remarkable high growth of Rs. 30, 285 crore in the month of march, 2021 which shown the

Hugh potential interment market as compare to other investment avenue. But in the month of April 2020, major investor has taken out Rs. 7,065 crore due to the high risk factor involved in capital market worldwide due the COVID-19 and this pandemic affected the growth of mutual fund as well as world economy also.(.businessworld.in/article²²¹)

13. Mutual Fund Assets of T30 and B30 Locations

T30 generally indicate the top 30 mutual funds in the 30 different geographical locations across the country. and B30 I indicate the location apart from the top 30. The location of B30 are showing the tend towards equity oriented mutual fund investment plan During the period of November 2020,individual investors hold 25 % of assets in the category of B 30 and Foreign institutional investors also contribute almost 5,89% in B30 location..

14. B30 and T30 - Asset Mix

Towards the equity oriented assets, 64% of the equity assets belong to B30 location and invested in equity scheme and 30 % equity oriented scheme contain the portfolio of T30 location.

(Table 6.02)

Month	Equity oriented Schemes	Non-Equity oriented Schemes
Oct'20 (B-30)	62%	38%
Oct'20 (T-20)	35%	65%
Nov'20 (B-30)	64%	36%
Nov'20 (T-20)	35%	65%

(Source: morningstar.in/posts²²²)

15. Equity fund and balance fund are the part of Equity-oriented schemes. Liquid fund and money market instruments are the part of non-equity oriented scheme. Money markets are the short term financial derivative market which is regulated by RBI with high liquidity nature.

16. Growth in Investor Accounts- Investor's capital has been increased by the growth investing, which is an strategy of better investment to enhanced the capital gain in

capital market. In financial investment aspect , growth investors are willing to invest in new and small capital industry and expected for a more than average growth in their future earning as compare to large cap industry, whose share price growth are at par with the market premium and systematic risk beta is around one shown the market growth rate and industry growth rate involved with the same proportionate.(mckinsey.com/business-functions²²³)

17. According to the AMFI report, the net Assets under management (AUM) shown the positive growth in both debt funds as well as equity funds .there was a remarkable growth in the inflows of cash in the debt mutual fund which is almost showing 50percent growth on November 30,2020 as compare to October 2020. There was a continues growth in equity funds and outflow of cash in the equity fund increases by a high volume in the capital market

18. According to the credit rating agency CRISIL published in dec'2020 states that there will be a growth of double digit in mutual funds as the potential investors are looking for a better return in the investment of mutual fund for their capital gain and by the year 2026 , the assets under management will show a landmark of more than Rs. 50,000 crore and this kind of growth shows the investors believe in mutual funds and return in the mutual funds perform a high return as compare to other investment avenue.(crisil.com²²⁴)

19. Mutual fund investment is always contain a risk factors of market volatility , so that investors always looked for safer side of investment but getting less return to mutual funds. But at present time , the investors believe in mutual funds interment and by better portfolio management the are taking the risk factors in a systemic ways and getting good return also na d this enhance the assets under management by a remarkable figure of Rs. 30 lakh core on Nov, 2020

20. From the prior presentation investigation of the chose fifteen value reserves, plainly ten assets have performed well and five supports had not performed well during the review time frame. The sharp fall in the NIFTY during the year 2019

has affected the presentation of the multitude of those reserves. In a definitive investigation, it could be inferred that every one of the assets have performed well in the high unpredictable market development expect SBI Bluechip Fund, Nippon India Largecap Fund, Nippon India Growth Fund, Nippon India Small cap Fund and DSP Smallcap Fund. Consequently, financial backers need to consider factual boundaries like Jensen's alpha, beta, standard deviation, Sharpe Ratios while putting resources into common assets separated from thinking about NAV and Total Return to guarantee steady execution of common assets.

21. Investor can likewise design like one common asset of differentiated value plan, second shared asset of adjusted sort and third one you can plan of obligation type and so forth. Thusly the cash will get broadened, hazard is decreased and the financial backer will get phenomenal benefit. For Example: Rs 20,000 every month, it is insightful to select a limit of three assets. Consider very much appraised huge cap reserves, midcap reserves and a reasonable asset. The last would give the obligation part and lessen the portfolio's disadvantage hazard. Examine the Standard Deviation, Sharpe proportion, Treynor Ratio, Beta, Correlation, P/E Ratio, P/B Ratio and Expense Ratio and additionally its presentation in the bear and the bull stage, and afterward put resources into it. Just making a decision about an asset by its NAV is unessential while choosing the asset as it is the rate gain or misfortune that is important.
22. We set off to look at whether a financial backer would get any expansion advantage by making an arrangement of enormous cap common assets in India. We demonstrate that there is restricted advantage to be acquired by such a portfolio. The SEBI guidelines requiring a base openness of 80% of the portfolio to the best 100 organizations by full market capitalisation and not over 10% openness to a solitary holding are not very prohibitive for store administrators to carry out procedures that are adequately not quite the same as a kind of perspective ETF.
23. Asset chiefs have adequate adaptability to communicate procedures that could show high dynamic offers. A more reasonable requirement on store administrator

activities is that the huge cap file is 'cumbersome'. This represents a predicament for the supervisor. Does she communicate a speculation approach which has a high following blunder, and acknowledge the raised danger of underperformance? Or then again does she take a less an unsafe low following blunder methodology? In a cutthroat market, these choices are imperative to the business achievement.

24. The cross-sectional holding information in June 2020 shows that many assets have followed the last methodology. There is a packing together of huge cap reserves. Remaining adjusted to the benchmark is by all accounts a cognizant decision. The examination of recorded month to month returns shows a high connection and positive covariance among huge cap reserves. The IR of these assets show that they don't beat the reference ETF on a danger changed premise. Given the moderate dynamic offers, hypothetically, it appears to be hard to see
25. Also search for past returns, profit and so on the shared asset has announced. In the event that the financial backer has picked value or securities exchange related common asset, he might go for SIP (Systematic Investment Plan) strategy. A danger unfavorable financial backer ought to try not to put resources into the Sectoral reserves.
26. AMC's utilization NFOs to make energy and push their assets. These plans are dispatched in light of the fact that they are simple roads to catch the executives expenses and increment the asset house's resource base. These plans are normally clones of existing plans, yet with new enthusiastic names displayed to draw in financial backers.
27. Shared assets have effectively assumed control over banks and monetary organizations in US, in offering the most ideal profits from a bunch of differentiated portfolios. The pattern in India is appearing to be identical with numerous shared asset plans acquiring the certainty of contributing people such a lot of that the public area banks and monetary foundations have begun their own common assets inferable from the dread of worldwide pattern. In any case, this

doesn't imply that common assets are brimming with advantages or excellencies. They have their own arrangement of issues with respect to costs, administrations, guidelines, productivity, interest, monetary flimsiness and others, which have been making large concern financial backers. The developing acknowledgment on such issues is unfavorably influencing the financial backers' stake in shared assets industry in India. Be that as it may, encouraging financial factors in the nation are giving confidence for its distinctiveness. The current review is an endeavor to look at the components answerable for this inconsistent condition of common assets in India in order to illuminate its future possibilities.

- 28.** The huge population of the country moving towards the financial investment and looking for a better return. Inflation is one of the major factor in economy which insist us to do the investment to meet our future liabilities and Up to a certain level of inflation is good for the growth of economy and beyond that make a negative impact in the economy and financial sector of the country. GDP growth rate and increase in per in per capita income of the income of the country is the primary factors for outflow of cash in the capital market.
- 29.** In the capital market, better portfolio management with diversify nature minimize the risk factor involes in the open market investment and increase the chance of higher return in long term investment plan in mutual fund. Market risk factors, business risk and interest risk is associated with the high return and in mutual fund investment risk and retrun factor showing the perfect positive correlation between them. In the international funds also a lot of risk factors like currency convertibility, hedging , arbitration and inflation associated with higher return and with the help of fundamental analysis and technical analysis , we are a better portfolio for a long term investment. Currency exchange rate with high risk of volatility is associated with foreign exchange market and to get information about the performance of international mutal fund are easy due to a lot of regulatory factors or international project appraisal involved in the capital investment and theses markets also affected by political and economic change of these countries.(cafemutual.com/news²²⁵)

30. "Arrangement of the top of the line assets" for the financial backers. Additionally, regardless of the accessibility of a huge pool of choices a financial backer may really be passed on with restricted choices because of the presence of comparable, clone-kind of assets with indistinguishable profiles. Hazard faced by a financial backer can be significantly diminished, and accordingly a financial backer can be in an ideal situation by picking a mix of plans rather than a solitary one for a given degree of return. This paper manages some viable issues in this specific situation and arrangements have been recommended dependent on experimental discoveries.
31. Indian mutual fund industry shown a fast growth over the years .and mutual fund showing the fast growth year by year and best performing mutual fund is keep on changing year by year which is based on demand and supply principle of the capoitail market. Various rating agency likes CRISIL, ICRA, FITCH, Standards and Poor, CARE etc are actively participated in the capital market and ranking the mutual funds scheme on the basis of basis of their performance and NAV calculation.On the basis of Qualitative and quantitative factors involved in the better return, these agency give their judgment on the some parameters like standard deviation, Net assets value, asset size, sharpe ratio, coefficient of determination etc. and with the help of these factors we makes a better portfolio for the better investment and our investment will show the better retun in the best perfuming mutual fund in India.(pwc.com/us/en/industries²²⁶)
32. Indian investors have shown three times jump in the contribution to Asset under Management (AUM) in mutual funds over the last three to five years. Year 2017 has proved to be one of the highest grosser by reaching a total corpus of Rs. 17 trillion, despite the poor show by equity and capital markets due to the demonetization and global surge in oil prices. Around Rs. 3.71 trillion contributions came in the year 2017 only, the highest ever contribution till date. The Systematic Investment Plans (SIP) monthly contribution has hit a record high of Rs. 4,500 crore, which is expected to rise even further high. ETFs have also seen a sharp rise in contribution by investors. Rs. 40,000 to Rs. 45,000 crores were invested through the ETFs and arbitrage funds, which represents almost 10% of total contribution. Another reason for sharp rise in mutual fund contribution is scrapping of entry load from the mutual funds. With rising incomes and good

economic policies, mutual funds industry saw a surge in mutual funds AUM and several fund houses were formed. One of the reasons for sudden rise in mutual fund contribution is technology. (valueresearchonline.com²²⁷)

33. Technology has made it possible for the asset management companies to expand its territory to places, where it doesn't have any physical presence. People are now able to get information, suggestion and even they can invest in mutual funds without visiting the representative offices of the AMC. Mutual Fund industry has adapted itself to the changing technological environment in and around itself. And it has seen a positive response from the investors. Investors can now even get the e-KYC done online, without even the physical contact with any of the representatives of the mutual fund industry. Also, SEBI (Securities Exchange Board of India) the regulatory body of the MF industry has made necessary changes in the regulations, so that it can take proper advantage of the new technologies into the mutual fund industry. Impact of technology on mutual funds and financial markets

34. Artificial Intelligence has been into the mainstream news, as it is always making headlines, every time it's something new and remarkable. Stephen Hawking's warning on the Artificial Intelligence cannot be ignored, whereas there are still people and government who can't stop working on Artificial Intelligence. AI has already created its space in the industry, with its applicability into many aspects. It has helped company to reduce inaccuracy and increase efficiency. It is already used in ECM (Enterprise Content Management) by mutual fund companies. AI does the job of processing large data, arranging, classifying, checking for error, and thus reducing the redundancy and duplication of data.(pubdocs.worldbank.org²²⁷)

35. Computers is known for analyzing and processing huge amount of data within fraction of seconds, combined with intelligence, smart analyzing and interpretation of data could help fund managers to do the historical analysis of the stocks. With greater intelligence AI is utilized for making security analysis and arriving at an optimum portfolio with risk-reward ratio. It can also be used to customize the needs of the investors and suggest the best possible investment options. Here Robo-Advisors are being developed, which can work based on certain algorithms to understand individual customers, its needs, risk parameters, etc. and then can

process the data to suggest right products for the investors. Since it will be automated, chances of inaccuracy are minimized.

- 36.** With next generation technology, entire investment process is now paperless, efficient and easy to invest. It has helped the fund houses to increase its efficiency in distribution channel; it is now possible to reach places, which was earlier difficult to reach. With e-commerce platforms, mutual funds would be under the reach of vast majority of the investors. Technology is transforming the asset management companies; it is now being reorganized and more centralized than before. Mobile, social media, cloud computing, Blockchain mechanism, big-data, analytics and Fin Tech is now redefining the future of asset management. Since AI has the potential to enhance the efficiency of the information processing, thus reduces the asymmetries, application of AI.
- 37.** Artificial Intelligence may process large information for the investor and can come up with most probable recommendations, which may be helpful for the investor in taking investment decision. It can reduce the overall trading cost for the investors; can suggest most appropriate trading strategies for the investors according to the changing scenarios. AI can be used to target specific customer segment and come up with better recommendation. Regulatory considerations regarding use of artificial intelligence and machine learning
- 38.** Regulating artificial intelligence is also termed as supervision. As AI and machine learning is already adopted by financial institutions in some areas like automated customer interactions, risk assessment, credit risk analysis, optimize capital, identify trading opportunities and optimizing trading execution.
- 39.** Regulations are required in areas where there is a third-party dependency, for example if an AI, developed by third party, incurs loss, then who is to be blamed? The third party, or the service provider or the investor. Regulatory authorities worldwide have imposed stricter and various regulations on asset management companies. The proposed measures to increase regulations on the financial services sector:

40. More regulations on reporting norms, and also put more stress on asset management companies to discourage investors to redeem funds at distressed situation in financial market.
41. Just like banks undertake stress testing more often, the financial services sectors should also frequently do stress testing of all the funds they manage.
42. Low tolerance for regulatory breaches by asset management companies, leading to increased fines and increased cost of regulations.
43. This could lead to increased burden of regulation on asset management companies and is going to significantly impact the small players.
44. Minimum qualifications for investment professionals, so that the minimum competency level should be achieved in order to work in an investment advisory firms as well as fund management house.
45. Complete ban on commissions on sale of mutual funds in order to protect consumers. Vi. Increased reporting in order to bring more transparency into the system.
46. Robo-advisors could offer tailor-made customized products for the investors, creating individual tailor-made customized products, could create low correlation among the various other trading strategies, which could lead to greater market diversity in market movements. Low cost of trading and increased efficiency in processing of information could help reduce price misalignments and hence build-up of macro-financial price imbalances. More use of machine learning could lead to lack of data transparency to the consumers, and hence it would be more difficult to explain on how a credit or insurance decision was reached (morganstanley.com²²⁹)

- 47.** The technology sector is continuously growing, so it's true that some of your investments may face some near-term headwinds. However, experts project that in the coming days, technology mutual funds will have the capacity to outperform global equity funds. Hence, if there is one sector you need to keep your eyes peeled for, then this is it!
- 48.** Artificial Intelligence is now being adapted by an increasing number of companies worldwide, and when it comes to financial industry, the asset management companies have already started making use of AI and machine learning. It has led to increased efficiency in operations of the financial institutions and also it has increased overall efficiency of the financial system and economy. More efficient risk management of the investment portfolio, helps to appropriate allocation of funds, also reduce cost of transactions and increase speed of the transactions. With adaptation of digitalization in mutual funds, it has shown a very positive sign of increased participation by the investors. (www2.deloitte.com²³⁰)
- 49.** Demonetization may have initially hampered the financial markets, but soon it witnessed highest ever contributions towards asset base of mutual funds, in the year 2017 as compared to over a decade. Investors can now make direct investments, without involvement of any broker or distributor, soon e-commerce platform will make it even more easier for the investors to invest in mutual funds. New technologies like Blockchain mechanism, robo-analytics, robo-advisors will help the asset management companies to increase their efficiency and performance in future.
- 50.** Distribution channels will utilize more of advanced technologies to make their work efficient and investor friendly.
- 51.** Technologies like robo-advisory can help the customer to have access to wealth of information and they can get personalized advisory at their convenience. However, there would be some challenges, which can be tackled by the active involvement of regulators, in bringing the necessary changes in regulations to be in the favor of the investors, by safeguarding the interest of the i

6.4 EXTENSION FOR FURTHER STUDY

This review covered just the main 5 ELSS reserves and their presentation over a range of 5 years. This investigation can be additionally extended to incorporate more ELSS reserves and a more drawn out time span. The exploration can likewise be ventured into enhanced shared asset classes and contrasting outcomes with choose contrasts. Incorporation of loan cost hazard, business hazard, political danger and unfamiliar trade hazard can set out open doors for additional improvement. Expanding the utilization of extra execution proportions and changed contrasting strategies can work with additional turn of event

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	N	1201	1201	1201	1201	1201
Educational qualification	Pearson's correlation	0.21	0.011	0.021	0.024	1
	Sig (2 – tailed)	0.473	0.7	0.464	0.404	
	N	1201	1201	1201	1201	1201

Source: Author Own research: IBM SPSS Web Report

Note: **Correlation is significant at the 0.01 level(2-tailed)

Correlation is significance at at the 0.01 level(2-tailed)

The above statistical data using SPSS shows that in term of karl Pearson's coefficient of correlation, there is a very weak negative correlation (-0.030) between gender and age factors. In gender and time duration for investing in growth mutual funds, there is a very weak negative (-0.006) correlation between them and the variables move in the opposite direction/, The correlation. In the present situation young generation are more focusing in the investment in growth mutual funds by taking risk and looking for capital appreciation and as older age group people are not taking any risk by investing in growth mutual funds and looking for some alternative investment attributes during the COVID-19 situation due to the highly volatile nature of the Indian mutual funds industry.

Karl Pearson's coefficient of correlation between the variables X and Y is given by

$$R = \text{Cov}(X, Y) / [\text{STDEV}(X) * \text{STDEV}(Y)]$$

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- (v) A risk factor is involved in mutual funds investment, so that people prefer to invest for the longer period of time with diversification of the funds to minimize the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.
- (vi) Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different aggressive and highly risky funds for better return. By the way of diversification of funds, they minimize the risk factors involved in the investment of financial markets.
- (vii) A lot of derivative factors which influence the final outcome of the financial investment and increase capital appreciation with the diversification of the funds according to the upward and downward market trends of the funds.
- (viii) People invested a lump sum amount in Growth Mutual funds for capital appreciation purpose as well as high return also. If we saw the history of

mutual funds return in India , we are getting more than 30% returned in long term investment plan and due to this reason people are investing huge amount in the growth saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.

- (ix) Mutual funds investment to risk factors due to open market operation as well as risk appetitive. Financial market is volatile in nature and a lot of upward and downward trends of technical analysis affects the market risk factors .People are investing in 100% in equity funds for high returns and bearing a more risky funds .Three years locking period is also considered as a risk factors during the present situation of COVID- 19 pandemic situation, if investors required money before the 3 year locking period.
- (x) People are looking for very high return and investing in the aggressive funds. They are taking the high risk involved in the open markets .The performance of growth mutual funds and their return play a vital role for their trust and further investment in the growth mutual funds .People are doing a lot of research in term of fundamental and technical analysis of the particular sectors as well as funds also.

6.3 IBM SPSS WEB REPORT – ONE WAY ANOVA – ELSS MUTUAL FUNDS

1. Mutual funds investment to risk factors due to open market operation so that genderwise investment plays a vital role for the future investment.
2. Mutual funds investment to risk factors due to open market operation and risk appetite and goal of the investors has more weightage in their future planning.
3. Mutual funds investment to risk factors due to open market operation and variation in monthly average saving has more weightage in their future planning in tax saving funds under section 80C of Income Tax Act
4. A risk factors is involved in mutual funds investment, so that people prefers to invest for the longer period of time with diversification of the funds to minimize the risk involved in the capital market and get better returns and goal of the investors to put more weight age in their long term future planning in tax saving funds.
5. Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation also with the diversification of the funds according to the upward and downward market trends of the funds.
6. People invested a lump sum amount in ELSS Mutual funds for tax saving purpose as well as capital appreciation also. If we saw the history of mutual funds return in India , more than 30% returned we are getting in long term investment plan and due to this reason people are investing huge amount in the tax saving mutual funds with the diversification of the funds according to the upward and downward market trends of the funds.
7. Mutual funds investment to risk factors due to open market operation as well as risk appetite and goal of the investors to choose the different tax saving fund to minimize the risk factors and capital appreciation also with the diversification of the funds according to the upward and downward market trends of the funds.
8. Mutual funds investment to risk factors due to open market operation as well as risk appetite. People are generally looking for tax saving instruments while investing in An equity-linked savings scheme or ELSS funds ELSS funds provides tax benefits to the investors upto 1.50 lakh in one assessment year under the section of income tax act, 1961.so, people are given first preference to tax

benefits factors in ELSS mutual funds and after that looking for the others factors likes capital appreciation etc.

9. Net Inflow of Mutual Fund Schemes - Net Equity Inflows (Rs crore) (motilaloswal.com²¹⁸)

Net investments into such stock plans have been dwindling for months as investors reduce holdings amid worries that the worst impact of the coronavirus may not have passed even as equities continue their ascent. Indian benchmarks have jumped more than 50% of their March low. The Nifty 50 gained 3% in August. All segments witnessed an outflow in August. Among schemes, investors pulled out the most

10. Mutual Fund Investments – Geographical dispersion

Indian mutual fund industry have shown a net investment of Rs. 39,498 crore in financial stock from Jan 2020 to June 2020 which is more than 4 times from its base year (i.e. Previous year 2019) in the same period. As we know that mutual fund investors are very aggressive and this is one of reason to tremendous growth against a sharp decline due to COVID-19 pandemic situation. If we saw the Mutual fund movement in SEBI website , Rs. 30,000 crore was invested in March 2020 alone which show the huge potential and aggressive investors in mutual fund and perform upto to an remarkable growth in the equity mutual funds and portfolio management theory applied a continuously growth in the mutual fund agaist the any other investment in financial sectors. (thefinapolis.com/news²¹⁹)

11. Financial Analyst of Assets Management Company believed that the perception and investment behavior of potential investors find out the opportunity in the invenstment decision rather than taken as a thread in the present sitation of pandemic and better portfolio management reward them a high return in mutual funds . (personalfn.com/²²⁰)

12. There is a net Rs. 1,384 crore was invested in the mutual fund industry during the Jan, 2020, in Feb, 2020 it was Rs. 9,863 crore and showing a remarkable high growth of Rs. 30, 285 crore in the month of march, 2021 which shown the

Hugh potential interment market as compare to other investment avenue. But in the month of April 2020, major investor has taken out Rs. 7,065 crore due to the high risk factor involved in capital market worldwide due the COVID-19 and this pandemic affected the growth of mutual fund as well as world economy also.(.businessworld.in/article²²¹)

13. Mutual Fund Assets of T30 and B30 Locations

T30 generally indicate the top 30 mutual funds in the 30 different geographical locations across the country. and B30 I indicate the location apart from the top 30. The location of B30 are showing the tend towards equity oriented mutual fund investment plan During the period of November 2020,individual investors hold 25 % of assets in the category of B 30 and Foreign institutional investors also contribute almost 5,89% in B30 location..

14. B30 and T30 - Asset Mix

Towards the equity oriented assets, 64% of the equity assets belong to B30 location and invested in equity scheme and 30 % equity oriented scheme contain the portfolio of T30 location.

(Table 6.02)

Month	Equity oriented Schemes	Non-Equity oriented Schemes
Oct'20 (B-30)	62%	38%
Oct'20 (T-20)	35%	65%
Nov'20 (B-30)	64%	36%
Nov'20 (T-20)	35%	65%

(Source: morningstar.in/posts²²²)

15. Equity fund and balance fund are the part of Equity-oriented schemes. Liquid fund and money market instruments are the part of non-equity oriented scheme. Money markets are the short term financial derivative market which is regulated by RBI with high liquidity nature.

16. Growth in Investor Accounts- Investor's capital has been increased by the growth investing, which is an strategy of better investment to enhanced the capital gain in

capital market. In financial investment aspect , growth investors are willing to invest in new and small capital industry and expected for a more than average growth in their future earning as compare to large cap industry, whose share price growth are at par with the market premium and systematic risk beta is around one shown the market growth rate and industry growth rate involved with the same proportionate.(mckinsey.com/business-functions²²³)

17. According to the AMFI report, the net Assets under management (AUM) shown the positive growth in both debt funds as well as equity funds .there was a remarkable growth in the inflows of cash in the debt mutual fund which is almost showing 50percent growth on November 30,2020 as compare to October 2020. There was a continues growth in equity funds and outflow of cash in the equity fund increases by a high volume in the capital market

18. According to the credit rating agency CRISIL published in dec'2020 states that there will be a growth of double digit in mutual funds as the potential investors are looking for a better return in the investment of mutual fund for their capital gain and by the year 2026 , the assets under management will show a landmark of more than Rs. 50,000 crore and this kind of growth shows the investors believe in mutual funds and return in the mutual funds perform a high return as compare to other investment avenue.(crisil.com²²⁴)

19. Mutual fund investment is always contain a risk factors of market volatility , so that investors always looked for safer side of investment but getting less return to mutual funds. But at present time , the investors believe in mutual funds interment and by better portfolio management the are taking the risk factors in a systemic ways and getting good return also na d this enhance the assets under management by a remarkable figure of Rs. 30 lakh core on Nov, 2020

20. From the prior presentation investigation of the chose fifteen value reserves, plainly ten assets have performed well and five supports had not performed well during the review time frame. The sharp fall in the NIFTY during the year 2019

has affected the presentation of the multitude of those reserves. In a definitive investigation, it could be inferred that every one of the assets have performed well in the high unpredictable market development expect SBI Bluechip Fund, Nippon India Largecap Fund, Nippon India Growth Fund, Nippon India Small cap Fund and DSP Smallcap Fund. Consequently, financial backers need to consider factual boundaries like Jensen's alpha, beta, standard deviation, Sharpe Ratios while putting resources into common assets separated from thinking about NAV and Total Return to guarantee steady execution of common assets.

21. Investor can likewise design like one common asset of differentiated value plan, second shared asset of adjusted sort and third one you can plan of obligation type and so forth Thusly the cash will get broadened, hazard is decreased and the financial backer will get phenomenal benefit. For Example: Rs 20,000 every month, it is insightful to select a limit of three assets. Consider very much appraised huge cap reserves, midcap reserves and a reasonable asset. The last would give the obligation part and lessen the portfolio's disadvantage hazard examine the Standard Deviation, Sharpe proportion, Treynor Ratio, Beta, Correlation, P/E Ratio, P/B Ratio and Expense Ratio and additionally its presentation in the bear and the bull stage, and afterward put resources into it. Just making a decision about an asset by its NAV is unessential while choosing the asset as it is the rate gain or misfortune that is important.
22. We set off to look at whether a financial backer would get any expansion advantage by making an arrangement of enormous cap common assets in India. We demonstrate that there is restricted advantage to be acquired by such a portfolio. The SEBI guidelines requiring a base openness of 80% of the portfolio to the best 100 organizations by full market capitalisation and not over 10% openness to a solitary holding are not very prohibitive for store administrators to carry out procedures that are adequately not quite the same as a kind of perspective ETF.
23. Asset chiefs have adequate adaptability to communicate procedures that could show high dynamic offers. A more reasonable requirement on store administrator

activities is that the huge cap file is 'cumbersome'. This represents a predicament for the supervisor. Does she communicate a speculation approach which has a high following blunder, and acknowledge the raised danger of underperformance? Or then again does she take a less an unsafe low following blunder methodology? In a cutthroat market, these choices are imperative to the business achievement.

24. The cross-sectional holding information in June 2020 shows that many assets have followed the last methodology. There is a packing together of huge cap reserves. Remaining adjusted to the benchmark is by all accounts a cognizant decision. The examination of recorded month to month returns shows a high connection and positive covariance among huge cap reserves. The IR of these assets show that they don't beat the reference ETF on a danger changed premise. Given the moderate dynamic offers, hypothetically, it appears to be hard to see
25. Also search for past returns, profit and so on the shared asset has announced. In the event that the financial backer has picked value or securities exchange related common asset, he might go for SIP (Systematic Investment Plan) strategy. A danger unfavorable financial backer ought to try not to put resources into the Sectoral reserves.
26. AMC's utilization NFOs to make energy and push their assets. These plans are dispatched in light of the fact that they are simple roads to catch the executives expenses and increment the asset house's resource base. These plans are normally clones of existing plans, yet with new enthusiastic names displayed to draw in financial backers.
27. Shared assets have effectively assumed control over banks and monetary organizations in US, in offering the most ideal profits from a bunch of differentiated portfolios. The pattern in India is appearing to be identical with numerous shared asset plans acquiring the certainty of contributing people such a lot of that the public area banks and monetary foundations have begun their own common assets inferable from the dread of worldwide pattern. In any case, this

doesn't imply that common assets are brimming with advantages or excellencies. They have their own arrangement of issues with respect to costs, administrations, guidelines, productivity, interest, monetary flimsiness and others, which have been making large concern financial backers. The developing acknowledgment on such issues is unfavorably influencing the financial backers' stake in shared assets industry in India. Be that as it may, encouraging financial factors in the nation are giving confidence for its distinctiveness. The current review is an endeavor to look at the components answerable for this inconsistent condition of common assets in India in order to illuminate its future possibilities.

- 28.** The huge population of the country moving towards the financial investment and looking for a better return. Inflation is one of the major factor in economy which insist us to do the investment to meet our future liabilities and Up to a certain level of inflation is good for the growth of economy and beyond that make a negative impact in the economy and financial sector of the country. GDP growth rate and increase in per in per capita income of the income of the country is the primary factors for outflow of cash in the capital market.
- 29.** In the capital market, better portfolio management with diversify nature minimize the risk factor involes in the open market investment and increase the chance of higher return in long term investment plan in mutual fund. Market risk factors, business risk and interest risk is associated with the high return and in mutual fund investment risk and retrun factor showing the perfect positive correlation between them. In the international funds also a lot of risk factors like currency convertibility, hedging , arbitration and inflation associated with higher return and with the help of fundamental analysis and technical analysis , we are a better portfolio for a long term investment. Currency exchange rate with high risk of volatility is associated with foreign exchange market and to get information about the performance of international mutal fund are easy due to a lot of regulatory factors or international project appraisal involved in the capital investment and theses markets also affected by political and economic change of these countries.(cafemutual.com/news²²⁵)

30. "Arrangement of the top of the line assets" for the financial backers. Additionally, regardless of the accessibility of a huge pool of choices a financial backer may really be passed on with restricted choices because of the presence of comparable, clone-kind of assets with indistinguishable profiles. Hazard faced by a financial backer can be significantly diminished, and accordingly a financial backer can be in an ideal situation by picking a mix of plans rather than a solitary one for a given degree of return. This paper manages some viable issues in this specific situation and arrangements have been recommended dependent on experimental discoveries.
31. Indian mutual fund industry shown a fast growth over the years .and mutual fund showing the fast growth year by year and best performing mutual fund is keep on changing year by year which is based on demand and supply principle of the capoitail market. Various rating agency likes CRISIL, ICRA, FITCH, Standards and Poor, CARE etc are actively participated in the capital market and ranking the mutual funds scheme on the basis of basis of their performance and NAV calculation.On the basis of Qualitative and quantitative factors involved in the better return, these agency give their judgment on the some parameters like standard deviation, Net assets value, asset size, sharpe ratio, coefficient of determination etc. and with the help of these factors we makes a better portfolio for the better investment and our investment will show the better retun in the best perfuming mutual fund in India.(pwc.com/us/en/industries²²⁶)
32. Indian investors have shown three times jump in the contribution to Asset under Management (AUM) in mutual funds over the last three to five years. Year 2017 has proved to be one of the highest grosser by reaching a total corpus of Rs. 17 trillion, despite the poor show by equity and capital markets due to the demonetization and global surge in oil prices. Around Rs. 3.71 trillion contributions came in the year 2017 only, the highest ever contribution till date. The Systematic Investment Plans (SIP) monthly contribution has hit a record high of Rs. 4,500 crore, which is expected to rise even further high. ETFs have also seen a sharp rise in contribution by investors. Rs. 40,000 to Rs. 45,000 crores were invested through the ETFs and arbitrage funds, which represents almost 10% of total contribution. Another reason for sharp rise in mutual fund contribution is scrapping of entry load from the mutual funds. With rising incomes and good

economic policies, mutual funds industry saw a surge in mutual funds AUM and several fund houses were formed. One of the reasons for sudden rise in mutual fund contribution is technology. (valueresearchonline.com²²⁷)

33. Technology has made it possible for the asset management companies to expand its territory to places, where it doesn't have any physical presence. People are now able to get information, suggestion and even they can invest in mutual funds without visiting the representative offices of the AMC. Mutual Fund industry has adapted itself to the changing technological environment in and around itself. And it has seen a positive response from the investors. Investors can now even get the e-KYC done online, without even the physical contact with any of the representatives of the mutual fund industry. Also, SEBI (Securities Exchange Board of India) the regulatory body of the MF industry has made necessary changes in the regulations, so that it can take proper advantage of the new technologies into the mutual fund industry. Impact of technology on mutual funds and financial markets

34. Artificial Intelligence has been into the mainstream news, as it is always making headlines, every time it's something new and remarkable. Stephen Hawking's warning on the Artificial Intelligence cannot be ignored, whereas there are still people and government who can't stop working on Artificial Intelligence. AI has already created its space in the industry, with its applicability into many aspects. It has helped company to reduce inaccuracy and increase efficiency. It is already used in ECM (Enterprise Content Management) by mutual fund companies. AI does the job of processing large data, arranging, classifying, checking for error, and thus reducing the redundancy and duplication of data.(pubdocs.worldbank.org²²⁷)

35. Computers is known for analyzing and processing huge amount of data within fraction of seconds, combined with intelligence, smart analyzing and interpretation of data could help fund managers to do the historical analysis of the stocks. With greater intelligence AI is utilized for making security analysis and arriving at an optimum portfolio with risk-reward ratio. It can also be used to customize the needs of the investors and suggest the best possible investment options. Here Robo-Advisors are being developed, which can work based on certain algorithms to understand individual customers, its needs, risk parameters, etc. and then can

process the data to suggest right products for the investors. Since it will be automated, chances of inaccuracy are minimized.

- 36.** With next generation technology, entire investment process is now paperless, efficient and easy to invest. It has helped the fund houses to increase its efficiency in distribution channel; it is now possible to reach places, which was earlier difficult to reach. With e-commerce platforms, mutual funds would be under the reach of vast majority of the investors. Technology is transforming the asset management companies; it is now being reorganized and more centralized than before. Mobile, social media, cloud computing, Blockchain mechanism, big-data, analytics and Fin Tech is now redefining the future of asset management. Since AI has the potential to enhance the efficiency of the information processing, thus reduces the asymmetries, application of AI.
- 37.** Artificial Intelligence may process large information for the investor and can come up with most probable recommendations, which may be helpful for the investor in taking investment decision. It can reduce the overall trading cost for the investors; can suggest most appropriate trading strategies for the investors according to the changing scenarios. AI can be used to target specific customer segment and come up with better recommendation. Regulatory considerations regarding use of artificial intelligence and machine learning
- 38.** Regulating artificial intelligence is also termed as supervision. As AI and machine learning is already adopted by financial institutions in some areas like automated customer interactions, risk assessment, credit risk analysis, optimize capital, identify trading opportunities and optimizing trading execution.
- 39.** Regulations are required in areas where there is a third-party dependency, for example if an AI, developed by third party, incurs loss, then who is to be blamed? The third party, or the service provider or the investor. Regulatory authorities worldwide have imposed stricter and various regulations on asset management companies. The proposed measures to increase regulations on the financial services sector:

40. More regulations on reporting norms, and also put more stress on asset management companies to discourage investors to redeem funds at distressed situation in financial market.
41. Just like banks undertake stress testing more often, the financial services sectors should also frequently do stress testing of all the funds they manage.
42. Low tolerance for regulatory breaches by asset management companies, leading to increased fines and increased cost of regulations.
43. This could lead to increased burden of regulation on asset management companies and is going to significantly impact the small players.
44. Minimum qualifications for investment professionals, so that the minimum competency level should be achieved in order to work in an investment advisory firms as well as fund management house.
45. Complete ban on commissions on sale of mutual funds in order to protect consumers. Vi. Increased reporting in order to bring more transparency into the system.
46. Robo-advisors could offer tailor-made customized products for the investors, creating individual tailor-made customized products, could create low correlation among the various other trading strategies, which could lead to greater market diversity in market movements. Low cost of trading and increased efficiency in processing of information could help reduce price misalignments and hence build-up of macro-financial price imbalances. More use of machine learning could lead to lack of data transparency to the consumers, and hence it would be more difficult to explain on how a credit or insurance decision was reached (morganstanley.com²²⁹)

- 47.** The technology sector is continuously growing, so it's true that some of your investments may face some near-term headwinds. However, experts project that in the coming days, technology mutual funds will have the capacity to outperform global equity funds. Hence, if there is one sector you need to keep your eyes peeled for, then this is it!
- 48.** Artificial Intelligence is now being adapted by an increasing number of companies worldwide, and when it comes to financial industry, the asset management companies have already started making use of AI and machine learning. It has led to increased efficiency in operations of the financial institutions and also it has increased overall efficiency of the financial system and economy. More efficient risk management of the investment portfolio, helps to appropriate allocation of funds, also reduce cost of transactions and increase speed of the transactions. With adaptation of digitalization in mutual funds, it has shown a very positive sign of increased participation by the investors. (www2.deloitte.com²³⁰)
- 49.** Demonetization may have initially hampered the financial markets, but soon it witnessed highest ever contributions towards asset base of mutual funds, in the year 2017 as compared to over a decade. Investors can now make direct investments, without involvement of any broker or distributor, soon e-commerce platform will make it even more easier for the investors to invest in mutual funds. New technologies like Blockchain mechanism, robo-analytics, robo-advisors will help the asset management companies to increase their efficiency and performance in future.
- 50.** Distribution channels will utilize more of advanced technologies to make their work efficient and investor friendly.
- 51.** Technologies like robo-advisory can help the customer to have access to wealth of information and they can get personalized advisory at their convenience. However, there would be some challenges, which can be tackled by the active involvement of regulators, in bringing the necessary changes in regulations to be in the favor of the investors, by safeguarding the interest of the i

6.4 EXTENSION FOR FURTHER STUDY

This review covered just the main 5 ELSS reserves and their presentation over a range of 5 years. This investigation can be additionally extended to incorporate more ELSS reserves and a more drawn out time span. The exploration can likewise be ventured into enhanced shared asset classes and contrasting outcomes with choose contrasts. Incorporation of loan cost hazard, business hazard, political danger and unfamiliar trade hazard can set out open doors for additional improvement. Expanding the utilization of extra execution proportions and changed contrasting strategies can work with additional turn of event