



# PARAMETRIC ANALYSIS OF MUTUAL FUND PERFORMANCE: ASSESSING RISK-ADJUSTED RETURNS WITH REFERENCE TO HDFC STANDERD LIFE

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## ABSTRACT

The significance of risk-adjusted return measurements is highlighted in this research, which employs parametric analysis to evaluate mutual fund performance. Returns and other traditional performance measures don't tell the whole story since they don't take risk into account. To evaluate the efficacy of mutual funds in producing returns in relation to risk, this study use statistical methods and parametric models such as the Treynor Ratio, Jensen's Alpha, and the Sharpe Ratio. Data on the Net Asset Value (NAV) of certain equities and hybrid mutual funds over a certain time period forms the basis of the research. Consistency, volatility, and comparative performance are determined by key factors like as standard deviation, beta, and portfolio returns. The results aid investors in locating funds with good risk-adjusted performance, which helps them make better investing choices. Findings from this study suggest that, in the ever-changing world of mutual funds and financial markets, parametric evaluation yields more accurate and useful results for investors.

## I. INTRODUCTION

### INTRODUCTION TO THE STUDY:

#### Parametric Analysis

This technique is used to determine a product's place in the marketplace alongside the competition. Plots are made of different aspects of the product (E.g. the speed of a car against cost) together with the corresponding aspects of competing products. This technique will show relationships between different aspects which are sometimes not immediately obvious or known. In order to be effective, a large number of different plots must be done. Most of these will show no obvious relationships, however a few will reveal strong relationships between different aspects. For instance, if a plot reveals that a product's cost is higher than the competitions when plotted against the speed of the car, this suggests that the targeted cost for the product is too high. This information helps to produce a product design specification for the new product.

This technique has the added advantage that it is relatively inexpensive, because plots are made using readily available published data about competing products. A typical plot is shown. The plot marked anomaly would suggest that this product needs further investigation to reveal why its parameters depart so markedly from competing products.

Mutual Fund Industry which is a relatively of a post-economic reforms phenomena in India, has been expanding during this Period in branch and bound Many commercial banks, insurance companies entered into mutual fund industry apart from foreign players. In the early years of evolution of mutual fund industry in the Indian financial market it was a monopoly and continued to be the same till very recent time. Then many players both foreign and Indian entered in the Mutual Fund Industry.

This increased the competition between the various firms working in the mutual fund Industry The need for developing various new



schemes arises so as to attract investors towards the firm and equally encouraging them to invest. This growth in the Mutual Fund Industry and scope of increasing markets has further increased the competition between the firms in the industry.

The competitions had given rise to demand for specialized products and skills of various individuals who can contribute towards the containment and growth of individual firms in the mutual fund industry. This gave rise to various related organizations and individuals working as specialized teams in the various areas of mutual funds. One such organization is **HDFC Asset Management Company Ltd (AMC)** it comes into pictures where the investors apply for the units in a Mutual Fund schemes and verify the validity and eligibility of the investor and allots the units

The mutual fund companies now receive millions of applications if a new scheme is launched.

This is due to the wide spread awareness created among the urban and rural Population of India. It therefore becomes a Herculean task to Manage the flooding applications However it should be noted that this is a Onetime activity similar to that of a short run project It is needless to State that a given mutual fund firm will not be possessing The technological, human and knowledge resources to take up such a gigantic task, it is in fact not needed by a mutual fund firm to create such a vast organizational structure when it is seen from the point of view scale of economies. Further to this problem, the mutual fund industry does not know where it stands in the current volatile and turbulent environment. This may be the reason they prefer to hire the services of professionals firm with specialized knowledge and Expertise.

These developments have led to an outcome that today, launching of mutual fund scheme has become a well organized activity which is accomplished through the coordinated endeavors of task groups.

The asset management companies have designed various schemes in accordance with the requirements of the various sections on investors on basis of equity linked, debt instruments linked, commodities linked and specific industry linked instruments. The investor today is given a wide range of options to invest in various types of funds according to his interests and capabilities.

Mutual funds enable even a small investor to investor to invest, as most of the mutual funds just start from a minimum amount of investment hence even a small investor can invest into a mutual fund and reap returns in the same proportions as the other big time investors. This shows that mutual fund industry is one which aims at every section of the society. To deal with this large population of investors and the competition, the asset management company has been forced to develop and design new schemes and hire the services of professionals.

mutual fund industry involves various operations from the stage of identification of the target group or defining a market segment, designing a scheme which comes up to the expectations and aspirations of the target group or market segment, reaching the selected market through launching the scheme which is thereby called NFO, till the stage of investing the amount raised in accordance with the norms stipulated with offer document and distributing the returns to the investor by way of dividend, after making adequate provision for taxation and other operating costs. All this process is well organized and performed in a specific order. There are various related organizations which specialize in the activities at various stages of the functioning of the mutual funds.

#### NEED AND IMPORTENCE OF THE STUDY

1. Mutual funds are dynamic financial intuitions which play crucial role in an economy by mobilizing savings and investing them in the capital market.



2. The activities of mutual funds have both short and long term impact on the savings in the capital market and the national economy.
3. Mutual funds, trust, assist the process of financial deepening & intermediation.
4. To banking at the same time they also compete with banks and other financial intuitions.
5. India is one of the few countries to day maintain a study growth rate is domestic savings.

#### SCOPE OF THE STUDY:

The study is limited to the analysis made on two major types of schemes offered by six banks. Each scheme is calculated in term of their risk and return using different performance measurement theories. The reasons for such performance in immediately analyzed in the commentary. Column charts are used to reflect the portfolio risk and return.

#### Objectives of the study:

- **Study of Mutual funds in HDFC Asset Management Company Ltd (AMC)**
- To study the technical, procedural, legal dimensions of the NFO
- To examine briefly the organizational structure, communication network, resource requirements to launch a new fund
- To study a sample of application drawn.

#### Methodology of study:

To fulfill the objective of the study both primary and secondary data has been collected. Primary data is the data collected specifically for the study. Data is collected directly from people and organizations via questionnaires or surveys before being analyzed to reach conclusions concerning the issues covered in the questionnaire or survey.

In this study primary data was collected through interaction with staff of **HDFC Asset Management Company Ltd (AMC)** . and the applications of Reliance equity fund.

Secondary data is the data collected previously by someone else for some other purpose which can be analyzed and interpreted according to requirements. For example, sources of secondary data are government publications, newspapers, worldwide web etc.

In this study the Secondary data is mainly taken from

- \* The company's training material.
- \* Reconciliation statements.
- \* Other documents generated within the organization which have to Access
- \* [www. hdfc.com](http://www.hdfc.com), [www.amfiindia.com](http://www.amfiindia.com),[www.sebi.com](http://www.sebi.com).

#### LIMITATIONS OF STUDY:

\* Analysis of the applications is carried out by taking the applications from Reliance equity Fund. The data available is therefore restricted by the design of the application.

\* The inspection of applications is done on the basis of a sample of 120 applications. Though the sample is drawn randomly, the possibility of sampling fluctuations affecting the findings cannot be ruled out.

\* Numerical data like number of applications received, total subscription amount received, statement of accounts, investor details, etc are not available and therefore a description of these aspects is given.

\* NFO process may not be same for all mutual funds that are released. It may differ from one fund to other depending upon the size like the no. of applications received, subscription amount received, etc.

## II. REVIEW OF LITERATURE



## Parametric and Nonparametric Statistics

When analyzing data for a research project you're often confronted with a decision about what kind of statistical analysis to perform. There are literally hundreds of tests from which to choose and you have to be careful to select the one that is the most appropriate for your data. If you select an inappropriate test then you may make an incorrect interpretation about your data and your manuscript will likely be rejected during a journal review process. Although it is impossible to give a definitive method for selecting appropriate tests in a brief article such as this, one aspect of statistical tests that is often confusing will be discussed – the difference between parametric and nonparametric statistical tests.

When you gather scientific data, one of the first statistics you'll typically calculate is the mean. This statistic is used to indicate average value of a population or sample. If the mean is combined with another common statistic called the standard deviation, then the pair of numbers tells the researcher both the central tendency of the group of numbers and their spread. A large standard deviation reflects a large spread in the data – the numbers are diverse and far apart. A small standard deviation reflects a tightness of the data – the numbers are close together. However, before you can really depend on these statistics to give you accurate information about the data, you're required to make the assumption that the data are normally distributed – that is, if you were to plot the data in a histogram, it would create a graph that looks like the well-known bell-shaped curve. When data behave in this way you can make some simple assumptions about the data. For example, the mean plus or minus one standard deviation contains about 65% of the data, and the mean plus or minus two standard deviations contains about 95% of the data. This information is often used to create a range of values in which you might expect future sampled data to appear.

### New fund offer (NFO):

When a mutual fund asset management company announces Public issue of units of a new fund/scheme it is called a New Fund Offer (NFO).

When a mutual fund company plans for a new fund offer it first informs to the registrar or the back office functions provider like HDFC through email. This is called as “NFO Launching Information Mail” sent by the fund manager of the asset management company to the NFO coordinator of the HDFC. In this Mail the fund manager will ask the NFO coordinator to get ready for the new fund with the required man power and software.

Later they send the sample application form, the key information memorandum (KIM) and offer document to HDFC. This offer document sets forth concisely, necessary information about the scheme for a prospective investor to make an informed investment decision on the scheme described. The offer document contains the salient features of the scheme like NFO opening date, NFO closing date, Scheme name, Scheme class, reopening date, plans available banks involved, number of bank branches involved, minimum amount – fresh purchase, maximum amount – fresh purchase, expected number of applications, entry load and exit load. The unit manager or the NFO coordinator will arrange a meeting where the AMC team, NFO expert's team, Data entry team, Reconciliation team and the dispatch team will discuss and fix the target dates by which the work has to be completed accordingly.

### What is a mutual fund?

Mutual fund is a mechanism for pooling the resources by issuing to the investors and investing funds in securities in accordance with objectives as disclosed in offer document.



Investments in securities are spread across a wide cross-section of industries and sectors and thus the risk is reduced, Diversification reduces the risk because all stocks may not move in the same direction in the same proportion at the same time. Mutual fund issues units to the investors in accordance with quantum of money invested by them. Investors of mutual funds are known as unit holders.

The profits or losses are shared by the investors in proportion to their investment. The mutual funds normally come out with a number of schemes with different investment objectives which are launched from time to time. A mutual fund is required to be registered with Securities and Exchange Board of India (SEBI) which regulates securities markets before it can collect funds from the public. better returns you can consider the following investment avenues that are popular in Indian context

#### **SEBI Guidelines on New Fund Offer:**

##### **1. Procedure for launching of schemes:**

- (1) No scheme shall be launched by the asset management company unless such scheme is approved by the trustees and a copy of the offer document has been filed with the Board.
- (2) Every mutual fund shall along with the offer document of each scheme pay filing fees as specified in the Second Schedule.

##### **2. Disclosures in the offer document:**

- (1) The offer document shall contain disclosures which are adequate in order to enable the investors to make informed investment decision [including the disclosure on maximum investments proposed to be made by the scheme in the listed securities of the group companies of the sponsor].
- (2) The Board may in the interest of investors require the asset management company to carry out such modifications in the offer document as it deems fit.
- (3) In case no modifications are suggested by the Board in the offer document within 21 [working] days from the date of filing, the asset management company may issue the offer document.
- (4) No one shall issue any form of application for units of a mutual fund unless the form is accompanied by the memorandum containing such information as may be specified by the Board.

##### **3. Advertisement material:**

- (1) Advertisements in respect of every scheme shall be in conformity with the Advertisement Code as specified in the Sixth Schedule and shall be submitted to the Board within 7 days from the date of issue.
- (2) The advertisement for each scheme shall disclose [investment objective for each scheme]

##### **4. Misleading statements:**

The offer document and advertisement materials shall not be misleading or contain any statement or opinion, which are incorrect or false.

##### **5. Listing of close ended schemes:**

Every close ended scheme shall be listed in a recognized stock exchange within six months from the closure of the subscription Provided that listing of close ended scheme shall not be mandatory.

- (a) If the said scheme provides for periodic repurchase facility to all the unit holders with restriction, if any, on the extent of such repurchase; or
- (b) if the said scheme provides for monthly income or caters to special classes of persons like senior citizens, women, children, widows or physically handicapped or any special class of persons providing for repurchase of units at regular intervals; or
- (c) If the details of such repurchase facility are clearly disclosed in the offer document; or

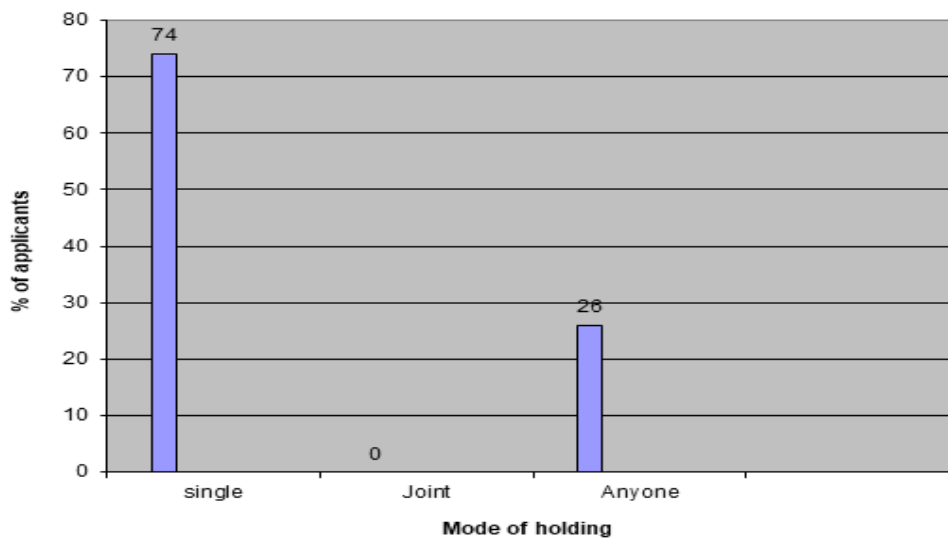


(d) If the said scheme opens for repurchase within a period of six months from the closure of subscription.

### III. DATA ANALYSIS AND INTERPRETATION

#### Holding profile of applicant:

Particulars	Single	Joint	Anyone	Total
No. of applicants	89	0	31	120
% of applicants	74	0	26	100

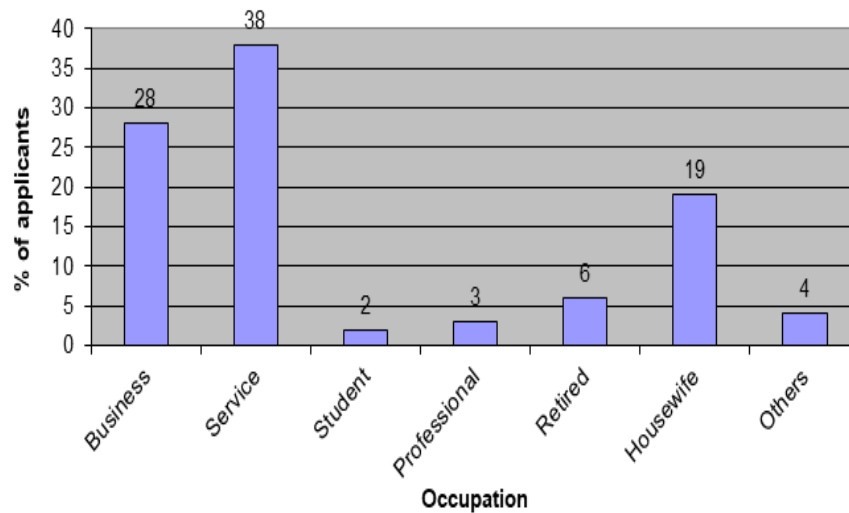


#### Interpretation:

It can be seen that majority of the applicants prefer to hold the allotted units individually and 26% prefer to hold anyone/survivors. This corroborates with the age profile of the applicants.

#### Occupation profile of applicants:

Particular	Business	Service	Student	Professional	Retired	Housewife	Others	Total
No. of applicants	34	46	2	4	7	23	5	120
% of applicants	28	38	2	3	6	19	4	100



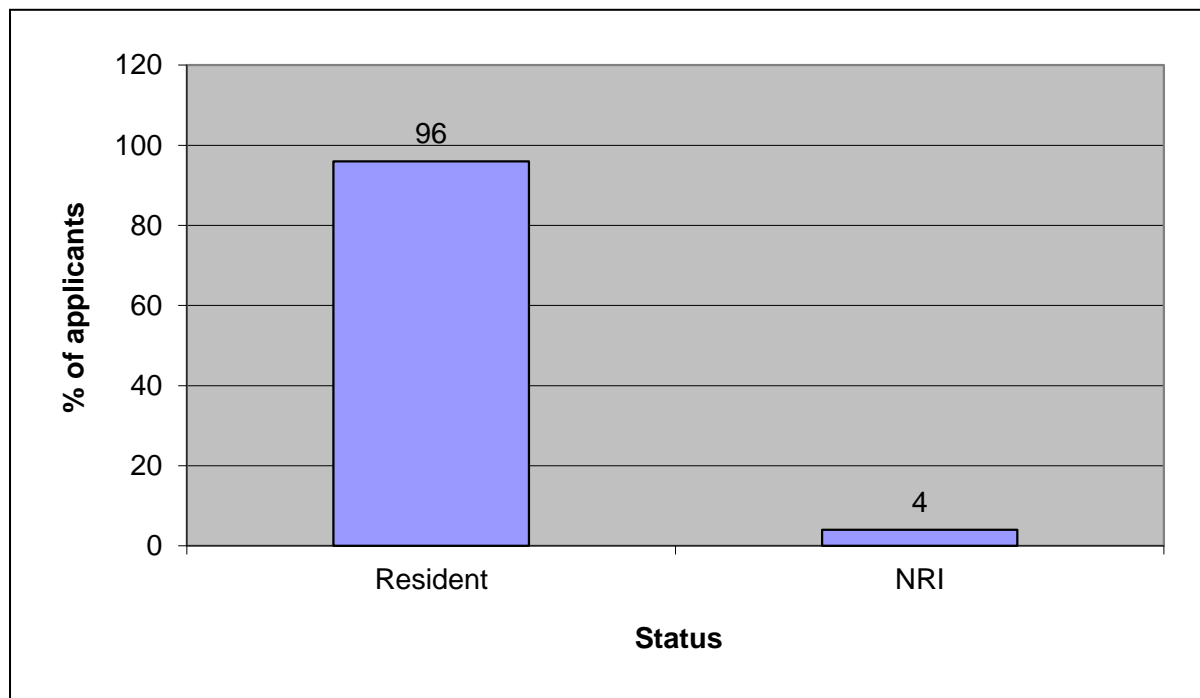
**Interpretation:**

Majority of the applicants are from services personnel at 38%, next comes business People are 28%. The housewife occupy 3<sup>rd</sup> highest at 19%. It is found that professionals and retired are at the lowest.

**STATUS:**

**a) Residential status of individual applicants:**

Particulars	Resident	NRI	Total
No. of applicants	104	4	108
% of applicants	96	4	100



**Interpretation:**



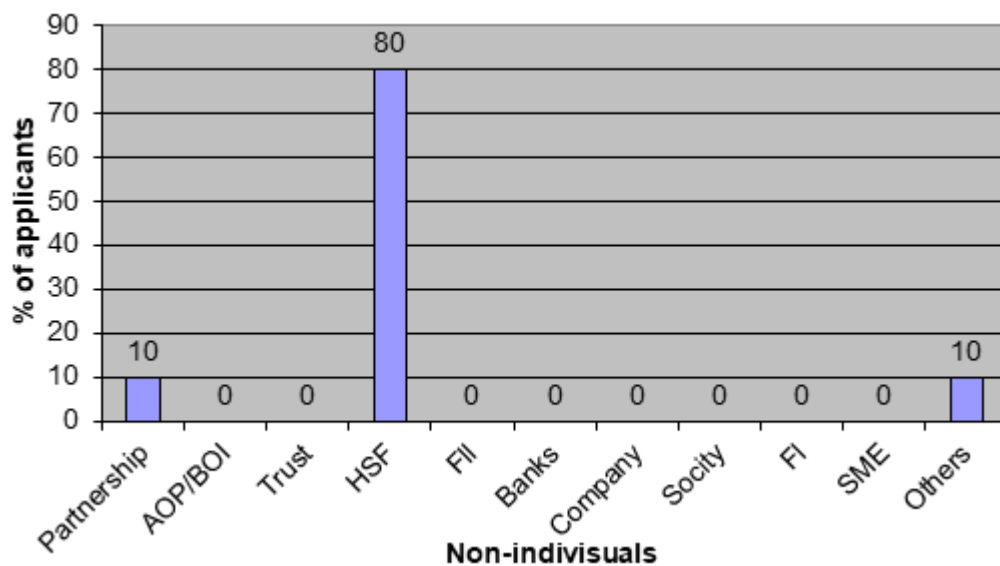


It can be observed from the table and the chart that the majority of applicants are resident individuals constituting 96% the applicants and remaining 4% are the Non-resident Indians.

**b) Status of non-individuals:**

Particulars	Partnership	AOP/BOI	Trust	HUF	FII	Banks
No. of applicants	1	0	0	10	0	0
% of applicants	10	0	0	80	0	0

Particulars	Company	Society	FI	SME	Others	Total
No. of applicants	1	0	0	10	0	0
% of applicants	10	0	0	80	0	0



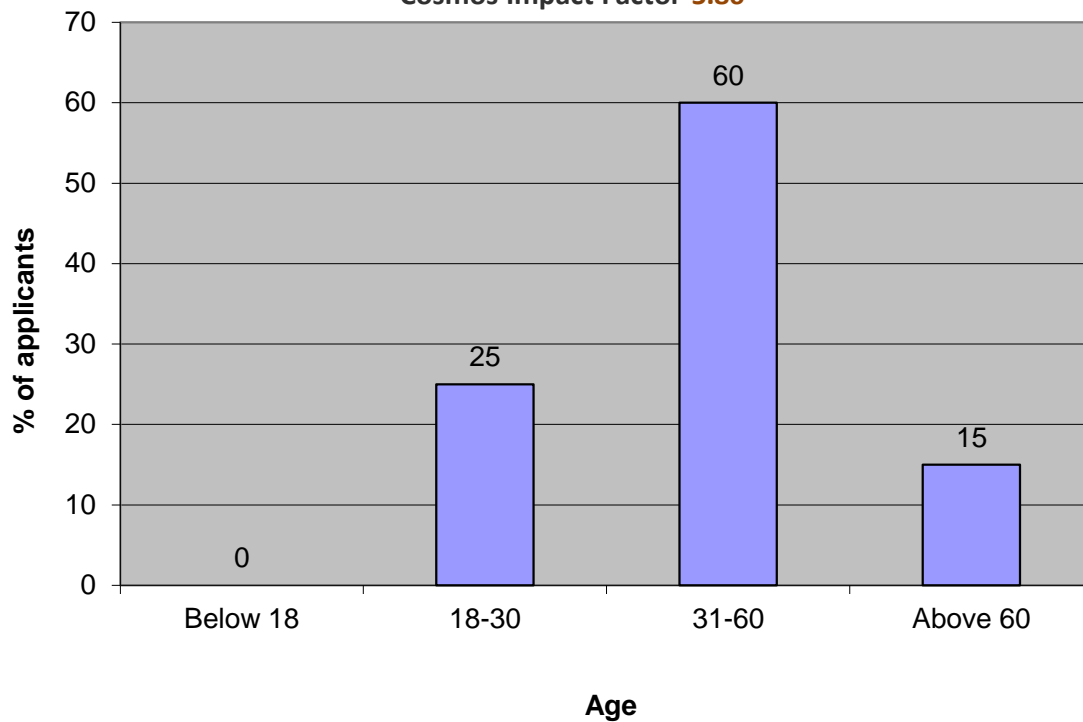
**Interpretation:**

In the non-individuals category HUF occupied the highest at 80% and next 10% is for partnerships. In others category 10% is found and all other non-individual entities have recorded zero applications.

**Age profile of the applicants:**

Particulars	Below 18	18-30	31-60	Above 60	Total
No. of applicants	0	30	72	18	120
% of applicants	0	25	60	15	100



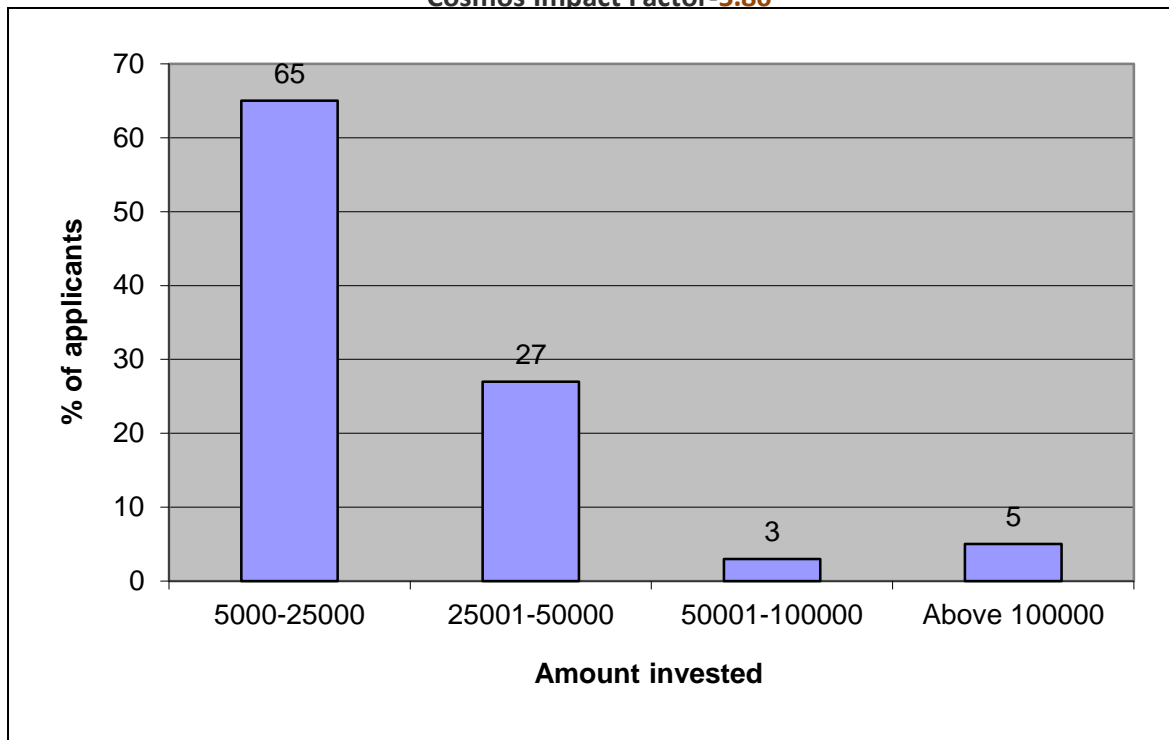


**Interpretation:**

The age profile of the applicants shows that the majority of the applicants fall into the age Group 31-60 years and the percentage of them being 60. This is followed by the age Group 18-30 years and 15% of the applicants are above 60 years.

**Investment profile of the applicants:**

Particulars	5000-25000	25001-50000	50001-100000	Above 100000	Total
No. of applicants	78	32	4	6	120
% of applicants	65	27	3	5	100

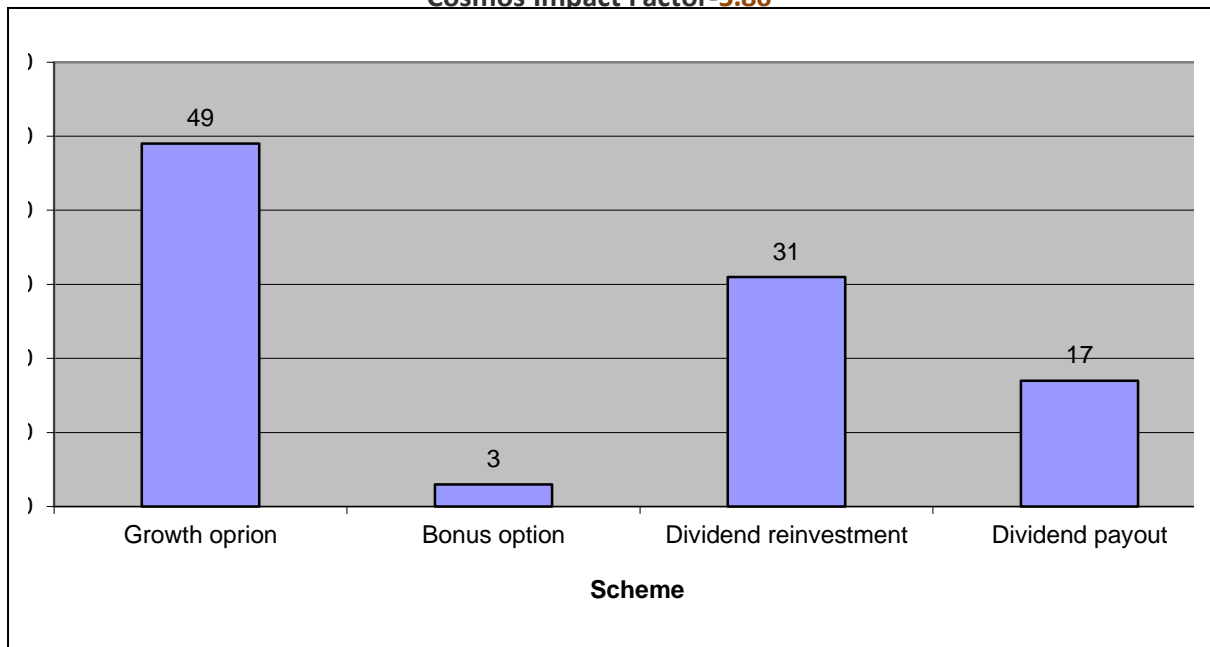


**Interpretation:**

Amount of investment is high at 65% in the range 5000-25000 and it is very low at 3% in 50001-100000, but the next slab. Above 100000 has registered 5%.

**Scheme profile of applicants:**

Particulars	Growth option	Bonus option	Dividend reinvestment	Dividend payout	Total
No. of applicants	59	4	37	20	120
% of applicants	49	3	31	17	100

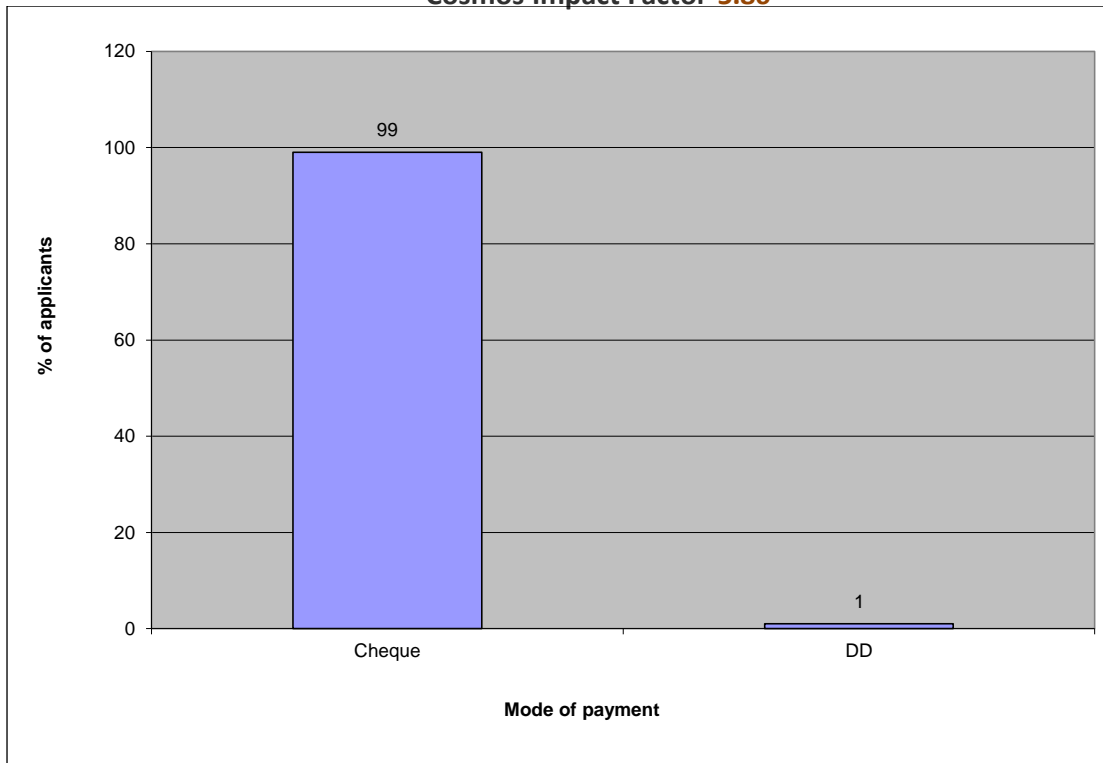


**Interpretation:**

Majority of the applicants Opted the growth option and the option of dividend reinvestment is 31%. This means that 80% of the applicants are not investing for income sake rather they look at the accumulation of profits.

**Analysis of mode of payment:**

Particulars	Cheque	DD	Total
No. of applicants	119	1	120
% of applicants	99	1	100

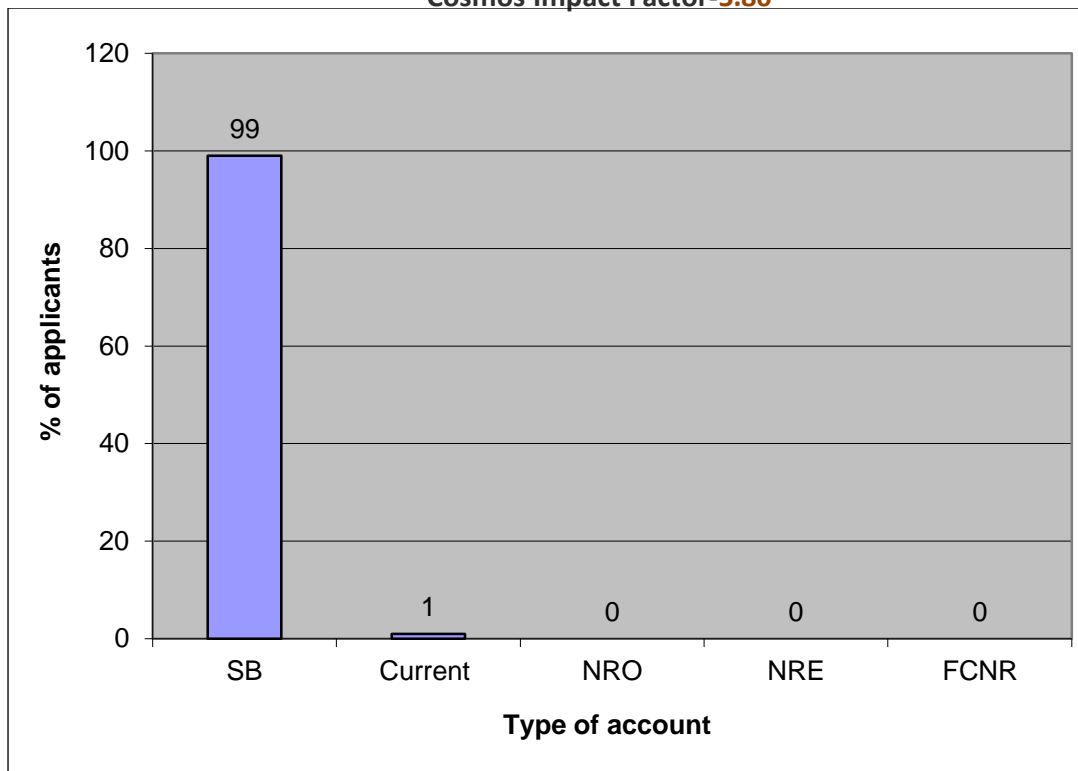


**Interpretation:**

The mode of payment reflects upon the quality of applicants. On an average 99% have paid through cheques and therefore the NFO is able to attract good quality retail investors.

**Analysis of type of account:**

Particulars	SB	Current	NRO	NRE	FCNR	Total
No. of applicants	119	1	0	0	0	120
% of applicants	99	1	0	0	0	100

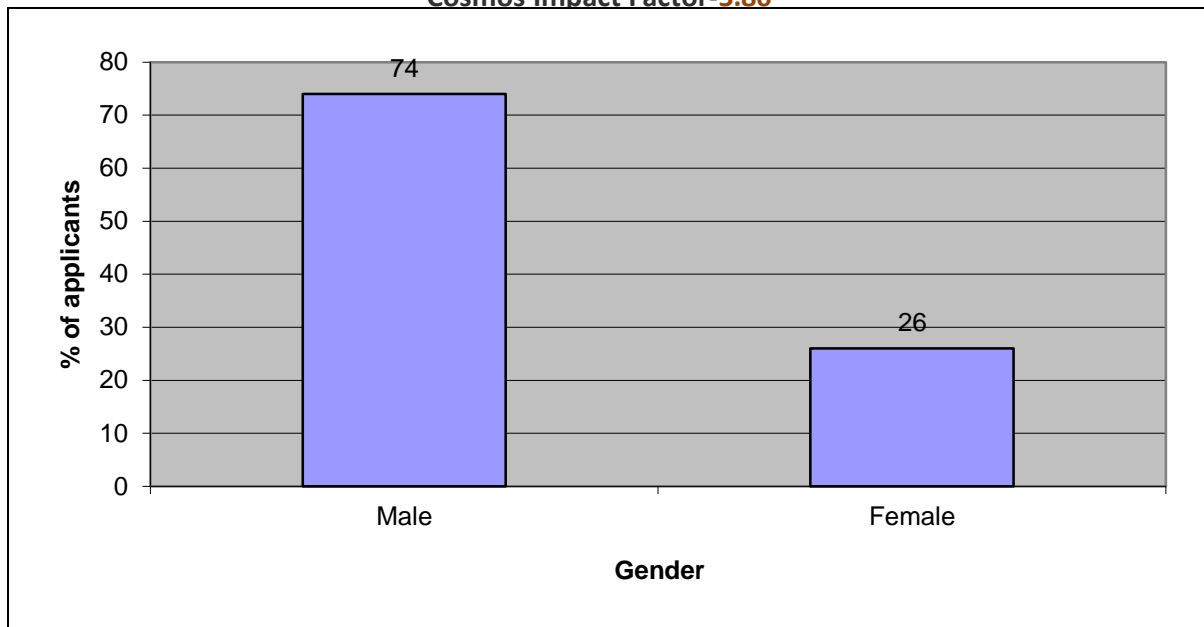


**Interpretation:**

Majority of the payments have been made from Savings Bank account (SB). No payments have been found from NRO, NRE, and FCNR even though 4% of the applicants are NRI s

**Gender profile of the applicants:**

Particulars	Male	Female	Total
No. of applicants	89	31	120
% of applicants	74	26	100



**Interpretation:**

The female participation in the NFO is low at 26%. The male applicants are very high at 76% as is not normally found in institutional investments.

**FINDINGS:**

- \* The NFO is found to be a complex activity calling for creating an organization polling the knowledge and expertise of people in different areas.
- \* The NFO process is simple and well structured as long as it is to investor to investor, but thereafter the process is lengthy time consuming and found to be overlapping at some stages.
- \* The SEBI regulations governing NFO are comprehensive and protect investor's interest at each level.
- \* Different funds have been designing different forms of applications for NFO.
- \* An analysis of sample of applications revealed the following
  - Majority applicants prefer to hold the units individually.
  - Majority of the applicants are in service.
  - NRI s share is about 4% of the total.
  - More than 2/3<sup>rd</sup> of the applicants are HUF s.
  - The model age group is 31-60.
  - The most common investment amount is 5000-25000.
  - About half of the applicants prefer Growth option.
  - Almost all applicants make the payments by cheques.
  - There were no NRO, NRE and FCNR accounts.
  - Majority the applicants are male, and.

**CONCLUSIONS**

- EQUITY FUNDS-SBI MUTUAL FUND has shown to be very successful according to the study's findings.
- Gains might be yours by putting your money into the HDFC GOLD Fund-Growth.
- The HDFC GOLD Fund -Growth is doing well when looking at the big picture.



- Potential backers of mutual funds must be informed about them.
- The industry's management and investors should be open and honest about their goals.
- As a result of global AMCS lining up to join the Indian markets, mutual funds have grown by 100%.
- Rural regions may also be represented by mutual funds.

#### **SUGGESTIONS AND RECOMMENDATIONS:**

- \* Different funds have been using different forms of applications. A standardized form of application maybe designed by the competent authority and should be made mandatory for all funds to use the standard application form.
- \* The NFO process is very complex and there is a need to simplify the process by eliminating certain unnecessary steps in the process ie instead of carrying out audit for three times and appropriate internal check system maybe devised to keep the errors within the tolerance limits.
- \* The NRI subscribers to the fund may be encouraged to make the payments from NRO, NRE and FCNR accounts.
- \* The application from institutional investors and foreign institutional investors are to be encouraged through a package of incentives.
- \* The participation of senior citizens in the NFO s may be encouraged as they are likely to hold more surpluses compared to others.
- \* The holding of units in joint names shall be encouraged.
- \* There is a need to investigate the reasons for HUF s occupying more than 2/3<sup>rd</sup> share in the non-individual applications as its not a body corporate.
- \* A savings from all channels of India / World are to be tapped by the NFO rather than one or two states applying for a loin share of the option.

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