Performance of IPOs - A detailed Analytical Study of IPOs during 2015-20

Ashutosh Sinha

Post Grad student, Liverpool John Moores University

ABSTRACT

Initial Public offering (IPOs) are generally a first time offering of a company's stock to the public. IPOs have had a strong significance all over the world as they act as an essential source of capital for companies to speed up their growth trajectory, as these funds help in the implementing new measures and strategic initiatives necessary for an unperturbed growth. This study includes the analysis of the performance of IPOs for the year [2015-2021] in detail and compares it with the short-term performance of a few select IPOs for the same range so as to understand which IPOs returns were more and is there any common factor leading to the same. The sample for this study includes all the IPOs listed in the Indian market for the selected year range. The resulting parameters of this study help in deriving the factors that led to the success or failure of IPOs in the market and provide a better understanding about the important factors involved throughout, Thus the results showcase factors such as brand awareness, Product placement and business models along with Investor sentiments are interconnected and have an effect on the performance of the IPOs. On the contrary, these findings help assess the current aspects of opportunities that lie in the IPO market with respect to long-term investments.

Keywords: IPO,Performance,Analysis, MAER, ARR, Raw Returns, Market Returns

CHAPTER 1
INTRODUCTION

Financial markets as we know them today are much more efficient in terms of having a streamlined flow of investments that aids in a better economic growth and helps produce surplus of funds with proper planning, which in turn facilitate newer products and services being introduced into the market. With a diligent research catering into the right blend of financial products, services and instruments provides a better overall view of supply and demand in the industry and attracts more investors. The main function of the financial markets involves generating more surplus funds, promoting economic growth and facilitating ease of access to end users and on the same time create a level and transparent environment. Financial markets have variety of instruments ranging from derivatives, options, forex and a lot of other instruments, one such among them is IPO. Initial Public offering (IPOs) is by which a private company lists its stocks on stock exchange for the first time for the public to buy them, and by this company raises funds for itself.

The launch of IPOs are interesting times from an investor's POV, as it gives them the opportunity to buy shares of a certain company for the first time. There are certain risks associated with this kind of investments and numerous research paper have tried to cover those aspects that pose a considerable

amount of risk to investors, if they invest without understanding the functioning of an IPO. Speaking of certain factors that affect the performance of IPOs include market conditions, profit metrics of other companies in the competition, investor sentiments, share market trends, the recent mark price of companies listed at the stock exchange and along with it underpricing of the IPOs along with under subscription and over subscription of IPOs in the initial period.

There is still a fair bit left to analyze and understand under the performance metrics, this study would cover the last mile, that is needed to help an investor understand the working of IPOs in order to line up better decisions with respect to their investments, as and when they decide to invest.

1.1   Background and related research

Initial Public offering, commonly known as IPO is the process where a privately held company decides to go public, basically lists its stocks for the first time on a stock exchange for the public to buy them. This offering is basically for both institutional as well as retail investors (Individual). There are two ways an IPO comes out, one is fixed pricing method and the other being book building method, and the application of an IPO is made through a bidding process and this process basically considers a lot size that has already been specified in the concerned company's prospectus.

Our view on IPOs is quite different today in comparison to what it used to be previously. Basic goal for many companies that are associated with increasing awareness in the market and to be able to attract valuable long term financial growth metrics. There are a lot of factors that the companies need to keep in check, before deciding to go public, as any wrong step might result in devastating consequences. Since IPOs are quite risky to invest in, there are a lot of factors one should assess as an investor.

But the goal that lies in terms of going public has a few distinct reasons, one of the prominent one being able to raise good amount of cash, though this isn't the only reason that excites a company going public, thus a few others are,

1. A lot of companies get better rates on issuing debt
2. They can always issue more shares as long as they aim to stay in the market.
3. They have access to better liquidity as they are trading in open markets.
4. ESOPs have become a new trend today amongst new age unicorn firms, as they attract a lot of fresh talent from the industry.

We have seen numerous instances about short term effects on IPOs on the performance of Mainboard IPOs listed previously, Related works have tried to extrapolate the existing gap and have tried to understand more in depth about the cause of it, Dr S Poornima and Aalaa j Haji (2016) quoted that generally, it's under-pricing and over pricing phenomenon and quote it to be the main reason behind the short-term effects, such as abnormal returns within first few months but there remains a lot more that fails to meet the eye. Sweety Nishant Shah (2015) has quoted several theories like price delegation theory, signalling theory and the theory of winner's curse but the aforementioned one's are way beyond comprehension for someone who's trying their hands on IPOs for the first time and to a certain extent under-pricing has a linear relationship with over subscription. B Ramesh and Poornima Dhume (2015) sought out that over pricing is more prevalent in the long term that what it is in the short term.

IPOs are known to cast a huge impact on a firm's performance and its branding in the short term, despite this there are very researchers who have tried to simplify the research process and outcomes on the short-term performance in the industry. There is a need of analysing a few factors closely to understand a few key factors that otherwise get overlooked vastly.

Out of them, perhaps what common factors are behind a couple of IPOs succeeding or failing at the market needs to be understood, because these are simple yet lethal metrics that one should not fail to consider.

Speaking of factors to be considered that influence buyer decisions in this industry are numerous, a few of them are economic, functional, marketing mix, personal, social and psychological.

Consumer behaviour though indicates several other things like how an individual or group chooses to think about buying, investing and disposing of financial instruments and products that satisfy their needs, thus it becomes an important insight to be considered.

The analysis contains an efficient selection of diverse data, that can help in retain the performance metrics as well as returns yielded by these IPOs under consideration. We hope that this study would be fairly significant to fellow investors, ed-tech firms, new comers under this domain and to a certain extent should help business firms as well in having a simpler and sleek understanding of these prospects. We should be able to derive and evaluate these with respect to the pitfalls will be under consideration as there is very little scope for error as this study will account to several measurements suitable with respect to the data available at hand and compliant to the objectives set, such that the research gap can be addressed in best possible manner.

1.2   Research Questions
1.   Which factors contribute to the success and failure of an IPOs?
2.   Returns if more, does it have any common factor leading to the same across IPOs?

1.3   Significance of the Study
This research has been touted to provide new insights into the performance of IPOs in India as we aim at finding out the factors behind the success or failure of IPOs considering the short-term performance under scrutiny and it would be of great importance to seek out a common factor that leads to a certain performance metric. If we can trace this out and document it in the right sense, it should give us the required insights that other researchers have not focused much upon and the finding would be rather conclusive and should provide great ease for anyone to comprehend and contemplate.

Quoting previous researchers this study adds to the existing data that is there on this topic and we should be able to extrapolate and complement their work in addition to the value add our study brings to the table. Quoting more on the research gap and the research question we have set up, our approach would be to carry out certain analysis that helps us to point out much data backed proofs let alone conclusive evidence that states out clearly, even if not as a whole but up to a certain level which specific factor has contributed and if the factor operated independently or is it backed by an external factor originating from the market itself. Thus, getting a bird's eye level view on may be of this market condition comes forward at times, it will lead to a certain performance change in the IPO market, thus we might reach out towards a predictive model to extrapolate further in the later years or pave a way for other researchers to move forward in our direction and find out more on the same. There's always more to find out on each and every point we make as this data driven domain allows us to run deep and have insights that are waiting to be collected and put to light in a constructive manner.

This study assists in deriving a better overview of imminent factors at play that lead to the success/failure of IPOs through a deep dive on the performance aspects of the same, such that these findings help an investor understand the mechanism and functioning of IPOs in order to line up better decisions with respect to their investments. Moreover, the analysis that is presented in this study will convey valuable information for future research that will explore the various other data sets and facts that are yet to be uncovered and sought after with a different viewpoint.

1.4   Aim and Objectives

The prime aim of this study is to assess the performance of IPOs in India and to understand the major supporting factors behind it. Thus, keeping an eye on the same, the following objective have been framed. Comparative Study and Analysis of short-term performance for IPO'S [2015-2021] in order to derive the prime factors that led to their success/failure in the market and to understand who's returns were more and if there is any common factor leading to the same.

1.5   Problem Statement

The need is to closely look at and monitor the factors that lead to the success and failure of the IPOs and try and triangulate which one is the most prominent one that is occurring repeatedly across the IPOs that have been launched in the Indian Market.

CHAPTER 2
LITERATURE REVIEW

2.0.1   Introduction: It is an overview of the previously published works on a specific topic, the main purpose of this is to provide the researcher or the author and the audiences with a general image of the existing knowledge on the subject under scrutiny.

2.0.2   Review Specifics

The detailed review of the previous publications have been documented below, by keeping few important metrics in mind as per a defined framework.

2.1   Performance of IPOS and factual aspects.

IPOs are a great source of investment when it comes to primary market and can be held in secondary market to maximize returns. Dr.S.Poornima and Aalaa J.Haji (2016) documented the short term and long-term performance of Indian IPOs from the date of offer to the day they got listed at the stock exchange, basically with an initiative to cover the aspect of analysing the returns under both short term and long-term performance and trying to figure out which were more. Researchers took up an analysis of companies listed in NSE and Gulf Base Index, with an aim to cover investment parameters like Raw Returns, Market adjusted Excess Returns, with respect to time constraints involved. Researchers also have quoted that there were other tools available to have a look at like buy and hold abnormal returns, but they would have required a lot of other variables and time to carry out an in-depth process to compute. The sample in use was small and the period of study rather discrete and limited, yet they were able to depict that the factors influencing the under-pricing that led to abnormal returns and an acute study to get the exact reason behind the cause. The results that were captured depicted that IPOs are a good source of investment when it comes

to primary market and can be held at a secondary market to maximize returns, yet there is much room left to try and extrapolate the results to understand the factors at play for influencing under-pricing.

Financial instruments today have much better information symmetry and investors today have access to loads of insights through various sources and can rely on them to make some sound investor decisions. Researchers studied the listing day performance of 113 IPOs for a period of 5 years in between 2010 to 2015 and found that on an average there is some positive return on the listing day itself but given that they also understood that most of the IPOs were under-priced. Sweety Nishant Shah and Disha Harshadbhai Mehta (2015) used Market adjusted abnormal returns along with a t test to understand more about the returns and a regression model to understand the relationship in between under-pricing and other independent variables such as issue price, issue size etc. The tests revealed that the returns in that time period were significantly low than the historic ones and the regression model didn't yield the expected results to comment more on the relationship in between the variables, rather their study suggested that investors can invest in new IPOs initially as most of them are under-priced in the initial days. There is some scope in trying to navigate through the tests done, in order to understand the factors at play and throw some concrete light on the relationship in between the variables. There have been studies that have intended to find out more about the price performance of IPOs listed in India and the sample contained 150 IPOs listed in the primary market. B.Ramesh and Dr. Pournima Dhume (2015) studied both the short term and long-term performance of IPOs with a gap of 1 month, 3 months, 6 months etc. The methodology involved MAER, annualizing factor, wealth relatives to compute various findings. Researchers found a couple of factors which were that over pricing is present in both long run and short run performances in the time period of 3 years from the day of listing, yet short run gains were way higher than what the anticipated market returns were. Thus, if an investor invests and holds them for a stipulated time, it could be known how much he might lose after a certain time period. The overpricing only makes the market sluggish and highly graded IPOs don't give high returns all the time and investors need to look out cautiously and issuer companies need to deviate from aggressive pricing.

Investigations have taken place with respect to the performance of IPOs listed in India during 2013-15 and it had taken into consideration the issue price to last trading price of IPOs to compute the details. A.S.Ambili and Gayatri Krishna (2013) found that on an average return are positive and that the investors are investing on the basis of company image and not fundamental analysis and most of the investors tend to purchase at a lower rate when the issue price and last trading price is compared. The methodology involved computing the percentage change in issue price to LTP and which all variables were impacting the same directly. There are couple of other factors which can be investigated, along with the existing one to understand and derive more in-depth viewpoints on the same. Financial markets contribute much towards the liquidity and overall economic growth of a a nation and it's functioning. This study had an objective of analysing the performance of IPOs in short term and understand the significance of abnormal returns of the IPOs and simultaneously understand more about over subscriptions, profit after tax. T Ramesh Chandra and Aaron Ethan Charles Dsouza (2021) took up 52 IPOs listed on NSE and BSE during the year 2018 to 202. The methodology in use had MAER, Wealth relatives and regression analysis. The results indicated an average IPO return of 14% on the listing day ranging of low -20s to as high as 83% with a standard deviation of about 25%. The empirical analysis reveals that over subscription effects the performance of IPOs along and other factors that are issue price, profit after tax, market conditions and

promoter holdings do not have a significant influence on the performance. This study depicted the performance metrics in a clear and transparent manner to add more original data to existing literature. Another study had the main objective to evaluate the short-term performance of IPOs by taking one month performance into consideration. K bhanu Murthy and Amit kumar singh (2014) wanted to know and check the notion that there is a significant rise in the performance of stocks in the forst 30 days. The sample had 89 IPOs been taken, that had entered the market in the period of 2006 to 2009. Researchers used logistic regression to test the basic hypothesis abd pre-listing metrics that includes a couple of ratios like debt to equity, EPS and market gain to evaluate the performance metrics. Their findings indicate that there is significant rise in performance in the short run , but there after there is a decline observed and perhaps the market over reacts to IPOs at the beginning. In general a theory that suggests that an earlier age at international entry improves the growth prospectus but also decreased survival chances. Researcher's empirical study suggests a a different story which gives rather mixed results. The analysis conducted by Justin Yan and David W. Willams (2020) supports the inverted U relationship in between age at entry and both firm growth and that the IPO performance steepens the growth curve and flattens the survival curve. Their study is based on 4568 firm year observations upon 425 companies based in the United States, and the methods in use included a pooled ordinary test square, weibull survival model with accelerated failure times. In carrying out such an extensive study they have advanced the knowledge about the conditions under which earlier or later internationalization leads some firms to thrive and others hit a dead end. In general terms, under-pricing refers to an IPO being priced way bellow its actual pricing metrics and this study examines the role of IPO under-pricing and its role in influencing the investor attention by understanding the performance in long and short terms. The data in use is collected from securities data company within a period of 2004 to 2014.

Young Boung Chang and YoungOk Kwon (2020) applied a methodology that includes cross sectional analysis of the samples and use of BHAR to calculate the under-pricing metrics along with additional analysis through an auto distributed regression lag model to compute the relationship between in between IT firms and non-IT firms in their way of responding to changes upon the deviation from long term relationship. The results of this study show that IT firms are under-priced more severely than the non it firms. There is an increased investor attention for under-pricing with IT firms and differs in a opposite direction for non-IT firms, and that IT firms see more favourable Post IPO performance than non it firms and with joint impact of BHAR and investor attention the IT firms continue to receive attention from Investors even with under-priced IPOs and this eventually influences the performances of IPOs in the long run.

Researchers factored in a study that aimed at analysing the short and long run performance of the UK market over a period of 1996 to 2016. Researchers took FTSE100 as a measure of stock market index and the monthly number of IPOs were obtained from LSE. Eliana Angelini and Matteo Foglia (2018), used VECM, granger-causality test, Toda-Yamamoto causality test as their aim was to find a relationship in between short run and long run performance and the external factors such as stock market return, market volatility, interest rate etc. Researchers found that there is a positive relationship in between the number of IPOs and Macro economic variables in consideration and firms interested in going public should pay attention to these variables, and an improvement cited by the researchers depicts that this study can be extended to different markets.

The performance of an IPO is basically factored in post listing by taking the current market price and IPO price. The main purpose of this study was to study the long run IPO performance of SME IPOs in India and examine the firm and issue related performance. Nischay Arora and Balwinder Singh (2020) conducted a study on a period that accounted for 3,6,12 months performance by taking time event methodology in to practice that takes account of buy and hold returns and the other methods in use were cumulative abnormal returns and wealth relatives. The sample included 375 IPOs issued during Feb 2012 to May 2018, in addition to the existing methods they have also used ordinary least square regression to investigate the determinants of long run performance. Their findings conclude that smes show long term over performance near about contradicting the international evidences of underperformance and it is evident from the buy and hold abnormal return (BHAR) metrics, however a few other variables were found to have no corelation with the BHAR.

2.2 Price and earnings performance metrics and behavioural factors

Finance is a diverse domain that is often looked at in a different sense in the retrospective and in this study the aim was about looking into the performance of IPOs and understanding the factors that led to under-pricing and over pricing of IPOs in India. The data used for this study included 54 IPOs out of NSE and BSE and were listed in the year 2010.Amongst these IPOs, K.Hema Divya (2013) found that only 2 IPOs used fixed pricing and all other others relied on book building methods, and analytical analysis of these IPOs showed there is a certain amount of over subscription involved which leads to the listing day gains, and that in turn led to higher day 1 gains, Standalone companies used small issue sizes where as big corporates used higher issue sizes to grasp more investors irrespective of industry classification. They focused more on the pricing aspects to determine the performance metrics of the IPOs, on one end fair enough, yet there's a lot more than what meets the eye.

One of the other studies add to the existing literature on the under-pricing from a different angle as it studies the government linkage of corporate governance towards under-pricing. This study comprises an analytical analysis of 404 IPOs in Indian context. Rekha Handa and Balwinder Singh (2017) have used signalling theory and these IPOs have been studied for their broad structures and ownership attributes. The variables board size and board committee exhibit a significant positive relationship to the IPO returns on listing day, though their findings indicate corporate governance factors have a very soft and minimal contribution towards explaining the under-pricing of IPOs that impact their performance, and in turn it signals those investors do not factor much for these while making investment decisions. In terms of Gaps, a different factor could have been taken into consideration for more in-depth insights.

Investment decisions have gained importance more than what it was years ago, and thus awareness of it has led to the working people save more and invest their funds for greater returns in that perspective this study was conducted. Aruna P. and Dr.H.Rajashekar (2016) used the theory of behavioural finance to understand more about the factors at play, and this study concluded that there are several factors at play, and they vary from time to time and place to place and also how this information is presented to an investors and how much risk are they willing to take. And each factor plays a significant role to leave a lasting effect on the performance of investments made.

Not many had embarked on understanding or even trying to look at the earnings performance through the main market IPOs and this study covers the earnings performance of IPOs in India and Deepa Mangla and

Amit kumar singh (2019) have discovered that the earnings performance of IPO countries is abnormally higher in IPO year as compared to post offer period. The methodology in use up here was modified jones model, as that shares good insights on earning management, and the sample included 152 IPOs taken from 2010 to 2014. they have documented that short term over performance of IPOs increases the hopes of potential investors and leads to a subsequent decline of performance in the long run, leaving the investors distraught. This phenomenon has been found to be omnipresent and effects investor across the globe. Their findings also have evidence that IPO year discretionary accruals lead to post IPO – Years under performance of earnings, with a consistent fall in earnings for the next six years.

There are basically two types of methods in terms of pricing the IPOs, in which one being book building method and another is fixed pricing method, though there is always a heavy inclination towards book building method of pricing. Ms Manjari Sharma (2013) aimed at reviewing the IPO process with an in-depth review of the book building process. This study used both theoretical and practical framework to study the process of issuing shares in the Indian capital market, samples taken for this study were secondary in nature and had taken from Sebi, NSE, BSE websites. The results of this research show that the whole process is very complex and this study helps unearth the complex nature of the whole process that is useful for scholars and researchers who wish to understand more about the functioning of it in order to delve deeper into other insights related to the same. The volatile nature of markets has challenged the hypothesis of efficient markets which motivates one to understand the driving force behind it. This study aims at looking more towards the perspectives of investment decisions that influence the performance of markets at the end. Dr. H. Rajashekar (2016) have used the theory of behavioural finance to examine the factors influencing investment decisions of investors. The scope is confined to retail investors only and the data collected for the same was taken from research articles, journals, magazines, and research websites. The results include metrics on risk assessments and information symmetry, how much risk an individual can take on and how much information is accessible to him and if the right information is available to him, thus all the variables in consideration play a significant role, but even then there is no significant point of view available to understand how much each factor contributes towards a specific end result.

2.3 Other viewpoints and farsighted aspects

There is very little information available today in terms of understanding a viewpoint that caters to whether a few activities carried out before the listing day have any effect on IPO perfromance or not. Murat Kizildag and Ozgur Ozdemir (2017) worked upon documenting their findings by analysing few metrics that involved looking into whether pre-franchising activity of issuing firms isn priced in financial makets and results in a pricing differential between franchising and non-franchising firms at the time of IPO and whether the same pehnomenon helps achieve a better post IPO performance compared to non franchisd ones. To test their hypothesis researcheers took their data set from Thomson's one banker data base, which had 100 IPOs in consideration and the methodology in use developed empirical models which used the ordinary least square regression analysis. Thus, with regards to long run performance of IPOs, researchers' find enough evidence to conclude that franchise firms on an average have better return performance compared to those who don't and this reveals several meaningful propositions for the IPO research and related market participants. In order to meet financial needs of companies there are several forms of financing available today, in contrast to traditional ways.

Some studies have done an empirical analysis of the venture capitalist's participation by trying to understand more about the listed companies in the stock market, this channel was not used widely before for the Italian market under consideration. Maurizio Rija (2019), took up IPOs that were carried out in the Italian market on the main list from 2007 to 2017, the main aim was to find out if the role of a venture capitalist's role in performing a certification would reduce information inconsistencies and improve oversubscriptions as under-pricing of IPOs would take place. The methodology involved used standard means of calculating under-pricing and over subscription metrics along with T-tests. The results depicted that there wasn't much difference in between the performances of venture backed IPOs and Non venture backed IPOs. To overcome the Limitations, Researchers have suggested to extend the refrence sample data to furthermore in order to derive more insights.In another study researchers have aimed at examining the post listing day performance of IPOs, which is further subdivided into an analysis of fixed IPOs and book built IPOs. Rsearchers have taken up 464 IPOs in total from the Indian Stock market, and these IPOs went public in between 2001 and 2015. Iqbal Thonse Hawaldar , K.R Naveen Kumar and T. Mallikarujunappa (2018), took up cumulative average abnormal return and annual average returns to examine the post listing performance. The analysis reveals that there is a negative corelation of CAAR's results with the book-built IPOs for around 5 years and beyond and for the fixed priced IPOs the relation turns positive after a certain point of time and continue to be positive thereafter, yet the results suggest that the IPOs are under-priced based on their performance on the day one of trading.

2.4   Summary

Some researchers have critically analysed a few metrics from a specific point of view too critically and a few have analysed rather radical and well-known factors that is omnipresent irrespective of market conditions. Some factors are common across all the studies but all of them have key findings to add into the existing literature. There is also focus onto the lesser-known variables, that is the behavioural factors that in plain sight seem to have less or negligible impact on the performance of IPOs yet studies have found things to be otherwise on the contrary. Common findings don't add much but leave a lot of room intact for further studies to be conducted from a different perspective in order to un earth new things that can help us better understand the world of IPOs and functioning of it, such that investors get to know and understand where to venture and where not to. The Factors that generally or say most likely have a role in producing successful IPOs revolve around a well differentiated product or is a very affordable product or has much preference and demand in the market,

And this is further connected to a large growing market and those who have a unique business model that helps them create strong stock margins and better cash flow generations.

Also, all these companies project a stable growth in terms of revenue, which is visible to the mass outside, and reflects the well-maintained compliance, operational and financial foundations.

CHAPTER 3
RESEARCH METHODOLOGY

3.1   Introduction: It is a defined process of scientific and systematic search for pertinent information or facts on the subject of interest in order to obtain more information or facts on the same.

3.2   Sample Selection: The sample we have considered for our study is based on the following criteria.

a) These companies are listed on NSE website and their pricing data along with other historical data is available and has been taken up for the short-term performance analysis.

b) Mainboard IPOs listed on NSE and BSE were considered for the primary objective.

c) The instrument of issue in use is Equity up here.

d) We relied on money-control to collect more data for the selected year range, Data regarding issue price, listing date, listing day- close price and listing day gain/loss % are available.

To quote the final sample consisted a total of 173 companies for the performance analysis, these IPOs are mainboard IPOs, generally they all got listed in the stock exchange for the first time to be able to offer their stocks to public.

3.3 Time period of this study: This study assesses the performance of mainboard IPOs in India launched during the period from March 2015 to December 2021.

3.4 Sources of data: The data has been considered from both National stock exchange and Bombay stock exchange in order to adhere to our prime aim and objectives set. For other data points with respect to issue price, listing date, listing day- close price and listing day gain/loss % have been collected from secondary websites such as money-control, HDFC Securities and Chittorgarh. This study is solely based on secondary data collected from various websites, and makes this study mostly analytical and to just a very small extent descriptive.

3.5 Data Selection: The data in use has been selected on the basis of the variables that are essential for the analysis to be carried out in the wake of deriving more factual data.

3.6 Research Methodology: This study uses MAER and Annualizing returns and a couple of other ratios, that could be taken into account, subject to change with respect to requirements.

We have seen some similar risk-adjusted ratios that have aided investors assess existing or appealing investments, but this one is preferred over the others as they are simple investment return metrics and don't consider the level of investment risk into account. The risk adjusted returns consider the availability of funds, risk forbearance, and the agility to hold a position for a long time under a risk rigged market. But there is always ample scope left to improve the risk adjusted returns by assessing his stock positions in the concerned market he has decided to enter.

Excess returns are considered as "alpha" or the "abnormal rate of return "the portion of a securities or portfolio's return as we find them to be is something often not given much importance for a much-detailed overview that one would seek from the overall market's rate of return. Rather it is generated by a skilled portfolio manager, and not everyone has the ability or luxury of appointing a portfolio manager.

Mathematically, assessing the excess yield is the rate of return that was found to be more is basically what was expected or was already predicted by the market models. But we rely on is closely related to (CAPM) also known as capital asset pricing model. Whose formula is as follows,

r = Rf + beta * (Rm – Rf) + excess return

Where,   the   variables   are   as   follows,

r =   the   security   or   portfolio   that   has   been   considered   it's   return

Rf =   the   risk-free   rate   of   return.

beta = the security's or portfolio's price volatility relative to the standard overall market metrics
Rm = the market return

Main function of this formula is to help in assessing the return of a certain security or financial instrument under given or expected market conditions. But there is another much simpler form which is known as (MAER), which is also known as market adjusted excess returns and this is the best way to find out and assert for important effects of the event on the general market, though it often does not account or cover for basic CAPM risk and thus gets the local firms systemic risk profile.

This model is a widely accepted model in terms of simplicity and accuracy it provides and thus has become a standard model over time.

3.7 MAER - The excess returns generally denote, how a fund has performed in the market in comparison to a benchmark and the excess return denoted by alpha, gives us the indication if a fund, stock or a security has overperformed or underperformed, and to compute the same, we follow the capital asset pricing model (CAPM) as the benchmark allows us to assess how various funds have performed in relation to the benchmark. Thus, we root for Market adjusted excess returns (MAER) that uses the CAPM model, and has two distinct advantages, the first one being that it takes exclusive account of any risk associated with the market and mean returns and this model is error proof by avoiding certain extra computations which otherwise isn't necessary.

Generally, for the market adjusted model, the best reason to estimate the yield of a market index is at that given time itself, thus while using this model we don't need to worry about taking or considering a time period from an existing estimation model, we can work it out independently as the returns would anyways be equal and correspond to the time period chosen. Thus, whilst proceeding further, we need to take care that the selected data to carry out this calculation has been devoid of any errors.

Any unprecedented results, would be directly related to the stocks in considerations and would also throw light on any event that might have or could have impacted the stocks in the market, therefore we can also understand what that event could have been which lead to such an impact and if it would have the same impact over other stocks as well if it occurs again in the future, and on the contrary abnormal returns outside expectations would depict the market reaction to any event that was unexpected and was out of prediction model.

3.8 Annualizing Factor: it is used to basically forecast the financial performance of an asset, security, fund or a company, thus to annualize a number, we will multiply the short-term rate of return with the no of periods that make one year.

In order to understand and take up the insights out of the analysis, we will use 'One Way Anova' as under statistics, one-way analysis of variance, also known as 'One-way Anova' is often used to compare the means of two or more independent groups in order to check if there exists a significant difference or rather conclusive evidence that suggests that the populations mean are statistically different., as this being a parametric test.

3.9 One Way Anova: To understand more and interpret the data more efficiently, we will be using one-way anova, one way Anova would help us compare the strategic means of two or more means and determine if there exists any statistical and clear difference in between the means of the data set under

observation. Thus, if there exists a difference in between the means, then it would show that our hypothesis would either hold true with respect to the conditions set. Thus, after the examining the data thoroughly, we arrived to set up the hypothesis for our Anova test and the hypothesis being.

3.9 Variable descriptions: -

Issue Price- This is the price at which the shares are offered to the public, when they become available for the public to buy for the first time.

Listing day close Price – It is the closing price of the IPO share.

Gain/Loss% - It is the percentage gain or loss from issue price to the close price.

Open price - The price at which the trade opened on the listing day.

Issue Size – The base issue size is the minimum size of the NCD issue specified by the issuer.

Current Market Price at NSE/BSE- It is the current price of the share at NSE/BSE.

Total: It is the number of times the Issue has been subscribed (BSE + NSE).

CHAPTER 4
ANALYSIS

4.1 Introduction: Screening the data more carefully to understand the best optimization that was possible in order to align it with the variables at hand, that will be in direct use with the selected methodology.

The data set across the years includes a total of 172 IPOs, on which the analysis has been carried out. The IPOs in consideration are all mainboard IPOs that went public and mostly all of them are more or less big brands that have listed their shares on the stock market. On having an overview of the data set, we can see that underpricing exist on majority of the IPOs, thus making it a fixed phenomenon across the years with respect to varying market conditions. All of these 172 IPOs have been Built up through the book building method, thus offering a greater transparency and having led to price discovery, it also offers a way of finding out the intrinsic value of the security being offered.

The table below contains the real data that is in use for the analysis.

4.2 Computations of 2015

Table 4.1, The IPOs of the year 2015

IPO Name	Issue= P0	Listing Close=P1	M0 = market index on the offer date	M1 = Closing market index on the first day of trading
Dr Lal PathLab	550	824.15	25,310.33	25,850.30
Alkem Lab	1050	1381.45	25,310.33	25,850.30
S H Kelkar	180	207.3	27,039.76	25,760.10
Interglobe Avi	765	878.45	27,253.44	25,743.26
Coffee Day	328	270.15	26,779.66	26,559.15

Prabhat Dairy	115	116.35	26,392.38	25,778.66
Sadbhav Infra	103	106.15	26,283.09	25,963.97
Shree Pushkar	65	63	26,032.38	25,622.17
Pennar Eng	178	157.5	26,032.38	25,622.17
Navkar Corp	155	166.4	25,741.56	25,719.58
Power Mech	640	585.75	28,236.39	25,714.66
Syngene Intl	250	155.2	27,561.38	27,866.09
Manpasand Bever	320	163.43	27,729.67	27,573.66
PNC Infratech	378	72.04	27,105.39	27,531.41
UFO Moviez	625	598.8	27,396.38	27,206.06
MEP Infra	63	60.95	27,676.04	26,717.37
VRL Logistics	205	293.3	28,799.69	27,011.31
Inox Wind	325	438	28,622.12	28,885.21
Imagicaaworld	180	191.25	28,709.87	28,504.46
Ortel Comm	181	171.95	29,593.73	28,469.67

The IPO table of 2015, has about 20 IPOs and the supporting data has details of their Issue price, Listing close price and Market data on closing of the offer date and on the first day of trading.

The issue price varies across the companies, with respect to the listing close price, and market condition have remained rather stable. Further drilling down into the computations of raw returns for the year 2015, we notice that the highest raw return was provided by Dr Lal Path Labs amounting to 49.845 and the lowest one has been seen to be of PNC Infratech, which is -80.941, showcased in the table 4.2.

Table 4.2, Raw Returns, Market Return and MAER of IPOs for the year 2015.

IPO Name	Raw Return	Market Return	MAER
Dr Lal PathLab	49.85	2.13	47.71
Alkem Lab	31.57	2.13	29.43
S H Kelkar	15.17	-4.73	19.90
Interglobe Avi	14.83	-5.54	20.37

Coffee Day	-17.64	-0.82	-16.81
Prabhat Dairy	1.17	-2.33	3.50
Sadbhav Infra	3.06	-1.21	4.27
Shree Pushkar	-3.08	-1.58	-1.50
Pennar Eng	-11.52	-1.58	-9.94
Navkar Corp	7.35	-0.09	7.44
Power Mech	-8.48	-8.93	0.45
Syngene Intl	-37.92	1.11	-39.03
Manpasand Bever	-48.93	-0.56	-48.37
PNC Infratech	-80.94	1.57	-82.51
UFO Moviez	-4.19	-0.69	-3.50
MEP Infra	-3.25	-3.46	0.21
VRL Logistics	43.07	-6.21	49.28

Looking in terms of the market returns the highest yield was provided by Dr lal path labs, though it was more or less the same and coinciding with Alkem labs, but with raw returns differing it gave a clear indication, that the MAER of Dr Lal path labs would still stand out higher than others, But the highest MAER was noted for VRL Logistics at 49.28. Lot of listed companies managed to return positive MAERs even with negative market returns. The lowest Market returns were shown by VRL logistics, which was -6.209, yet it outperformed the comparisons heavily by standing out with the best MAER across all other companies listed in the same calendar year.

Signifying that a few firms managed to outperform comparisons where as others underperformed across their listing day.

Table 4.3, The ARR computations for IPOs of 2015

IPO Name	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Dr Lal PathLab	13611%	416%	127%	73%	51%
Alkem Lab	2716%	204%	74%	45%	32%
S H Kelkar	457%	77%	33%	21%	15%
Interglobe Avi	438%	75%	32%	21%	15%
Coffee Day	-91%	-54%	-33%	-23%	-18%

Prabhat Dairy	15%	5%	2%	2%	1%
Sadbhav Infra	44%	13%	6%	4%	3%
Shree Pushkar	-32%	-12%	-6%	-4%	-3%
Pennar Eng	-77%	-39%	-22%	-15%	-12%
Navkar Corp	137%	33%	15%	10%	7%
Power Mech	-66%	-30%	-16%	-11%	-9%
Syngene Intl	-100%	-86%	-62%	-48%	-38%
Manpasand Bever	-100%	-93%	-74%	-60%	-49%
PNC Infratech	-100%	-100%	-97%	-89%	-81%
UFO Moviez	-41%	-16%	-8%	-6%	-4%
MEP Infra	-33%	-13%	-6%	-4%	-3%
VRL Logistics	7710%	327%	107%	62%	44%
Inox Wind	3673%	235%	83%	50%	35%
Imagicaaworld	109%	28%	13%	9%	6%
Ortel Com m	-46%	-19%	-10%	-7%	-5%

The ARR computation for the Year 2015, seemed to be heavy and good enough for investment during the first month of listing or even until first 3 months, the returns were more or less decreasing across one year's timeline. It can be seen that those firms who had already had a great beginning since the listing day had rather substantial number of returns to showcase across the year, even though they were declining

with time, it would have stabilized at some point with respect to market conditions. And those firms that underperformed since the start, saw their returns gradually move towards going positive, possibly an year later where, it should stabilize. In terms of the Highest ARRs, it was seen across VRL logistics which stood at 7710% and lowest was seen across manpasand Beverages and Syngene Intl which stood at -100% respectively, as shown in Table 4.3.

Table 4.4, Basic Statistical Measures for the year 2015.

	Raw Return	Market Return	MAER
Mean	-0.69	-1.72	1.03
Median	-0.95	-1.02	1.98
Max	49.85	2.13	49.28
Min	-80.94	-8.93	-82.51

To summarize upon the Year's performance, we could see that overall Raw returns and Market returns weren't that satisfactory though the average MAER slated towards a positive outlook on the average returns. Average Raw Returns amounted to -0.6927 and Market returns stood at -1.719, whereas MAER compiled up a 1.026 on an average, and as seen in Table 4.4. The Median across Raw returns and Market returns stayed negative, yet MAER slightly banked on a higher side of touching 2. As per the computation suggest, firms with higher Raw returns showcased higher MAER values than the one's in comparison.

Table **4.5**. Basic Statistical Measures of ARR for the year 2015

	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Mean	1411%	48%	8%	1%	-1%
Median	-8%	-4%	-2%	-1%	-1%
Max	13611%	416%	127%	73%	51%
Min	-100%	-100%	-97%	-89%	-81%

The average ARRs were highest during the first month and gradually showcasing a declining trend with increasing investors holding period, as seen in Table 4.5, projecting towards a stable approach for many of the firms after an year, which is clear by looking at the Median computations across the year. The Minimum ARR stayed at 100% and the Max stood at 13611%, with the average ARR on a higher side of 1411% for the year 2015, and the Median showcased a meagre -8% owing to a lot of firms underperforming.

4.3 Computations of 2016

Table 4.6, IPOs of the Year 2016.

IPO Name	Issue Price	Listing Close Price	M0 = Market index on the offer date	M1 = Closing market index on the first day of trading

Laurus Labs	428	96.1	26,392.76	26,374.70
Sheela Foam	730	1032	26,394.01	26,747.18
Varun Beverages	445	205.29	27,836.51	27,591.14
PNB Housing Fin	775	890.6	28,091.42	27,458.99
Endurance Techn	472	647.7	28,220.98	27,984.37
HPL Electric &	202	189.05	28,773.13	28,334.55
ICICI Prudentia	334	297.65	28,634.50	27,865.96
GNA Axles	207	233.45	28,372.23	28,294.28
L&T Technology	860	865.1	28,353.54	28,668.22
RBL Bank	225	299.3	28,077.00	28,452.17
S P Apparels	268	295	27,981.71	28,152.40
Dilip Buildcon	219	251.95	28,003.12	27,859.60
Advanced Enzyme	896	235.66	27,915.89	28,003.12
L&T Infotech	710	697.65	27,626.69	27,710.52
Quess Corp	317	503	26,740.39	27,144.91

Mahan agar Gas	421	519.9	26,812.78	27,144.91
Parag Milk Food	215	247.8	25,101.73	25,399.72
Ujjivan Financi	210	231.6	25,603.10	25,772.53
Thyroc are Techn	446	618.1	26,064.12	25,688.86
Equitas Holdin g	110	135.25	24,883.59	25,880.38
Bharat Wire Rop	45	45.4	24,952.74	25,269.64
Quick Heal Tech	321	254.45	24,287.42	23,649.22
TeamL ease Ser.	850	1021.95	24,539.00	22,986.12
Precisi on Camsh	186	177.25	24,492.39	24,287.42
Naraya na Hruda	250	336.7	25,803.78	25,406.33

The key variables, remain the same across 2016 computations as well, there are around 26 Mainboard IPOs for the year 2016 and the considerations include Issue price, listing open price, listing close price, Market index on the offer date at day end, Closing Market index on the first day of trading. Having a closer look onto Market index for the closing day data on the offer date and first day of trading, mostly shows that the conditions remained similar to what it was in 2015, which was hinting towards limited surplus gains and more volatility, though there is a gradual rise in the index just after first quarter of the year as showcased in Table 4.6, which hints that this should have helped in decreasing the losses.

Table 4.7, Raw Returns, Market returns and MAER of IPOs for the year 2016.

IPO Name	Raw Return	Market Return	MAER
Laurus Labs	-77.55	-0.07	-77.48
Sheela Foam	41.37	1.34	40.03
Varun Beverages	-53.87	-0.88	-52.99

PNB Housing Fin	14.92	-2.25	17.17
Endurance Techn	37.22	-0.84	38.06
HPL Electric &	-6.41	-1.52	-4.89
ICICI Prudentia	-10.88	-2.68	-8.20
GNA Axles	12.78	-0.27	13.05
L&T Technology	0.59	1.11	-0.52
RBL Bank	33.02	1.34	31.69
S P Apparels	10.07	0.61	9.46
Dilip Buildcon	15.05	-0.51	15.56
Advanced Enzyme	-73.70	0.31	-74.01
L&T Infotech	-1.74	0.30	-2.04
Quess Corp	58.68	1.51	57.16
Mahanagar Gas	23.49	1.24	22.25
Parag Milk Food	15.26	1.19	14.07
Ujjivan Financi	10.29	0.66	9.62
Thyrocare Techn	38.59	-1.44	40.03
Equitas Holding	22.95	4.01	18.95
Bharat Wire Rop	0.89	1.27	-0.38
Quick Heal Tech	-20.73	-2.63	-18.10
TeamLease Ser.	20.23	-6.33	26.56
Precision Camsh	-4.70	-0.84	-3.87
Narayana Hruda	34.68	-1.54	36.22

With regards to the process followed, this faction of the study has factored in the RAW returns, Market returns and MAER across all the IPOs for the Year 2016, as showcased in the table 4.7, where it can see that Quess Corp had a positive run on the raw returns amounting to 58.675, followed by Sheela foam and Endurance technologies on 41.36 and 37.22 respectively. A few IPOs showcased a positive run-in term of the Raw returns, whereas Market returns remained not that great throughout. Highest positive market returns were showcased by equitas Holdings, who stood at 4.005 approximately in comparison to 1.5 and 1.3 of Quess Corp and Endurance technologies respectively. More or less the same trend exists in here as well, firms with positive raw returns showcased good runs in terms of MAER computations, Quess corp topping the charts with a 57.16, followed by Sheela foam and Endurance technologies standing at 40.031 and 38.06. Implying strong returns on initial investments and have performed rather decently. A few firms hit quite low in terms of raw returns and MAERs, Advanced Enzymes and Varun beverages had their raw returns in high negatives, which were amounting to -73.69 and -53.86, a showcased in Table 4.7. This indicates that the product placement in the market wasn't done properly, there was less awareness amidst investors in terms of the product knowledge and its sustainability towards the future.

Table 4.8. The ARR computations of the year 2016.

IPO Name	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]

Laurus Labs	-100%	-100%	-95%	-87%	-78%
Sheela Foam	6651%	307%	102%	60%	42%
Varun Beverages	-100%	-96%	-79%	-65%	-54%
PNB Housing Fin	443%	76%	33%	21%	15%
Endurance Techn	4600%	261%	90%	53%	38%
HPL Electric &	-55%	-24%	-13%	-9%	-6%
ICICI Prudentia	-75%	-37%	-21%	-14%	-11%
GNA Axles	332%	63%	28%	18%	13%
L&T Technology	7%	2%	1%	1%	1%
RBL Bank	3119%	218%	78%	47%	34%
S P Apparels	222%	48%	21%	14%	10%
Dilip Buildcon	450%	77%	33%	21%	15%
Advanced Enzyme	-100%	-100%	-93%	-84%	-74%
L&T Infotech	-19%	-7%	-3%	-2%	-2%
Quess Corp	27416%	550%	155%	87%	60%
Mahanagar Gas	1203%	135%	53%	33%	24%
Parag Milk Food	463%	78%	33%	21%	15%
Ujjivan Financi	229%	49%	22%	14%	10%
Thyrocare Techn	5201%	276%	94%	55%	39%
Equitas Holding	1136%	131%	52%	32%	23%
Bharat Wire Rop	11%	4%	2%	1%	1%
Quick Heal Tech	-94%	-61%	-38%	-27%	-21%
TeamLease Ser.	841%	111%	45%	28%	21%
Precision Camsh	-44%	-18%	-9%	-6%	-5%
Narayana Hruda	3643%	234%	83%	50%	35%

The Analysis of ARRs hold the trend good on the aspect that firms with positive Raw returns showcased greater performance for the first month as we can see Quess corp was the firm to beat with a 27416% in ARR followed by 6651% of Sheela foam and 5201% of Thyrocare, as showcased in Table 4.8.These firms created a base for themselves that has allowed them to sustain their dream run for a much longer term, whereas other competing firms who ran negative since the beginning had a long road towards turning positive rather than returning sustainable returns that could excite investors. Advanced Enzyme and Laurus labs both stood at -100% returns, and from the one-year trend the returns though started to move towards a positive end but rather slowly, which meant that market conditions had to improve drastically in order to get a good view of investors.

Table 4.9, Basic Statistical Measures for the year 2016

	Raw Return	**Market Return**	**MAER**
Mean	5.62	-0.28	5.90
Median	12.78	-0.07	13.05
Max	58.68	4.01	57.16
Min	-77.55	-6.33	-77.48

From the summary of Table 4.9, it can be measured that the Average MAER was much better than what it was in the previous year, which is 2015. Average Market returns also saw a better performance in comparison to previous year's average of -.127, and from the average raw return numbers the MAER numbers were near about easier to predict. The Median of MAERs and Raw returns stand close to each other and bring an outright positive outlook, further solidifying the structure that the market conditions improved in 2016. Min and Max numbers for the 3 factions showed improvements as well.

Table 4.10, Basic Statistical Measures of the ARR for the year 2016,

	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Mean	2215%	87%	23%	10%	6%
Median	332%	63%	28%	18%	13%
Max	27416%	550%	155%	87%	60%
Min	-100%	-100%	-95%	-87%	-78%

It can be quoted that Year 2016's ARR were quite good in terms of a longer run point of view, which was evident from the initial analysis. The Average Mean stood at 2215% and Median being at 332% in the first month, but even a year down the line it seemed to retain much of the positive runs, yet the one's on negative seemed to have had a very difficult run to be able to cope up with the losses upfront and a rather slower recovery trajectory, which could worsen anytime, given the changes in investor sentiments.

4.4   Computations of 2017

Table 4.11, IPO data of 2017

IPO Name	Issue =p0	Listing Close = P1	M0 = market index on the offer date	M1 = Closing market index on the first day of trading
Astron Paper &	50	119.7	33,462.97	34,056.83
Future Supply	664	685.8	32,597.18	33,601.68
Shalby	248	239.25	32,802.44	33,462.97
HDFC Life	290	344.25	33,370.76	33,342.80
Khadim India	750	688.5	33,573.22	32,941.87
Mahindra Logist	429	429.15	33,213.13	33,314.56
Nippon	252	284	33,042.50	33,731.19
General Insuran	912	435.2	31,833.99	33,042.50
IEX	1650	162.65	31,846.89	32,506.72
Godrej Agrovet	460	595.55	31,671.71	32,633.64

Prataap Snacks	938	1178.3	31,922.44	31,592.03
SBI Life Insura	700	708	32,400.51	31,497.38
ICICI Lombard	661	681.55	32,272.61	31,159.81
Capacite Infra	250	342.4	32,186.41	31,626.63
Matrimony.com	985	901.2	31,882.16	32,370.04
Bharat Road Net	205	208.15	31,661.97	32,423.76
Dixon Technolog	1766	578.56	31,661.97	32,423.76
Apex Frozen	175	209.85	31,291.85	31,702.25
Cochin Shipyard	432	522	32,575.17	31,213.59
SIS	815	378.35	32,514.94	31,531.33
Salasar Techno	108	272.1	31,804.82	32,228.27
AU Small Financ	358	541.2	30,834.32	31,715.64
GTPL Hathway	170	171.65	31,283.64	31,209.79
CDSL	149	261.6	31,311.57	30,921.61
Eris Life	603	601.05	31,056.40	30,857.52
Tejas Networks	257	263.3	31,155.91	30,958.25
IndiGrid InvIT	100	95.08	30,658.77	31,190.56
PSP Projects	210	208.95	30,658.77	31,109.28
HUDCO	58	72.5	29,926.15	30,464.92
S Chand and Co	670	675.85	30,133.35	29,933.25
Shankara Buildi	460	632.8	29,167.68	29,974.24
CL Educate	500	208.95	29,518.74	29,620.50
Avenue Supermar	299	640.75	28,901.94	29,485.45

Music Broadcast	333	59.7	29,048.19	29,648.99
BSE Limited	806	1069.2	27,117.34	28,240.52

The outlook towards the Indian stock market for 2017, was rather more of going unnoticed. It had been already termed as bullish with respect to investor sentiments. And the market index data for the year shows that dip as we go down in to the third quarter of the year, as shown in table 4.11 and the effects of it on the listings would be rather conclusive as well. There were 36 IPOs considered in the Year 2016 for the further drill down of facts and analysis. There exists stark underpricing that can be easily recognized from the data put up for analysis. A lot of the firms seem to exhibit a greater difference in between the issue price set up and the listing close price. Decrease can only be spotted for a few. Implying that investors responded quite well to a few firms on the day or week of their listing.

Table 4.12, The Raw returns, Market Returns and MAER of the year 2017

IPO Name	Raw Return	Market Return	MAER
Astron Paper &	139.40	1.77	137.63
Future Supply	3.28	3.08	0.20
Shalby	-3.53	2.01	-5.54
HDFC Life	18.71	-0.08	18.79
Khadim India	-8.20	-1.88	-6.32
Mahindra Logist	0.03	0.31	-0.27
Nippon	12.70	2.08	10.61
General Insuran	-52.28	3.80	-56.08
IEX	-90.14	2.07	-92.21
Godrej Agrovet	29.47	3.04	26.43
Prataap Snacks	25.62	-1.04	26.65
SBI Life Insura	1.14	-2.79	3.93
ICICI Lombard	3.11	-3.45	6.56
Capacite Infra	36.96	-1.74	38.70
Matrimony.com	-8.51	1.53	-10.04
Bharat Road Net	1.54	2.41	-0.87
Dixon Technolog	-67.24	2.41	-69.65
Apex Frozen	19.91	1.31	18.60
Cochin Shipyard	20.83	-4.18	25.01
SIS	-53.58	-3.03	-50.55
Salasar Techno	151.94	1.33	150.61
AU Small Financ	51.17	2.86	48.31
GTPL Hathway	0.97	-0.24	1.21
CDSL	75.57	-1.25	76.82
Eris Life	-0.32	-0.64	0.32
Tejas Networks	2.45	-0.63	3.09
IndiGrid InvIT	-4.92	1.73	-6.65

PSP Projects	-0.50	1.47	-1.97
HUDCO	25.00	1.80	23.20
S Chand and Co	0.87	-0.66	1.54
Shankara Buildi	37.57	2.77	34.80
CL Educate	-58.21	0.34	-58.55
Avenue Supermar	114.30	2.02	112.28
Music Broadcast	-82.07	2.07	-84.14
BSE Limited	32.66	4.14	28.51

The trend of companies performing well on having substantiable amount raw returns hold good for this year's data as well. Highest Raw returns touched by Salazar tech at 151.9 followed by Astron paper at 139.4. The lowest in terms of the Raw returns were seen in IEX AT -90 and Music broad cast at -82.07 respectively, as shown in the table 4.12. The Market returns remained sub-par with the highest being touched upon by BSE ltd standing at 4.14 and lowest were by Khadim India which was -1.8. Though MAER held on for the one's on the higher side of Raw returns.

Table 4.13, The ARR Computations of the year 2017.

IPO Name	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]
Astron Paper &	4100085.31%	3346.26%	487.15%	225.52%
Future Supply	48.15%	14.00%	6.77%	4.46%
Shalby	-35.41%	-13.55%	-7.02%	-4.74%
HDFC Life	705.65%	100.45%	41.58%	26.09%
Khadim India	-64.69%	-29.32%	-15.93%	-10.92%
Mahindra Logist	0.43%	0.14%	0.07%	0.05%
Nippon	328.24%	62.38%	27.43%	17.54%
General Insuran	-99.99%	-95.02%	-77.69%	-63.22%
IEX	-100.00%	-99.99%	-99.09%	-95.64%
Godrej Agrovet	2215.56%	184.98%	68.82%	41.79%
Prataap Snacks	1503.90%	152.15%	58.80%	36.12%
SBI Life Insura	14.83%	4.72%	2.33%	1.55%
ICICI Lombard	45.14%	13.22%	6.40%	4.23%

Capacite Infra	4491.30%	258.00%	89.22%	52.99%
Matrimony.com	-66.10%	-30.27%	-16.50%	-11.33%
Bharat Road Net	20.39%	6.38%	3.14%	2.08%
Dixon Technolog	-100.00%	-98.92%	-89.59%	-77.88%
Apex Frozen	811.22%	108.84%	44.52%	27.83%
Cochin Shipyard	899.92%	115.41%	46.77%	29.16%
SIS	-99.99%	-95.55%	-78.90%	-64.57%
Salasar Techno	7632549.77%	4139.27%	551.22%	248.79%
AU Small Financ	15164.04%	434.28%	131.16%	74.84%
GTPL Hathway	12.47%	3.99%	1.98%	1.31%
CDSL	94141.25%	880.06%	213.09%	114.04%
Eris Life	-3.86%	-1.30%	-0.65%	-0.44%
Tejas Networks	34.27%	10.32%	5.03%	3.33%
IndiGrid InvIT	-45.87%	-18.50%	-9.72%	-6.59%
PSP Projects	-5.92%	-2.01%	-1.01%	-0.68%
HUDCO	1410.44%	147.16%	57.22%	35.21%
S Chand and Co	11.16%	3.59%	1.78%	1.18%
Shankara Buildi	4744.34%	264.46%	90.92%	53.91%
CL Educate	-100.00%	-97.09%	-82.95%	-69.26%
Avenue Supermar	1065241.95%	2099.26%	369.03%	180.24%
Music Broadcast	-100.00%	-99.91%	-96.94%	-90.21%
BSE Limited	3013.02%	214.52%	77.36%	46.53%

The Analysis of ARRs hold the trend good on the aspect that firms with positive Raw returns showcased greater performance for the first month as we can see Salasar Tech was the firm to beat with a 7632549%

in ARR followed by Avenue Super at 1065241% as showcased in Table 4.13.These firms created a base for themselves that has allowed them to sustain their dream run for a much longer term, whereas other competing firms who ran negative since the beginning had a long road towards turning positive rather than returning sustainable returns that could excite investors. Music Broadcast and SIS both stood at -100% returns, and from the one-year trend the returns though started to move towards a positive end but rather slowly, which meant that market conditions had to improve drastically in order to get a good view of investors.

Table 4.14 Basic Statistical Measures of the year 2017

	Raw Return	Market Return	MAER
Mean	10.73	0.71	10.03
Median	2.45	1.47	3.09
Max	151.94	4.14	150.61
Min	-90.14	-4.18	-92.21

The average Raw returns stood at 10.73, which is nearly 50% more than previous year, owing to better performance showcased by a few firms through the year and Maximum was of 151.9 for Astron paper, whereas Minimum was of IEX that stood at -90.14, as shown in Table 4.14. There wasn't much difference in average MAER numbers as well, as it was being directly lead on strong raw returns. Market returns showcased a big leap in terms of returning into positives in comparison to both the previous years, which implies, even with the unstable market conditions, it was over all a better year than the previous one's for investors, if they had placed their belief in the right firm at the right time, meaning investments done with proper research.

Table 4.15 Basic Statistical Measures of ARR for the year 2017

	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Mean	542823%	416%	60%	23%	11%
Median	34%	10%	5%	3%	2%
Max	7632550%	4139%	551%	249%	155%
Min	-100%	-100%	-99%	-96%	-90%

The minimums of ARRs stood at -100 and the same trend held up in here, with increase in time, it was rather a slow recovery towards a sustainable positive run, yet the one's that started big were able to retain much of a positive rate through the year. As shown in table 4.15, we can see the mean ARR stood at 416% through to the 2nd month and almost 60% through the half year mark, implying a good run in the market. Though the median for the ARRs even though positive, still stayed quite low, owing to a majority of firms underperforming severely, which further leads to an inference that the product firms failed to get much limelight in order to catch the investor's eye.

4.5 Computations of 2018

Table 4.16, IPOs of the year 2018.

IPO Name	Issue Price	Listing Close Price	M0 = market index on the offer date	M1 = Closing market index on the first day of trading
AAVAS Financier	821	773.15	36,652.06	34,474.38
CreditAccess Gr	422	420.8	37,887.56	38,336.76
TCNS Clothing C	716	657.8	36,373.44	37,494.40
Fine Organics	783	822.8	35,547.33	35,264.41
RITES	185	170.16	35,547.33	35,689.60
Indostar Capita	572	585.5	35,319.35	34,616.13
ICICI Securitie	520	444.9	33,006.27	33,596.80
Mishra Dhatu Ni	90	90	33,136.18	33,019.07
Hindustan Aeron	1215	1128.35	33,176.00	32,968.68
Bandhan Bank	375	477.2	33,685.54	33,174.39
Bharat Dynamics	428	390.7	33,856.78	33,685.54
HG Infra Engg	270	270.05	34,445.75	34,184.04
Aster DM Health	190	179.85	34,300.47	34,445.75
Galaxy Surfacta	1480	1698.1	36,283.25	34,413.16
Amber Enterpris	859	1237.25	35,081.82	36,033.73
Newgen Software	245	253	34,771.05	36,283.25
Apollo Micro Sy	275	454.1	34,433.07	35,798.01

The dataset for 2018, carries 18 IPOs, in which the issue prices varied across companies in a diverse range. The highest being for Hindustan Aeron, standing at 1215 and lowest being with Mishra at 90. Referring to Table 4.16, we can see from the Sensex data that market at the start of the year had better conditions than through to the mid and end of the year, and things looked to be far better in shape with big

opportunities to offer, in general it was said that India was supposed to continue as a strong bull market throughout 2018 and beyond.

Table 4.17, Raw Returns, Market returns and MAER of IPOs for the year 2018.

IPO Name	Raw Return	Market Return	MAER
AAVAS Financier	-5.83	-5.94	0.11
CreditAccess Gr	-0.28	1.19	-1.47
TCNS Clothing C	-8.13	3.08	-11.21
Fine Organics	5.08	-0.80	5.88
RITES	-8.02	0.40	-8.42
Indostar Capita	2.36	-1.99	4.35
ICICI Securitie	-14.44	1.79	-16.23
Mishra Dhatu Ni	0.00	-0.35	0.35
Hindustan Aeron	-7.13	-0.62	-6.51
Bandhan Bank	27.25	-1.52	28.77
Bharat Dynamics	-8.71	-0.51	-8.21
HG Infra Engg	0.02	-0.76	0.78
Aster DM Health	-5.34	0.42	-5.77
Galaxy Surfacta	14.74	-5.15	19.89
Amber Enterpris	44.03	2.71	41.32
Newgen Software	3.27	4.35	-1.08
Apollo Micro Sy	65.13	3.96	61.16

The Raw returns and Market returns were not that satisfactory, yet a few firms managed to outperform comparisons, as raw returns for Apollo micro were the highest that stood at 65.12 and Amber enterprises being at 44.03, followed by Bandhan bank at 27.25 as seen in table 4.17. Market returns were positive for a few and rather negative for majority, the highest Market returns was showcased by Newgen software at 4.34 and the lowest was projected by Aavas financiers that stood at -5.828. As through the previous years, it was seen that the firms with great positive returns, had the edge in terms of sustainable performance, it could be seen that firms that already had higher raw returns retained better MAER numbers in contrast to its comparisons who had definitely had a poor start. Only a few firms managed to exceed their Raw returns by MAER though marginally in their tally.

Table 4.18. The ARR computations of the year 2018.

IPO Name	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
AAVAS Financier	-52%	-22%	-11%	-8%	-6%
CreditAccess Gr	-3%	-1%	-1%	0%	0%
TCNS Clothing C	-64%	-29%	-16%	-11%	-8%

Fine Organics	83%	22%	11%	7%	5%
RITES	-64%	-29%	-16%	-11%	-8%
Indostar Capita	33%	10%	5%	3%	2%
ICICI Securitie	-85%	-47%	-27%	-19%	-15%
Mishra Dhatu Ni	0%	0%	0%	0%	0%
Hindustan Aeron	-59%	-26%	-14%	-10%	-7%
Bandhan Bank	1777%	166%	63%	39%	28%
Bharat Dynamics	-67%	-31%	-17%	-12%	-9%
HG Infra Engg	0%	0%	0%	0%	0%
Aster DM Health	-49%	-20%	-11%	-7%	-5%
Galaxy Surfacta	433%	75%	32%	20%	15%
Amber Enterpris	8373%	339%	110%	64%	45%
Newgen Software	48%	14%	7%	4%	3%
Apollo Micro Sy	44589%	664%	176%	97%	66%

The ARRs comply with the trend as it been noticed across the years, firms with better starts managed to retain a positive rate for the on-going year, whereas others had a run full of struggle, as seen in table 4.18 the highest ARR was projected by Amber, 339% for the first quarter and lowest was seen in Bharat dynamics at -31%.

Table 4.19, Basic Statistical Measures for the year 2018

	Raw Return	Market Return	MAER
Mean	6.116708598	0.015467031	6.101241567
Median	0	-0.35342034	0.113235926
Max	65.12727273	4.349020234	61.16323467
Min	-14.44230769	-5.941494148	-16.2314526

Raw returns dipped for the year 2018, in comparison to the previous year that stood at highs of 10s and the same was seen across MAER as well, as it is evident that the raw returns have a direct impact on the MAER, which is more than that of Market returns, as per the computations seen in Table 4.19, Market reruns had a rather considerable dip from the previous years, this is evident that the market conditions had

begun to be shaky through the year. The Median stood at 0 and Minimum of MAERs went as low as -16.23.

Table 4.20, Basic Statistical Measures for ARRs for the year 2018

	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Mean	3229%	64%	17%	9%	6%
Median	0%	0%	0%	0%	0%
Max	44589%	664%	176%	97%	66%
Min	-85%	-47%	-27%	-19%	-15%

In terms of the ARRs data here the growth path for companies that already had a negative rate, seemed to be getting a gradual yet a faster recovery than the previous year and on the other hand simultaneously it can be seen that the decline in the firms that began big at the beginning had a rather steep decline through the year, The Average ARR declines from 64% for quarter one to just 6% at end of the year and median stayed at 0 throughout the year, looking at Table 4.20, it can also be spotted from the computations that there is a stark fall in the Max and Min ARRs across the years, showcasing that the Market conditions were depleted through to the end of the year.

4.6 Computations of 2019

Table 4.21, IPO data of 2019.

IPO Name	Issue =P0	Listing Close = P1	M0 = market index on the offer date	M1 = Closing market index on the first day of trading
Prince Pipes	178	166.6	41,558.57	41,558.00
Ujjivan Small	37	55.9	40,802.17	40,581.71
CSB Bank	195	300.1	40,359.41	40,850.29
IRCTC	320	145.72	38,667.33	38,214.47
Sterling & Wils	780	725.35	36,976.85	37,328.01
Indiamart Inter	973	1302.55	39,122.96	39,908.06
Neogen	215	263.55	39,054.68	37,789.13
Metropolis	880	959.55	38,877.12	38,905.84
Rail Vikas	19	19.05	38,672.91	38,607.01
Embassy Office	300	314.1	38,095.07	38,877.12
MSTC	128	114.2	37,752.17	38,672.91
Chalet Hotels	280	290.4	35,592.50	36,546.48

Xelpmoc Design	66	58.8	36,108.47	36,582.74

With around 14 Main board IPOs for the year 2019, looking across the predictions for the year, it was said that the strong economic policies and the boom in IT sector owing to the Boom in implementation of AI, would ideally provide a good growth path for the year. Highest issue price was offered by India mart that was 973 and lowest was on offer by Rail Vikas, that being 19. Market index numbers looked promising for the year, even with a slight decline towards the end of the year.

Table 4.22, Raw returns, Market returns and MAER computations data for 2019.

IPO Name	Raw Return	Market Return	MAER
Prince Pipes	-6.40	0.00	-6.40
Ujjivan Small	51.08	-0.54	51.62
CSB Bank	53.90	1.22	52.68
IRCTC	-54.46	-1.17	-53.29
Sterling & Wils	-7.01	0.95	-7.96
Indiamart Inter	33.87	2.01	31.86
Neogen	22.58	-3.24	25.82
Metropolis	9.04	0.07	8.97
Rail Vikas	0.26	-0.17	0.43
Embassy Office	4.70	2.05	2.65
MSTC	-10.78	2.44	-13.22
Chalet Hotels	3.71	2.68	1.03
Xelpmoc Design	-10.91	1.31	-12.22

Across the Raw returns for the year 2019, as seen in the Table 4.22. The computations showcase that the raw returns this year weren't that high in comparison to the previous years, the highest for the current year in consideration stood at 51 for Ujjivan, followed by 33 for India mart. Sighting the MAERs it can be seen that those with higher raw returns showcased higher MAERs, even with a high negative Market return, and where as a few with positive Market returns still managed to show rather poor numbers, still held up the trend upon better the Raw returns, better were the MAER computations. The highest MAERs numbers were pushed by Ujjivan and India mart, and the lowest of the Market returns were supported by Prince pipes that stood at -0.0013.

Table 4.23, ARR computations for the year 2019,

IPO Name	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Prince Pipes	-55%	-24%	-13%	-9%	-6%
Ujjivan	15051%	433%	131%	75%	52%

Small				
CSB Bank	18869%	474%	140%	79%	55%
IRCTC	-100%	-96%	-80%	-65%	-55%
Sterling & Wils	-59%	-26%	-14%	-9%	-7%
Indiamart Inter	3378%	226%	81%	48%	34%
Neogen	1091%	128%	51%	32%	23%
Metropolis	187%	42%	19%	12%	9%
Rail Vikas	3%	1%	1%	0%	0%
Embassy Office	75%	20%	10%	6%	5%
MSTC	-75%	-37%	-21%	-14%	-11%
Chalet Hotels	56%	16%	8%	5%	4%
Xelpmoc Design	-75%	-37%	-21%	-14%	-11%

The trend in ARRs show that there is no steep decline in retaining sustainable earnings through the year, for the firms that began with a great run and the recovery for the firms that started on the negative front was quite spectacular as well. Prince Pipes stood at -24% ARR in quarter 1 but moved up to a single digit number of just -6 through the end of year, and as per the trend should have stabilized somewhere near the end of Q1 in the following year. The same trend was also spotted for a few other firms in the year 2019, as seen in the Table 4.23.

Table 4.24, Basic Statistical Measures for the year 2019

	Raw Return	Market Return	MAER
Mean	6.89	0.59	6.31
Median	3.71	0.95	1.03
Max	53.90	2.68	52.68
Min	-54.46	-3.24	-53.29

The numbers for the year 2019, improved slightly than what it was for the previous year, better raw returns supported better MAER computations, though Average Market returns stayed low, the Median number were highly encouraging for the Market returns, when compared to the previous year, which was -0.54. It is quite evident the market conditions were much better for investment strategies to be implemented in the ongoing year, before it turned bearish again, owing to several external factors.

Table 4.25, Basic Statistical Measures of ARRs for the year 2019

	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Mean	2950%	86%	22%	11%	7%
Median	56%	16%	8%	5%	4%
Max	18869%	474%	140%	79%	55%
Min	-100%	-96%	-80%	-65%	-55%

In contrast to the Raw and Market returns and MAER details, it could be seen that the firms that had started on a negative front at the start of the first quarter had much difficulty in decreasing the losses through to the end of the year. But those who had begun on a positive note, retained better percentages of returns through the year, The Median of ARRs continued to stay rather conclusively better even at towards the fag end of the year, with a 4% on the positive note.

4.7 Computations of 2020

Table 4.26, IPOs during the Year 2020.

IPO Name	Issue Price	Listing Close Price	M0 = Market index on the offer date	M1 = Closing market index on the first day of trading
Bectors Food	288	595.55	46,263.17	46,973.54
Burger King	60	138.4	44,618.04	46,253.46
Gland	1500	1820.45	42,597.43	43,882.25
Equitas Bank	33	32.75	40,544.37	39,757.58
Mazagon Dock	145	173	37,973.22	40,593.80
UTI AMC	554	476.6	37,973.22	40,593.80

Angel One	306	275.85	37,734.08	38,973.70
Chemcon Special	340	584.8	38,034.14	38,697.05
CAMS	1230	1401.6	38,034.14	38,697.05
Route	350	651.1	38,193.92	38,034.14
Happiest Minds	166	371	38,417.23	38,979.85
Rossari	425	742.35	36,693.69	38,140.47
SBI Card	755	683.2	38,144.02	31,390.07

This year was rather a difficult one, with Pandemic taking over and impacting the market directly. Indian stock market was running quite great until Feb 2020, but crashed after Feb, from having a peak of 42,273, was reduced to 25638 by 23 March. This was one of the fastest crashes in the history which even topped the 2008's drop.

The drop wasn't just due to the Pandemic, another key factor was that of bad loans that caused the shares of Yes bank to fall and also cases leading to corruptions, all these coupled with the US & EU markets facing a drop.

There were 14 Main board IPOs, refer to Table 4.26. that have been taken up for the study and the market data shows the steep fall from Q1 through to Q3. Even though the issue prices were set differently closing price was rather conclusive.

Table 4.27, Raw Returns, Market returns and MAER of 2020.

IPO Name	Raw Return	Market Return	MAER
Bectors Food	106.79	1.54	105.25
Burger King	130.67	3.67	127.00
Gland	21.36	3.02	18.35
Equitas Bank	-0.76	-1.94	1.18
Mazagon Dock	19.31	6.90	12.41
UTI AMC	-13.97	6.90	-20.87
Angel One	-9.85	3.29	-13.14
Chemcon Special	72.00	1.74	70.26
CAMS	13.95	1.74	12.21
Route	86.03	-0.42	86.45
Happiest Minds	123.49	1.46	122.03
Rossari	74.67	3.94	70.73
SBI Card	-9.51	-17.71	8.20

Firms that were listed at the beginning of the year had better Raw returns than a few who went live at the middle of the year, and a few managed to rack up positive returns through to Q3 and Q4. The highest raw returns were showcased by burger king, that stood at 130.66, followed by happiest minds at 123.49, refer Table 4.27 for the same. All those with great Raw returns preserved better MAER's when the market returns weren't that great. Though Market returns seemed to be responsive due to market volatility and sensitivity it carried at that point of time. The highest Market return was seen across UTI AMC Which stood at 6.901 and coming to MAER case, it was the best of all for burger king at 127.001.

Table 4.28, The ARR computations of the year 2020

IPO Name	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Bectors Food	690142%	1803%	336%	167%	109%
Burger King	2608675%	2864%	445%	210%	133%
Gland	955%	119%	48%	30%	22%
Equitas Bank	-9%	-3%	-2%	-1%	-1%
Mazagon Dock	757%	105%	43%	27%	20%
UTI AMC	-84%	-46%	-26%	-18%	-14%
Angel One	-72%	-34%	-19%	-13%	-10%
Chemcon Special	73296%	802%	200%	108%	73%
CAMS	390%	70%	30%	19%	14%
Route	190435%	1139%	252%	131%	88%
Happiest Minds	1776204%	2508%	411%	197%	126%
Rossari	88430%	860%	210%	113%	76%
SBI Card	-70%	-33%	-18%	-13%	-10%

Relying of the Market conditions ARRs rather complied to it, the best returns were seen at the start of the year and some recovery through to Quarter 3 and Quarter 4.

Those at the top seemed to have retained well and along with that whoever started on the negative end, moved quickly towards recovering much of the losses towards the end of the year. The highest ARR was

seen across Burger King for the Q1 that stood at 2864% and the lowest one was for UTI AMC that stood at -46%. Refer Table 4.28.

Table 4.29, Basic Statistical Measures of the year 2020.

	Raw Return	Market Return	MAER
Mean	47.24	1.09	44.68
Median	21.36	1.74	21.25
Max	130.67	6.90	129.13
Min	-13.97	-17.71	-20.87

Referring to table 4.29, It can be seen that the average Market returns dropped starkly in comparison to the previous years, amounting to 1.087. Though Raw returns and MAER nos stayed in the trend. The Median for Raw Returns and MAER stayed near to each other indicating that there was some improvement in terms of the returns owing to the severe downfall faced at the beginning of the year.

Table 4.30, Basic Statistical Measures of ARRs for the year 2020

	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
Mean	417619%	781%	147%	74%	48%
Median	955%	119%	48%	30%	22%
Max	2608675%	2864%	445%	210%	133%
Min	-84%	-46%	-26%	-18%	-14%

Average ARR seemed to stay positive and hold good for the calendar year, in case of Median no's they looked attractive as well from an investor's point of view. The numbers on either faction didn't seem to fall much in comparison to the previous year's standpoint. The maximum for Q1 held at 2864% and the Minimum stood at -46%.

4.8 Computations of 2021

Table 4.31, The IPOs of the year 2021

IPO Name	Issue= p0	Listing Close = P1	M0 = market index on the offer date	M1 = Closing market index on the first day of trading
Sapphire Foods	1180	1216.05	60433.45	59,636.01
One 97(Paytm)	2150	1564.15	60,545.61	59,636.01
PB Fintech	980	1202.9	60,138.46	60,718.71
SJS Enterprises	542	509.85	60,138.46	60,718.71

Sigachi Ind	163	603.75	60,138.46	60,718.71
FINO Payments	577	545.25	59,306.93	60,686.69
FSN E-Co(Nykaa)	1125	2206.7	59,984.70	60,352.82
ABSL AMC	712	699.65	59,413.27	60,135.78
Paras Defence	175	498.75	59,005.27	58,765.58
Sansera Eng	744	818.7	58,247.09	60,048.47
AMI Organics	610	934.55	57,338.21	58,247.09
Vijaya Diagnost	531	619.3	57,338.21	58,247.09
APTUS VALUE	353	374.05	54,554.66	55,958.98
CHEMPLAST SANMA	541	534.9	54,554.66	55,958.98
Nuvoco Vistas	570	531.3	54,402.85	55,555.79
CarTrade Tech	1618	1500.1	54,402.85	55,329.32
Krsnaa Diagnost	954	990.75	54,369.77	55,582.58
Devyani Int	90	123.35	54,369.77	55,582.58
Exxaro Tiles	120	132.25	54,369.77	55,582.58
Windlas Biotech	460	406.7	54,369.77	55,792.27
Rolex Rings	900	1166.55	52,443.71	54,402.85
Glenmark Life	720	748.2	52,578.76	54,277.72
Tatva Chintan	1083	2310.25	53,140.06	52,653.07
Zomato	76	125.85	52,904.05	52,975.80

Clean Science	900	1585.2	53,054.76	52,553.40
G R Infra	837	1746.8	53,054.76	52,553.40
India Pesticide	296	335.45	52,306.08	52,880.00
Krishna Inst.	825	1096.8	52,501.98	52,735.59
Dodla Dairy	428	609.1	52,501.98	52,735.59
Shyam Metalics	306	375.85	52,551.53	52,699.00
Sona BLW	291	362.85	52,551.53	52,699.00
PowerGrid InvIT	100	102.98	49,765.94	49,580.73
Macrotech Dev	486	463.15	49,661.76	48,080.67
Barbeque Nat	500	590.4	49,180.31	49,661.76
Nazara	1101	1576.8	49,801.62	50,136.58
Suryoday Small	305	276.2	49,801.62	49,858.24
Kalyan Jeweller	87	75.3	50,363.96	49,008.50
Craftsman	1490	1433	50,395.08	48,440.12
Laxmi Organic	130	164.6	50,395.08	48,440.12
Anupam Rasayan	555	525.9	50,792.08	49,180.31
Easy Trip	187	208.3	50,441.07	49,858.24
MTAR Tech	575	1082.25	51,444.65	50,395.08
Heranba	627	812.25	50,255.75	50,405.32
Railtel	94	121.4	52,104.17	49,099.99
Nureca	400	666.65	52,154.13	51,039.31
Stove Kraft	385	445.95	48,347.59	50,731.63
Home First	518	527.4	49,624.76	50,255.75

Indigo Paints	1490	3118.65	49,792.12	49,797.72
IRFC	26	24.85	48,564.27	46,285.77
Antony Waste	315	407.25	45,553.96	47,868.98

This was a rather happening year, after last year's distraught, many companies who had deferred their listings for the past year, went public this year, to quote there were 52 Firms that went public in 2021. The jump in Market index was led by a great growth seen across the public sector lenders that amounted to approximately 80% in net profit and a decline in bad loans. The highest the Indian stock market touch was in Feb 2021, that was 52516.76. looking across **Table 4.31**, the data showcases that similar to the previous year, Q1 looked solid in terms of market conditions. With a gradual drop through the year, but not what it had been the previous year. It was expected that the economy would return to normalcy due vaccination drives and the policies of US that were slated to have a direct impact on the economy. Paytm saw a crash in closing price whereas Nykaa seemed to be a winner by deploying their go to market strategies in the best way possible. Many firms had their closing prices go up in comparison to their issue price. This indicates the demand for the products in the market and the degree of investor awareness, that was present.0.

Table 4.32, The Raw returns, Market Returns and MAER of the year 2021

IPO Name	Raw Return	Market Return	MAER
Sapphire Foods	3.06	-1.32	4.37
One 97(Paytm)	-27.25	-1.50	-25.75
PB Fintech	22.74	0.96	21.78
SJS Enterprises	-5.93	0.96	-6.90
Sigachi Ind	270.40	0.96	269.43
FINO Payments	-5.50	2.33	-7.83
FSN E-Co(Nykaa)	96.15	0.61	95.54
ABSL AMC	-1.73	1.22	-2.95
Paras Defence	185.00	-0.41	185.41
Sansera Eng	10.04	3.09	6.95
AMI Organics	53.20	1.59	51.62
Vijaya Diagnost	16.63	1.59	15.04
APTUS VALUE	5.96	2.57	3.39
CHEMPLAST SANMA	-1.13	2.57	-3.70
Nuvoco Vistas	-6.79	2.12	-8.91
CarTrade Tech	-7.29	1.70	-8.99
Krsnaa Diagnost	3.85	2.23	1.62
Devyani Int	37.06	2.23	34.82
Exxaro Tiles	10.21	2.23	7.98
Windlas Biotech	-11.59	2.62	-14.20
Rolex Rings	29.62	3.74	25.88
Glenmark Life	3.92	3.23	0.69

Tatva Chintan	113.32	-0.92	114.24
Zomato	65.59	0.14	65.46
Clean Science	76.13	-0.94	77.08
G R Infra	108.70	-0.94	109.64
India Pesticide	13.33	1.10	12.23
Krishna Inst.	32.95	0.44	32.50
Dodla Dairy	42.31	0.44	41.87
Shyam Metalics	22.83	0.28	22.55
Sona BLW	24.69	0.28	24.41
PowerGrid InvIT	2.98	-0.37	3.35
Macrotech Dev	-4.70	-3.18	-1.52
Barbeque Nat	18.08	0.98	17.10
Nazara	43.22	0.67	42.54
Suryoday Small	-9.44	0.11	-9.56
Kalyan Jeweller	-13.45	-2.69	-10.76
Craftsman	-3.83	-3.88	0.05
Laxmi Organic	26.62	-3.88	30.49
Anupam Rasayan	-5.24	-3.17	-2.07
Easy Trip	11.39	-1.16	12.55
MTAR Tech	88.22	-2.04	90.26
Heranba	29.55	0.30	29.25
Railtel	29.15	-5.77	34.91
Nureca	66.66	-2.14	68.80
Stove Kraft	15.83	4.93	10.90
Home First	1.81	1.27	0.54
Indigo Paints	109.31	0.01	109.29
IRFC	-4.42	-4.69	0.27
Antony Waste	29.29	5.08	24.20

The list of Firms that went Public this year is a long one and on-going through Table 4.31, We can assess that market returns ranged from a low of -3.8 to a high of 5.08, which seems to be quite a long overhaul. The Raw returns were quite great this year, as there were majority of the firms that ended on the positive end and a few went negative. The raw returns ranged from a low of -27 for PAYTM to a high of 270 for sigachi ltd. The Impact of Raw returns were rather conclusive on the parameters that came up for MAER computations for the year. Sigachi retained the highest spot for MAERs with a 269.4, followed by Paras defence on 185. Overall, the trend remained intact across the data set in consideration. There are a few exceptions where negative market returns have resulted in a positive outcome towards the MAER. The IPOs raised a total of Rs 1.11L crore through the Mainboard IPOs beating the previous best of 2017-18, that had stood at 81553 Crore. This was factored in by the new age loss making startups, very huge retail participation that in turn resulted in a better listing gain at the beginning.

Table **4.33**. ARR computations for the year 2021

IPO Name	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]
Sapphire Foods	44%	13%	6%	4%
One 97(Paytm)	-98%	-72%	-48%	-35%
PB Fintech	1110%	130%	52%	32%
SJS Enterprises	-52%	-22%	-12%	-8%
Sigachi Ind	829855034%	20128%	1323%	487%
FINO Payments	-50%	-21%	-11%	-7%
FSN E-Co(Nykaa)	362938%	1436%	292%	149%
ABSL AMC	-19%	-7%	-3%	-2%
Paras Defence	34205516%	6889%	736%	312%
Sansera Eng	220%	47%	21%	14%
AMI Organics	17856%	464%	138%	78%
Vijaya Diagnost	550%	87%	37%	23%
APTUS VALUE	102%	26%	12%	8%
CHEMPLAST SANMA	-13%	-4%	-2%	-2%
Nuvoco Vistas	-57%	-25%	-13%	-9%
CarTrade Tech	-60%	-26%	-14%	-10%
Krsnaa Diagnost	58%	17%	8%	5%
Devyani Int	4530%	259%	89%	53%
Exxaro Tiles	226%	48%	22%	14%
Windlas Biotech	-78%	-39%	-22%	-15%
Rolex Rings	2248%	186%	69%	42%
Glenmark Life	60%	17%	8%	5%
Tatva Chintan	1007561%	2059%	365%	179%

Zomato	46144%	673%	178%	98%
Clean Science	97884%	893%	215%	115%
G R Infra	771820%	1875%	345%	170%
India Pesticide	358%	66%	29%	18%
Krishna Inst.	3097%	217%	78%	47%
Dodla Dairy	7220%	318%	105%	61%
Shyam Metalics	1120%	130%	52%	32%
Sona BLW	1366%	145%	56%	35%
PowerGrid InvIT	43%	13%	6%	4%
Macrotech Dev	-44%	-18%	-9%	-6%
Barbeque Nat	655%	96%	40%	25%
Nazara	7805%	329%	107%	63%
Suryoday Small	-70%	-33%	-18%	-13%
Kalyan Jeweller	-83%	-44%	-25%	-18%
Craftsman	-38%	-15%	-8%	-5%
Laxmi Organic	1666%	160%	61%	38%
Anupam Rasayan	-48%	-20%	-10%	-7%
Easy Trip	272%	55%	24%	16%
MTAR Tech	219577%	1199%	261%	135%
Heranba	2233%	186%	69%	42%
Railtel	2147%	182%	68%	41%
Nureca	49915%	694%	182%	99%
Stove Kraft	498%	81%	35%	22%
Home First	24%	8%	4%	2%
Indigo Paints	799614%	1899%	347%	171%
IRFC	-42%	-17%	-9%	-6%
Antony Waste	2176%	183%	68%	42%

The ARR Computations were rather solid for the calendar year, with majority of the firms holding substantial returns at the end of Quarter 2 owing to a great start they had with the help of recovering market. Sigachi, Paras defense and Indigo paints were among the top firms that held great percentage of

ARRs owing to 1323%, 736% and 347% respectively. Their returns allowed them to sustain well through to the next year, keeping the investors interested in holding their money for a longer while. On the other hand, those running negative seemed to reduce their loss quite effectively across the year, by this model, possibly it can be predicted that they would have returned positive and also would have stabilized somewhere down to Q1 end in 2022.

Table 4.34, Basic Statistical Measures for the year 2021

	Raw Return	**Market Return**	**MAER**
Mean	32.23	0.31	31.92
Median	16.63	0.44	15.04
Max	270.40	5.08	269.43
Min	-27.25	-5.77	-25.75

The mean across the 52 mainboard IPOs for the Factions inclusive of Raw returns and MAER stayed on a high of 30s, to be precise 32.229 for Raw returns and 31.917 for MAER, along with Market returns standing positive at an average of 0.311. This showcased a positive outlook for a high number of firms that went public for the calendar year. Out of 52, 29 Firms received a mega response of more than 10 times, in which 5 were subscribed over 100 times and remaining few in the lot were subscribed 3 times. The median Numbers as per table 4.32, stayed positive for all the factions, which being 16.6 for raw returns, 0.44 for Market returns and 15.04 for MAER, overall, a very positive and growth filled year for the investors. A few firms still managed to underperform and thus contributed to negative returns, lowest were of -27.24 for Raw returns and a further low of -25.74 for MAER numbers in contrast to a max of 270.398 and 269.433 for Raw and Market returns respectively.

Table 4.35 Basic statistical Measures of ARRs for the year 2021

	Annualized rate of Return [N=30]	**Annualized rate of Return [N=90]**	**Annualized rate of Return [N=180]**	**Annualized rate of Return [N=270]**	**Annualized rate of Return [N=360]**
Mean	18894521.31%	740.69%	97.45%	47.42%	30.92%
Median	602.64%	91.39%	38.34%	24.16%	17.60%
Max	829855034%	20128%	1323%	487%	277%
Min	-98%	-72%	-48%	-35%	-28%

Owing to the growth rate and recovery rates, it's quite evident from Table **4.35**, as per the Average ARR nos are concerned, Firms were able to retain almost close to 50% of the returns roundabout Quarter 3, but there is a dip in the percentages from Q1 to Q3 which shows the undulating market conditions that were in effect due the 2nd wave of coronavirus that gripped the world, and had a direct impact upon the economic factors. The Median numbers stayed quite satisfactory even through to the end of the year, we could still see, 17.60% of returns still being retained, it was more important to stand on the positive end, when the market volatility was at its peak. The Maximum Numbers for the ARRs with respect to Quarter sections remained pretty encouraging through they kept dipping, overall Quarter wise comparison showed up healthy metrics across the Listed firms.

4.9 Anova computations for Raw Returns across 2015 - 2021

To understand more on how, the dataset contemplates across the years of our study and provides us the insights to further discuss and throw light on the facts that could be considered.

The One-way analysis of Variance, using the F-distribution would be adept at comparing the means across our data set and help us understand the differences.

The data set of Raw returns across the years 2015-2021, has been tabulated below in **Table 4.36.**

Table 4.36, Shows the data set of Raw Returns for the years 2015-2021

Raw Return 2015	Raw Return 2016	Raw Return 2017	Raw Return 2018	Raw Return 2019	Raw Return 2020	Raw Return 2021
49.85	-77.55	139.40	-5.83	-6.40	106.79	3.06
31.57	41.37	3.28	-0.28	51.08	130.67	-27.25
15.17	-53.87	-3.53	-8.13	53.90	21.36	22.74
14.83	14.92	18.71	5.08	-54.46	-0.76	-5.93
-17.64	37.22	-8.20	-8.02	-7.01	19.31	270.40
1.17	-6.41	0.03	2.36	33.87	-13.97	-5.50
3.06	-10.88	12.70	-14.44	22.58	-9.85	96.15
-3.08	12.78	-52.28	0.00	9.04	72.00	-1.73
-11.52	0.59	-90.14	-7.13	0.26	13.95	185.00
7.35	33.02	29.47	27.25	4.70	86.03	10.04
-8.48	10.07	25.62	-8.71	-10.78	123.49	53.20
-37.92	15.05	1.14	0.02	3.71	74.67	16.63
-48.93	-73.70	3.11	-5.34	-10.91	-9.51	5.96
-80.94	-1.74	36.96	14.74			-1.13
-4.19	58.68	-8.51	44.03			-6.79
-3.25	23.49	1.54	3.27			-7.29
43.07	15.26	-67.24	65.13			3.85
34.77	10.29	19.91				37.06
6.25	38.59	20.83				10.21
-5.00	22.95	-53.58				-11.59
	0.89	151.94				29.62
	-20.73	51.17				3.92
	20.23	0.97				113.32
	-4.70	75.57				65.59
	34.68	-0.32				76.13
		2.45				108.70
		-4.92				13.33
		-0.50				32.95
		25.00				42.31
		0.87				22.83
		37.57				24.69

		-58.21				2.98
		114.30				-4.70
		-82.07				18.08
		32.66				43.22
						-9.44
						-13.45
						-3.83
						26.62
						-5.24
						11.39
						88.22
						29.55
						29.15
						66.66
						15.83
						1.81
						109.31
						-4.42
						29.29

The dataset has 173 Main board IPOs, and the aim was to test if the means come stand out to be statistically different.

The assumptions that have been taken up for the one-way Anova, include

- Normality – It is said that each sample should be drawn from a normally distributed population.
- Equal Variances – The variances of the populations that come out should be near about equal, slight variations are acceptable given the raw ness of the data.
- Independence – The observations need to stand different, and independent of each other.

The data set of Raw returns were tabulated under one table and the Anova computations were made, upon which we came across a F value amounting to 3.124 and an F-critical value of 2.15. F-values were higher and the P- value generated came up to be 0.006243.

In general, higher the F value yields, Lower the P-values come up to.

Up here, The P-value is less than or equal to the Alpha value or the significance level set at the beginning of the test, therefore it can be interpreted that the differences between some of the means are statistically significant, and we can reject the Null hypothesis that not all population means are equal.

4.10 Anova computations for MAERs across 2015 - 2021

On the other hand, we have implemented the same spec of test for MAER calculations.

Table 4.37, Shows the data set of MAER for the years 2015-2021

MAER 2015	MAER 2016	MAER 2017	MAER 2018	MAER 2019	MAER 2020	MAER 2021
47.71	-77.48	137.63	0.11	-6.40	105.25	4.37
29.43	40.03	0.20	-1.47	51.62	127.00	-25.75

19.90	-52.99	-5.54	-11.21	52.68	18.35	21.78
20.37	17.17	18.79	5.88	-53.29	1.18	-6.90
-16.81	38.06	-6.32	-8.42	-7.96	12.41	269.43
3.50	-4.89	-0.27	4.35	31.86	-20.87	-7.83
4.27	-8.20	10.61	-16.23	25.82	-13.14	95.54
-1.50	13.05	-56.08	0.35	8.97	70.26	-2.95
-9.94	-0.52	-92.21	-6.51	0.43	12.21	185.41
7.44	31.69	26.43	28.77	2.65	86.45	6.95
0.45	9.46	26.65	-8.21	-13.22	122.03	51.62
-39.03	15.56	3.93	0.78	1.03	70.73	15.04
-48.37	-74.01	6.56	-5.77	-12.22	8.20	3.39
-82.51	-2.04	38.70	19.89			-3.70
-3.50	57.16	-10.04	41.32			-8.91
0.21	22.25	-0.87	-1.08			-8.99
49.28	14.07	-69.64	61.16			1.62
33.85	9.62	18.60				34.82
6.97	40.03	25.01				7.98
-1.20	18.95	-50.55				-14.20
	-0.38	150.61				25.88
	-18.10	48.31				0.69
	26.56	1.21				114.24
	-3.87	76.82				65.46
	36.22	0.32				77.08
		3.09				109.64
		-6.65				12.23
		-1.97				32.50
		23.20				41.87
		1.54				22.55
		34.80				24.41
		-58.55				3.35
		112.28				-1.52
		-84.14				17.10
		28.51				42.54
						-9.56
						-10.76
						0.05
						30.49
						-2.07
						12.55
						90.26
						29.25
						34.91

						68.80
						10.90
						0.54
						109.29
						0.27
						24.20

The Data set for the Anova Computations of MAER had been setup in a similar as it has been done earlier for Raw returns and the results came across as follows.

The F -value for the MAER computations came up to 2.95 and F-critical Values were 2.153, whereas P-value stood at 0.00913.

The same convention held up here as well, Higher F values resulted in a lower P- value statistics, aiding us in conveying that Up here, The P-value is less than or equal to the Alpha value or the significance level set at the beginning of the test, therefore it can be interpreted that the differences between some of the means are statistically significant, and we can reject the Null hypothesis that not all population means are equal.

Table 4.38, Anova Results Summary.

	F	*F crit*	*P-value*
ANOVA - Raw Returns	3.13	2.15	0.01
ANOVA - MAER	2.95	2.15	0.01

Table **4.38,** covers the summarized data for the one-way variance test conducted for Raw returns and MAER computations.

Comparisons with respect to F-statistics, with respect to the conventions, the larger the F-statistics are the greater is the evidence that there is difference in between the group means, as the variation in between sample means is higher to the relative variation in between the samples.

And as P- values for both the data sets stand less than the significance level set up, amounting to 0.006 and 0.009 for Raw returns and MAER computations respectively.

CHAPTER 5
RESULTS AND DISCUSSIONS
5.1 Inference from Performance of IPOs: -

The prime objective was to analyse the performance of the IPOs and Assimilation of the data collectively, that took us towards understanding what factors were making a significant contribution in making an IPO succeed. Initial interpretations from the collection of Sensex Data, was throwing key insights on the market trends, and just not one year, if we look across all the years, under our study, we can see that the market was looking to rise slowly, as reason being steady growth in key sectors, that helped boost the economy, furthermore, Key brands who went public within those years, seemed to have gained a great momentum through their diverse business strategies and had gained much fame and revenue using the same efficiently and had started to carve out a market league of their own.

The issue price and listing open price weren't much identical for majority of the brands that went public, showcased under-pricing, evidently as they wanted the investor demand to drive the price upwards to its market value.

Our analysis, consisted data across the IPOs from 2015-2021, with total no of IPOs under scrutiny, touching the highs of 170s. We have had a close look at the Market conditions of those years and computations of the raw returns, Market returns and MAERs showcase rather conclusive insights.

Thus, the Means Across the Year 2015-2021 for the fields Raw Return, MAER and Market returns are as follows, **Table 5.1**

	Raw Return	Market Return	MAER
Mean 2015	-0.69	-1.72	1.03
Mean 2016	5.62	-0.28	5.90
Mean 2017	10.73	0.71	10.03
Mean 2018	6.12	0.02	6.10
Mean 2019	6.89	0.59	6.31
Mean 2020	47.24	1.09	46.16
Mean 2021	32.23	0.31	31.92

Fig 5.1, Trend across the means for the years 2015-2021
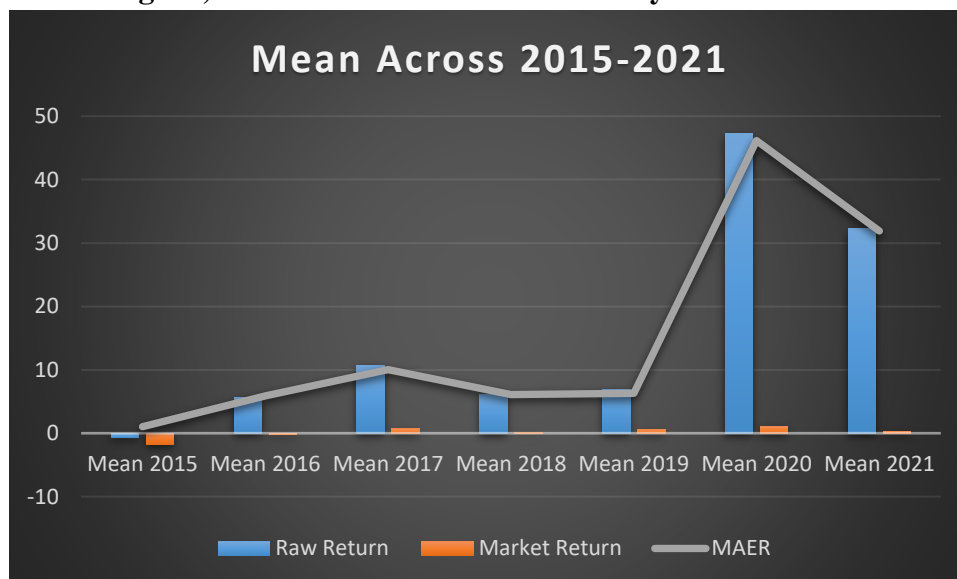
With a scrutiny made upon the analysed data, it is found that it was seen that the firms with great positive returns, had the edge in terms of sustainable performance with good returns on the go through the year, implying that for a short term, staying invested wouldn't lead to a drastic downfall out of nowhere. it could be seen that firms that already had higher raw returns retained better MAER numbers in contrast to its comparisons who had definitely had a poor start. There wasn't much difference in average MAER numbers as well, as it was being directly lead on strong raw returns. Market returns showcased a big leap in terms of returning into positives in comparison to both the previous years, which implies, even with the unstable market conditions. Only a few firms managed to exceed their Raw returns by MAER though marginally in their tally.

It can be further established that for investors, if they had placed their belief in the right firm at the right time, meaning investments done with proper research and awareness, they would be able to maximize returns, even when the market conditions didn't seem to be that encouraging.

5.2 Discussions upon ARR and Anova Computations: -

Through ARR computations, few more revelations came to light, it can be seen that those firms who had already had a great beginning since the listing day had rather substantial number of returns to showcase across the year, even though they were declining with time, it would have stabilized at some point with respect to market conditions. And those firms that underperformed since the start, saw their returns gradually move towards going positive, possibly a year later where, it should have stabilized.

The Mean of Annualized rate of returns across the years 2015-2021 has been tabulated below in **Table 5.2**

	Annualized rate of Return [N=30]	Annualized rate of Return [N=90]	Annualized rate of Return [N=180]	Annualized rate of Return [N=270]	Annualized rate of Return [N=360]
2015 ARR	1411.31%	47.61%	7.97%	1.43%	-0.63%
2016 ARR	2215.20%	87.10%	22.96%	10.48%	5.78%
2017 ARR	369333.46%	339.50%	51.60%	20.95%	11.05%
2018 ARR	3228.94%	63.86%	17.15%	9.26%	6.22%
2019 ARR	2949.63%	86.32%	22.46%	11.23%	7.03%
2020 ARR	417619.00%	781.00%	147.00%	74.00%	48.00%
2021 ARR	17349459.00%	817.00%	106.00%	51.00%	33.00%
Mean ARR	**2592316.63%**	**317.47%**	**53.59%**	**25.39%**	**15.77%**

Fig 5.2, Trend across the Average ARR precentages for the years 2015-2021
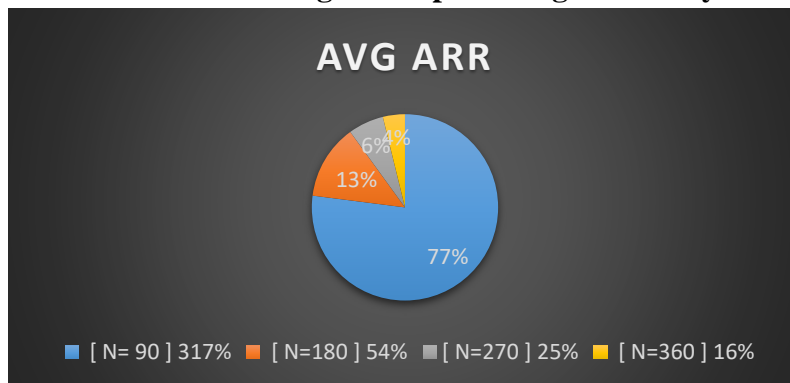
There were firms who stood at -100% returns, and from the one-year trend the returns though started to move towards a positive end but rather slowly, which meant that market conditions had to improve drastically in order to get a good view of investors.

yet the one's on negative seemed to have had a very difficult run to be able to cope up with the losses upfront and a rather slower recovery trajectory, which could worsen anytime, given the changes in investor sentiments. Implying that investors responded quite well to a few firms on the day or week of their listing. Firms that created a base for themselves allowed them to sustain their dream run for a much longer term, whereas other competing firms who ran negative since the beginning had a long road towards turning positive rather than returning sustainable returns that could excite investors, as it was evident from the trends and data from other factions.

ARRs even though positive, still stayed quite low, owing to a majority of firms underperforming severely, which further leads to an inference that the product firms failed to get much limelight in order to catch the investor's eye.

Further indications move up that the product placement in the market wasn't done properly, there was less awareness amidst investors in terms of the product knowledge and its sustainability towards the future, which if placed properly could have helped improve the performance to a certain extent.

For Anova Computations we had our hypothesis setup as,

Ho : There is no significant difference in between the means of short term performance of the IPOs, that are branded, have good financial foothold, a product offering with great demand in market, catering to a large audience.

From our tests it was evident that when computations include a F statistic result that is slightly higher than the F-critical value, it implies that something is significant, which is further materialized by understanding that a small P-value directly indicates all the values are significant. Thus, the Null hypothesis can be rejected.

Data from Anova Computations, helped us understand and quote from our tests that when computations include a F statistic result that is slightly higher than the F-critical value, it implies that something is significant, which is further materialized by understanding that a small P-value directly indicates all the values are significant. Thus, the Null hypothesis can be rejected.

Upon rejecting H0, an inference can be derived that there exists a significant difference in between the means of short-term performance of the IPOs, that are branded, have good financial foothold, a product offering with great demand in market, catering to a large audience

Thus, it could be established that there existed a significant difference in between the means of short-term performance of the IPOs, that are branded, have good financial foothold, a product offering with great demand in market, catering to a large audience. Better brand awareness meant that it had a name in the market that could drive belief in its offerings amongst the investors as that would give the product placement an edge over competitors in the market irrespective of its type and operational capabilities., there by locking in on investor's sentiments.

CHAPTER 6
CONCLUSIONS AND RECOMMENDATIONS
6.1 Conclusions

The prime aim and focus of this study were to assess the performance of IPOs in India and to understand the major supporting factors behind it. monitor the factors that lead to the success and failure of the IPOs and try and triangulate which one is the most prominent one that is occurring repeatedly across the IPOs that have been launched in the Indian Market.

The firms with great positive Raw returns, had the edge in terms of sustainable performance with good returns on the go through the year and this had a direct impact upon the MAER results, implying that for a short term, the success of firms was mostly led by firms that had a good name in the market, that is that they were established players with a good financial foothold and had a rather sustainable product offering that had a great demand in the market capable of withstanding undulating market conditions.

The brand awareness amongst investors is directly connected to investors sentiments, as this awareness is the key driver in motivating the investors for making certain investments that on the other hand wasn't seen across companies that were lesser known. If we take off brand awareness, it indirectly cuts off or decreases the information symmetry that reaches investors, thus taking effecting under subscription, even if the firm in consideration had a great product offering with prominent potential. The results support three common factors that affect the IPO performance, and they are Brand awareness, Product offering with a substantial business model different from other and eye catching one and investor sentiments. It can be seen that the firms that succeeded in offering better returns were able to check these three factors and the ones who defaulted had missed on one or more of the factors under scrutiny.

6.2 Limitations of the study and Recommendations for future scope of work

Limitations include that in order to understand more on Investor sentiments brand awareness, the relation in between them which would be independent of product offering and unique business models would require a primary data analysis to uncover more and understand the scope of impact these factors pose on the performance of IPOs. Secondary data limits the exposure to historical patterns and past references but primary data would put forth raw insights that can help us in a diverse manner. There have emerged several other methods that are more complex in nature yet their accuracy is impeccable and that suits the nature of a primary data added up in the research metrics. Some of those methods include an advanced spectral analysis of time dependent MAER, use of the capital pricing model or the arbitrage pricing theory.

There is a lot of scope left in order to unearth more aspects that could prove to be more influential and beneficial for the common man to understand better. One must move out of the scope that includes already discussed factors such as pricing metrics and move more towards investor sentiments, Market vulnerability as these factors require more raw information in order to compute and comprehend.

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APPENDIX A: RESEARCH PLAN

We will basically follow a step wise structure and the table below would account to as follows: -

Table 8.1, Research plan chart.

Task No	Name	Start Date	End Date	Duration	Progress %
1	Background Study	Sep 27, 2021	Oct 14, 2021	14 days	100
2	Literature Review	Oct 14, 2021	Oct 29, 2021	12 days	100
3	Research Title preparation and Submission	Nov 01, 2021	Nov 08, 2021	6 days	100
4	Data Collection	Nov 08, 2021	Nov 12, 2021	5 days	100
5	Data screening and Analysis	Nov 15, 2021	Nov 30, 2021	12 days	80
6	Research Proposal preparation + Submission	Nov 29, 2021	Dec 06, 2021	6 days	100
7	Calculations and Graph preparations	Dec 07, 2021	Dec 30, 2021	18 days	100
8	Interim report preparation	Dec 30, 2021	Jan 14, 2022	12 days	100
9	Interim Report Submission	Jan 12, 2022	Jan 21, 2022	8 days	100
10	Final report preparation	Jan 28, 2022	Feb 11, 2022	11 days	0
11	Final report submission	Feb 14, 2022	Feb 28, 2022	11 days	0
12	Presentation on final results	Feb 21, 2022	Mar 08, 2022	12 days	0

And the progress until now is depicted by the radar chart, figure 1.1 below,

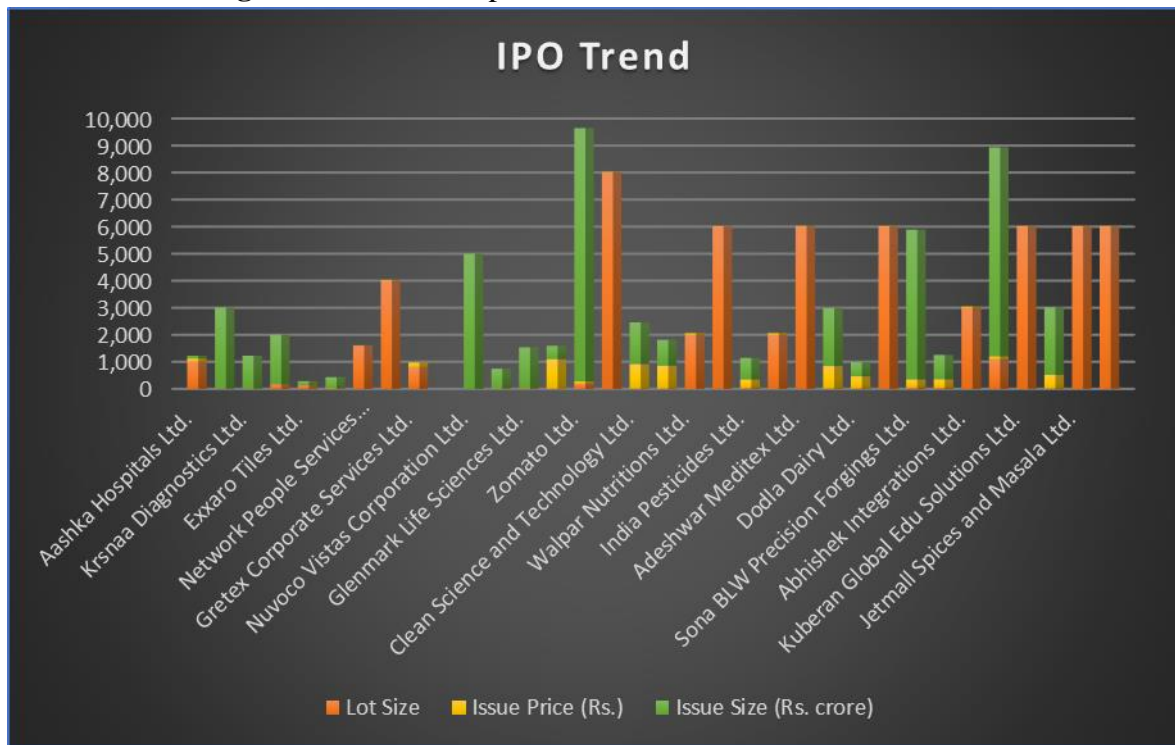**Fig 8.1** Radar Chart for progress
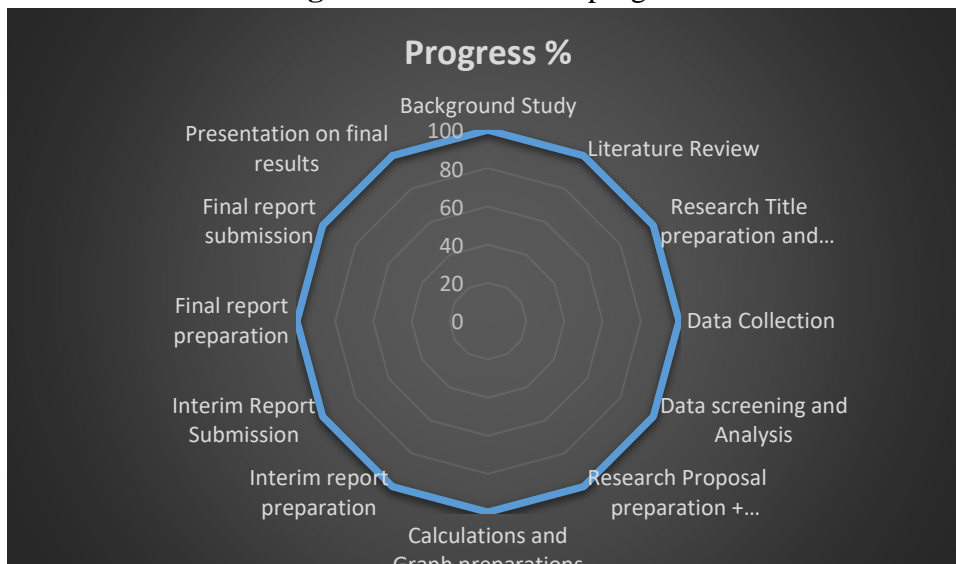
To quote on the analysis and other calculations, the statistical tools that are under consideration for the analysis might subject to change with respect to requirements.

Figure below represents a trend of the IPOs in Indian market momentum and it suggests that India IPO market saw an upward trend and Indian Stocks ranked 12th in the world in terms of IPOs in YTD 2021.This growth comes as India saw a significant growth in the number of start-ups and other established private league companies join the IPO race.

To see through there were various factors that sparked investor interest in IPO market such as huge dry powder investments, strong performance by Indian corporates, evolving regulatory reforms, attractive business models, effective corporate governance, strong management teams and fair valuations, all contributing towards a better interest towards an increased investment activity. **Figure 8.2** IPOs current trend in terms lot size, Issue price, issue size etc.

Fig 8.2 IPO trends as per Lot size, Issue Price and Issue size

APPENDIX B: RESEARCH PROPOSAL