

## **A Study of the IPO Market in India: Pre and Post Pandemic Analysis**

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### **ABSTRACT**

The Covid 19 Pandemic has deeply affected almost all the world and India is no exception. With other segment of the market, the Indian primary market too witnesses some activity during the pandemic and its performance of the primary market was impacted in terms of number of IPOs hitting the market and their post listing performance. Though many studies have been carried out to analyse this, not many have dug deeper into specific companies and analysed the performance of all the companies that have been listed through this period. The performance of company's post getting listed and how the pandemic has affected these companies have yet to be studied in detail. Through this research paper the researchers aim to fulfil this gap and understand the effects of the pandemic on the performance of primary market. The research is based on secondary data from the financial markets. The data comprises of 30 companies that came out with their IPO during the year 2016 to 2021 according to their market capitalization. Multiple Regression, t-test and Event Study Techniques have been applied to analyse and evaluate the impact of Covid 19 on the performance of companies which came up with their Initial Public Offering from 2016 to 2021. Result showed that Covid 19 impacted the companies which came out with their IPOs between 2016 and 2021. Also, Primary market saw a greater number of IPOs hitting the market due to a well performing secondary market during this period. The study is useful for market participants, analysts and investors to understand the impact of Covid 19 on Primary market as well as the performance post listing so that they can take informed decision.

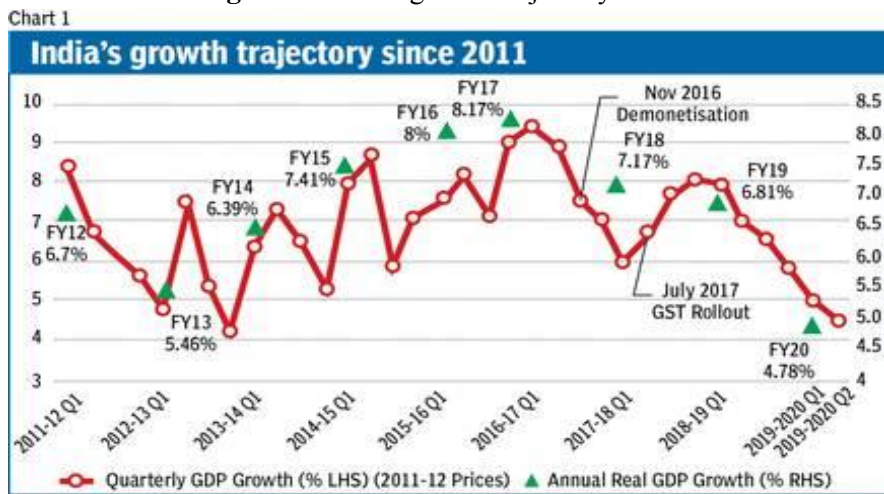


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## 1. Introduction

The ongoing Covid'19 pandemic has taken over the world and changed the life of many in just a short span of time. Coming initially from China, the pandemic started in late 2019 and affected many countries which are still facing issues in dealing with the coronavirus. The effects spread to many important areas of a country and the two most important aspects are health and economy. India too is one of the countries who has been deeply affected by the pandemic and many sectors have been disrupted. India is currently facing a very serious second wave of the pandemic which has taken a toll on the whole country. The economy was deeply hit in India and many sectors were affected majorly and it might take time to restore the effects of the pandemic.

**Figure 1:** India's growth trajectory since 2011



**Source-** Central Statistical Office

From Figure 1, it can be inferred that the growth has drastically declined in 2019-2020 because of the pandemic.

The focus of this study is to analyze the Indian Primary Market and understand the performance of IPOs due to the coronavirus pandemic. Like other factors, the primary and secondary markets too have been affected and we see major changes during the past year when India were dealing with the deadly virus, in fact India

still is facing the second wave of the pandemic which in turn might have worse impacts than the first wave.

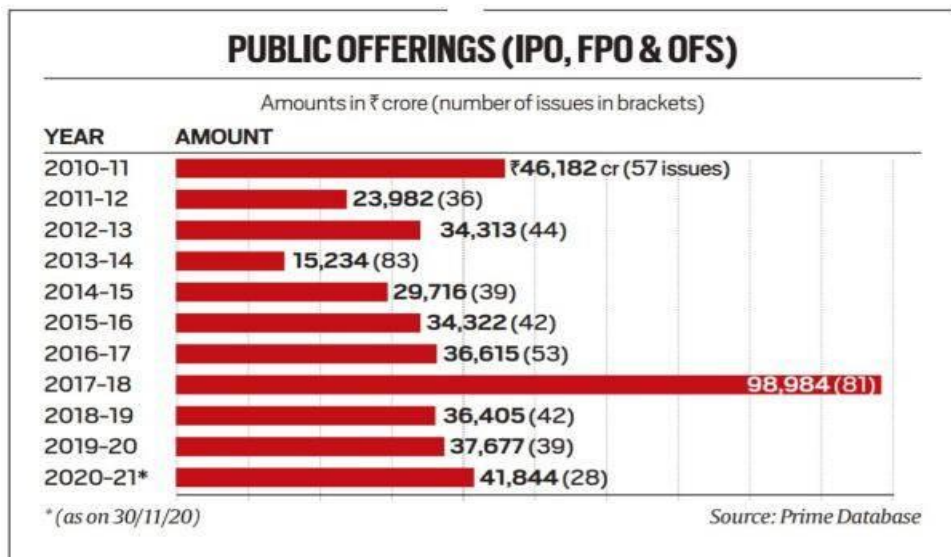
Financial Markets are divided into Primary and Secondary Market, whereby Primary Market is the new issue market and secondary market is the market where existing securities are traded in the market. Companies tap the primary market through IPO, Follow on Public Offering, Private Placement and Qualified Institutional Placement.

Initial Public Offering is widely used by unlisted companies to issue new shares to the general public and get listed on various stock exchanges. The firms raise resources through these primary issues.

From basic research one can observe two sides on the effects of the pandemic on the primary market. Some studies show that the market has been doing well and some show the negative side of the same.

The fast spread of the pandemic has impacted financial markets not just in India but all over the world. A huge level of risk has been created for the investors and they have to suffer major losses in a short span of the time because of the disruption in the market.

**Figure 2:** Number of IPOs issued and the worth of the IPOs from 2010-2021 in India.



**Source-** Prime Database

The primary market and the IPOs were also hit in this crisis. As we can see from Figure 2, the number of IPOs issues have been increasing from 39 in FY 2014-15

to 81 in FY 2017-18. The worth too has increased from 29716 to a whopping 98984 which is about triple the amount. However, with the onset of the Coronavirus pandemic we see a decrease in the number of IPOs as well as the worth of the same. From FY 2017-2018 to FY 2020-21, the number of IPOs has decreased from 81 to 28 and the worth reduced from 98984 to a 41844 which is half the amount. The figure clearly shows the impact of the pandemic and how the companies are getting listed less because of the spread of the virus. Some data also shows that the IPOs have been thriving even during the Covid-19 Pandemic. Even though India's economy was deeply affected, the primary market seems to have been done well in 2020.

**Figure 3:** India's best-performed post-IPO stocks in 2020

### India's best-performed post-IPO stocks in 2020

Issuer	Sector	Listing date	2020 stock performance* (In percent)
Route Mobile	Software	Sept. 21	214
Burger King India	Retail	Dec. 14	192
Rossari Biotech	Specialized chemicals	July 23	121
Happiest Minds Technologies	IT services	Sept. 17	107
Gland Pharma	Pharmaceuticals	Nov. 20	56

\*2020 close compared to issue price at IPO

Source: BSE

**Source - BSE India**

During 2020, BSE and NSE counted 14 companies in total which got listed amidst the coronavirus pandemic. All these stocks were seen trading above the price that they were issued at and four IPOs saw a 100% increase on their initial price. In Figure 3 it is seen that the 5 companies which performed best after getting issued. Route mobile got listed in September, which was the peak of the pandemic in India. The company performed wonderfully in the stock market and one can see a whopping increase of 214%. The company performed despite the economic implications on the economy due to the Covid-19 pandemic.

The purpose of this paper is to delve deeper into the IPOs and understand their financial performance in the midst of the pandemic. It aims at analyzing how the pandemic actually affected the IPOs. Studies show that the trend of high performance of companies post IPOs is expected to continue in 2021 as many well-established startups, which include 4 unicorns (Companies who aren't listed but are valued at \$1 billion or more) were in line for their IPOs to be issued by the end of 2020. All companies except Flipkart have priory told that they plan to get listed on BSE and NSE in 2021. These companies are expected to do well in the stock markets.

**Table 4:** Indian internet Unicorns expected to debut on stock exchanges in 2021.

<b>Issuer Company</b>	<b>Business</b>	<b>Valuations (in billion dollars)</b>	<b>Major Shareholders</b>
Flipkart Internet	Online Retail	25.0	Tencent, Walmart, Tiger Global, Microsoft
Zomato	Food Delivery	3.9	Ant Financial, Sequoia, Temasek
Delivery	E-Commerce Logistics	1.6	Softbank group, Carlyle, Fosun
Policy Bazaar Insurance Broker	Online Insurance Market Place	1.5	Softbank Group, Tencent
Grofers India	Online Grocery	0.7	Softbank Group, Sequoia

**Source:** Nikkei Survey

Figure 4 lists the 5 companies which are expected to get listed and tells us about their valuations and major shareholders. These IPOs will compare to the tech startups in Silicon Valley which normally get a high valuation before getting listed.

## 2. Literature Review

Surana, Sreyansh *et al.* (2021) analyzed the Initial public offers pre and post Covid. The research analyzed the performance of 242 listings from 2010-2021 and compared the performance pre and post Covid. Secondary data was collected about the IPOs from moneycontrol.com and analyzed the companies through

parameters like HNIs, QIBs and RIIs, listing-gains and current market price. The research found that fifteen IPOs were issued in the first 3 months of 2021 and raised a total capital of 14550 Crores. The research through analysis realized that in the history of Indian Markets, 2021 is going to be targeted as the golden year of IPOs as activism is detected by the investors, especially the retail investors. It was also concluded that higher listing gains and greater issue is influenced because of the shift in the behaviors of retail investors. Furthermore, it was found out that nowadays more investors are in favor of the grey market premium and are overlooking the fundamentals.

Madyan, M., Sasikirno, N. and Meidiaswati, H. (2020) in their study evaluates the relationship between public ownership, share warrants and market performance of IPO on the Indonesian Stock Market. Market performance, public ownership and share warrants evaluated for 124 IPOs during the time period 2009-2014. The research paper found no significant relationship between public float and warrant offerings with long term performance.

Singh, Amit et al (2020) studied the behavior of the Indian IPO market and used semi log equations and a dummy model to study the changes in the IPO market. This was across 4 policy periods which are globalization, liberalization, crisis periods and recovery. The trend of the three main variables were analyzed during the periods namely number of IPOs, amount raised and the average size of the IPOs. The study analyzed that the amount of the IPOs has been showing growth at a steady rate of 11.54 % when compounded annually whereas the number issues reduced at a rate of 9.91% and the average size showed a new increase of 21.46 %. It was seen that large months of capital are being raised from a smaller number of issues which indicate an increase in the quality and not the quantity of the issues.

Agarwal, E. and Saigal, A. (2020) evaluated how Covid 19 impacted the stock exchange of India. Secondary research was held and it was found out that the prices of the IPOs had dropped majorly due to the pandemic and companies were facing major losses. Some companies cancelled premium listings as well as they suffered losses. Overall, globally, stock markets were facing an average loss of 20-30%.

Manu, K.S. and Saini, Chhavi (2020) conducted a valuation analysis of the initial public offers in India. The studied the post-IPO performance of companies which got listed in 2017. Event study methodology was used to carry out the analysis. They further tried to find out whether in the short run, IPOs were underpriced. It was found that about 70% of the IPOs they selected were underpriced. It was also found out that this movement was not influenced by issue size, age of company,

ownership and the holding of the promoter post issue. They also carried out regression and correlation which suggested that the 1<sup>st</sup> day and 30<sup>th</sup> day showed no significant relationship between the dependent and independent variables selected.

Huang, Y.S., Li, M and Chen, C.R. (2019) in their paper evaluated the IPO performance for firms in different financial markets. It was observed that firms in better developed financial markets experience less underpricing and comparatively better long-term performance due to higher transparency and less information asymmetry.

Seth, R., Vishwanatha, S.R and Prasad, D. (2019) highlights in their study that anchor backed IPOs earn superior returns mainly due to monitoring. The research finds a negative causal relation between allocation to anchor investors and underpricing.

Gandolfi, G., Regalli, M. *et al.* (2018) evaluated around 437 IPOs over a period 1997-2011 in Italy, France and Germany across different industries. The study found similar short-term anomaly but significant differences in long term performance post listing across different markets. Industry was not found to be a factor responsible for underpricing or long-term performance of these firms.

Hawaldar, I.T., Naveen Kumar, K.R. and Mallikarjunappa, T. (2018) in their study evaluated the listing day performance of book built and fixed price IPO. Pricing and long run performance of 464 firms were evaluated for the time period from 2001 to 2015. The result found negative cumulative average abnormal returns in case of Book Built IPOs and up to 5 years and beyond whereas for fixed price process it found negative returns one year onwards.

Samantha, P.K., Dam, S. *et al.* (2018) analyzed 117 IPOs in the Indian market between 2009 and 2013 to measure their short-term performance by using Market Abnormal Excess Returns (MAER) and also tried to understand the factors affecting the short-term performance.

Sasikirono, N., Sumiati, S. and Indrawati, N.K. (2018) in their research study examined the relationship between underpricing and long run performance of IPOs in the Indonesian Stock Exchange (IDX) as well as determinants of IPO's market performance. OLS and regression had been applied to a sample of 105 IPOs from 2009 to 2013. Age, proceeds and underwriter's reputation were taken as measures of long run performance whereas proceeds were the important determinant of underpricing.

Barac, Z.A, Markota, L. and Ivkonic, K. (2016), in their paper highlighted the impact of financial and operating performance of all IPOs on Zagreb Stock Exchange (ZSE) in Croatia for a time period from 2009 to 2015. The study also

evaluated the post listing performance of these stocks in terms of first day turnover and return on equity.

Murthy, K.V.B, Singh A. K. and Gupta, L. (2016) in their research study examined the long run performance of 311 IPOs from 2000 to 2003. The relationship between short run and long run performance was tested through Logistic Regression. The result showed no or negative relationship between short run and long run performance. They found companies had listing gains, short run gains and were not able to provide long run gains.

Sehgal, S and Sinha, BK (2013) studied valuation of IPOs in India and examined two main propositions which were the factors in determining the underpricing of IPOs and the impact of mispricing of IPOs. Data was taken from 432 IPOs. The positive variables for IPOs were discovered to be- the number of times the IPOs were subscribed, the number of uses of the proceeds of IPOs, the delay in listings and the dummies. The **negative** variables are company size, investors' sentiments and investment banks' reputation defined in terms of share in IPO proceeds and dummy for private companies' IPOs. It was also found that public trading of IPOs which are newly listed may take as long as 6 months after the listing. It was also observed that mispricing of the IPOs majorly impacts the reputation of the Investment Banks and hence there were long term implications of the pricing of IPOs.

Murthy, K. V. Bhanu and Singh, Amit Kumar (2014) studied the Short-Run Performance of IPO Market in India. A sample size of 30 was taken to check the one-month performance of the IPOs in India. They took data about share prices of a total of 89 IPOs from the National Stock Exchange. To check the performance, some of the variables that were taken are- Listing gains, Price trends, Standard deviation, event day for when the shares are sold in the short run, etc. The model that was used was the logit model which is a regression model and is used to speculate a dichotomous variable from a particular set of independent variables. The available evidence and some findings of this paper showed that the price performance of IPO stocks and quality of issuers deteriorated in the years after going public. The positive variables for IPOs were discovered to be -number of times an IPO problem was subscribed, number of uses of IPO proceeds, Listing Delay, Industry PE ratio, and dummy.

Ahmad, Z.N.A and Kect, L.B (2012) in their paper evaluated the short run performance and long and long run performance of IPOs on Malaysian MESDAC Market. The result indicated that market adjusted initial returns show short run underpricing of stocks. In long run BHAR and CAR methods showed that stock underperformed as compared to the market.



Sahoo, S. and Rajib, P. (2010) in their study evaluated the underpricing of IPOs on the listing day and showed underperformance after that. The study focuses on the price performance of IPOs for the following three years. The result interpretation suggests that investors who invested through direct subscription reaped positive market adjusted return whereas investors who bought shares on the listing day through the secondary market earned a negative return.

Pande, Alok and Vaidyanathan, R. (2008) studied the determinants of IPO underpricing in NSE India. They tried to explain why IPOs were underpriced on the first day, the listing delay between the first day listing and book closure of the issue and the money spent on the IPO firm's Marketing. They also tried to understand where any patterns were emerging w.r.t the prior studies.

They found out that the underpricing was positively impacted by the demand generated during book building and listing day and the money spent on marketing turned out to be insignificant.

### **3. Research Methodology**

#### **Research Questions**

The questions that are proposed and will be answered in this research paper are as follows:

-Which Mid-Cap IPOs were issued in the last five years (2016-2021) and how was their post listing performance in terms of risk of under/over pricing, over and under subscription, specific ratios, listing at a premium/discount, etc.?

-How did Covid-19 affect the companies which were recently listed on the basis of stock returns?

-How did the primary market perform in the wake of Covid-19 and how did the performance change pre and post the pandemic (2019-21)?

#### **Objective of the Study**

The objective of the study according to the proposed questions are as follows:

-To analyze how Covid-19 affected the companies which got recently listed on the basis of stock returns.

-To find out how the primary market performed in the wake of Covid-19 and how the performance changed pre and post the pandemic (2016-2021).

#### **Hypothesis**

Ho1: There is no significant impact of Covid-19 on the stock returns of Companies which came out with IPOs post listing.

Ho2: The Covid'19 pandemic has not significantly impacted the primary market in terms of number of issues.

Ho3: There is no relationship between the returns of the companies and the stock returns of the index.

## Research Design

The research is descriptive in nature and intends to evaluate the impact of covid 19 pandemic on the primary market in terms of number of issues and also the impact on the post listing performance. The paper quantitative techniques to analyze data collected through secondary sources.

## Techniques and Tools

### Regression

A regression analysis is a statistical tool generally used for one of two main purposes: predicting the value of the dependent variable for individuals for whom information about the explanatory factors is known, or estimating the effect of an explanatory variable on the dependent variable. In this study, regression will be performed on all the 30 companies in comparison to the SENSEX S&P 500 returns (taken from the official data of BSE).

A multiple regression will be carried out in 6 groups separated by the year the IPOs were launched in which are –2016 to 2021.

$$\text{Return} = \ln(P2/P1) - 1 * 100$$

(P1 and P2 being the price a day ago and the price today).

-Independent Variable- SENSEX S&P 500 stock returns.

-Dependent variable - Companies stock returns.

-R Square and Beta Value have been used to understand the strength of correlation and volatility of these stocks post listing.

### **-R-Square**

R-square reflects the percentage of the dependent variable which varies w.r.t the independent variable as per the linear model.

If the value of R-square is between 0.3 and 0.5, the variation is generally considered weak or low.

If the value is between 0.5 and 0.7, the variation is considered moderate

If the value is above 0.7, it is considered to be a strong model.

### **Beta**

The depiction of beta is under coefficients and X-variable in regression. Beta measures the volatility of a stock when compared to the overall market. The market, for example the S&P 500 Index has a beta of 1.0 and individual stocks are analyzed on how they vary from this value.

If a stock has moved more than the market, then it has a beta above 1.0 which means that the stock is riskier but have a potential to provide higher returns.

If a stock swings less than the market, then it has a beta less than 1.0 and it means that the stock is less risky but has lower returns.

### **F- value and P-value**

The F-value tells us whether the test is significant or not and P value is the probability that the tests occurred randomly. For us to reject the null hypothesis, the F significance should be as close to 0 as possible.

### **Valuation Ratios**

To study the overall performance of the companies after getting listed, the following valuation ratios such as Earning per share, Price to earnings ratio, Price to book ratio, Enterprise value/EBITDA, Price to sales ratio and Return on Equity have been analyzed for the selected sample of 30 companies.

### **Industry Comparison**

To understand better the performance of the company, an industry comparison will be done through some ratios like P/E and ROE. A median was taken significant variables of all the companies to understand how the selected company is performing w.r.t the competitors in the industry.

### **T-test**

For the purpose of this study, it needs to be tested whether Covid impacted the stock returns of the IPOs issued released in India in the last 5 years.

A **t-test** was applied to see if there was any impact on the stock returns due to the covid- 19 pandemic. Given that the null hypothesis is valid, a p-value is the probability of having a result that is as extreme as or more extreme than the sample result by chance alone. The null hypothesis if the p-value is less than our significance level. If we don't, we can't deny the null hypothesis. The likelihood that the null hypothesis is valid is greater than 0.05. A statistically valid ( $P \leq 0.05$ ) test finding indicates that the test hypothesis is incorrect or should be discarded. A P value greater than 0.05 indicates that no result was seen.

For the purpose of the study **two tail** values for finding out the P-value as the study had two variables in the study

- Price returns for each company.
- Sensex S&P returns.

### **Event Study**

An event study is a statistical tool for determining the effect of an event on a company's value. The main idea is to discover the abnormal return related to the event in question after controlling for the return resulting from market price fluctuation.

Event Study had been applied in this study during the time period November 2019 - May 2021. The event dates for analysis will be 15th March 2020 - Initial lockdown started throughout India during this time. The study is done on 19/30 companies according to the availability of data.

### Sample Selection

As mentioned in the research problem, the area of study for this study will be the IPOs that got issued in the last 5 years. The aim is to analyze the performance of the companies before and after getting listed and how the pandemic has affected the performance of all these companies. The study will be analyzing the Indian Primary market and comparing it with the secondary market as well. The timeframe of the study is 2016-2021 as the aim is to analyze the effect of the pandemic on the IPO Market. For selection and analysis purposes of the study midcap companies which had an issue size above INR 500 Crores. The 30 companies are as follows-

**Table 5:** Sample Companies from the year 2016-2021.

S.No	Issuer Company	Issue Open	Issue Close	Issue Size (Crore Rs.)	Issue Price (Rs.)
1	Mahanagar Gas Limited IPO	Jun 21, 2016	Jun 23, 2016	1,039.64	421
2	Dilip Buildcon Ltd IPO	Aug 1, 2016	Aug 3, 2016	653.98	219
3	Endurance Technologies Ltd IPO	Oct 5, 2016	Oct 7, 2016	1,161.73	472
4	PNB Housing Finance Ltd IPO	Oct 25, 2016	Oct 27, 2016	3,000.75	775
5	Housing and Urban Development Corporation Ltd IPO	May 8, 2017	May 11, 2017	1,224.35	60
6	Eris Lifesciences Limited IPO	Jun 16, 2017	Jun 20, 2017	1,741.16	603
7	Central Depository Services (India) Limited IPO	Jun 19, 2017	Jun 21, 2017	523.99	149
8	Security and Intelligence Services (India) Ltd IPO	Jul 31, 2017	Aug 2, 2017	779.58	815
9	Godrej Agrovet Limited IPO	Oct 4, 2017	Oct 6, 2017	1,157.31	460
10	Indian Energy Exchange Ltd IPO	Oct 9, 2017	Oct 11, 2017	1,000.73	1,650.00
11	Amber Enterprises India Limited IPO	Jan 17, 2018	Jan 19, 2018	600	859
12	Galaxy Surfactants	Jan 29,	Jan 31,	937.09	1,480.00

	Limited IPO	2018	2018		
13	Aster DM Healthcare Ltd IPO	Feb 12, 2018	Feb 15, 2018	980.14	190
14	Bharat Dynamics Ltd IPO	Mar 13, 2018	Mar 15, 2018	960.94	428
15	ICICI Securities Ltd IPO	Mar 22, 2018	Mar 26, 2018	4,016.97	520
16	Fine Organic Industries Limited IPO	Jun 20, 2018	Jun 22, 2018	600.2	783
17	Varroc Engineering Limited IPO	Jun 26, 2018	Jun 28, 2018	1,945.77	967
18	CreditAccess Grameen Limited IPO	Aug 8, 2018	Aug 10, 2018	1,131.19	422
19	Metropolis Healthcare Limited IPO	Apr 3, 2019	Apr 5, 2019	1,204.29	880
20	Ujjivan Small Finance Bank Ltd IPO	Dec 2, 2019	Dec 4, 2019	750	37
21	Prince Pipes and Fittings Ltd IPO	Dec 18, 2019	Dec 20, 2019	500	178
22	Happiest Minds Technologies Ltd IPO	Sep 7, 2020	Sep 9, 2020	702.02	166
23	Route Mobile Ltd IPO	Sep 9, 2020	Sep 11, 2020	600	350
24	Computer Age Management Services Ltd IPO	Sep 21, 2020	Sep 23, 2020	2,244.33	1,230.00
25	UTI Asset Management Company Ltd IPO	Sep 29, 2020	Oct 1, 2020	2,159.88	554
26	Equitas Small Finance Bank Ltd IPO	Oct 20, 2020	Oct 22, 2020	517.6	33
27	Indigo Paints Limited IPO	Jan 20, 2021	Jan 22, 2021	1,176.00	1,490.00
28	Anupam Rasayan India Limited IPO	Mar 12, 2021	Mar 16, 2021	760	555
29	Laxmi Organic Industries Limited IPO	Mar 15, 2021	Mar 17, 2021	600	130
30	Kalyan Jewellers India Limited IPO	Mar 16, 2021	Mar 18, 2021	1,175.00	87

The analysis of performance of sample of 30 companies were analyzed based on Price Earnings Ratio, Beta, Offer Price and Listed Price and listing at premium or discount was evaluated. Interpretation was drawn on the performance based on these variables. In the table ‘1’ depicts that Covid-19 has impacted the company negatively and ‘0’ depicts that it has not.

It can be seen that 17 out of 30 companies are listed at a premium which is around 56.67% of the total companies. Looking at the yearly results –

**Table 6:** Table for combined Company Analysis.

S.No	Issuer Company	Year	Type	Negative impact by Covid
1	Mahanagar Gas Limited IPO	2016	Premium	0
2	Dilip Buildcon Ltd IPO	2016	Premium	1
3	Endurance Technologies Ltd IPO	2016	Premium	0
4	PNB Housing Finance Ltd IPO	2016	Premium	1
5	Housing and Urban Development Corporation Ltd IPO	2017	Premium	1
6	Eris Lifesciences Limited IPO	2017	Discount	0
7	Central Depository Services (India) Limited IPO	2017	Premium	1
8	Security and Intelligence Services (India) Ltd IPO	2017	Discount	1
9	Godrej Agrovet Limited IPO	2017	Discount	1
10	Indian Energy Exchange Ltd IPO	2017	Discount	1
11	Amber Enterprises India Limited IPO	2018	Premium	0
12	Galaxy Surfactants Limited IPO	2018	Premium	0
13	Aster DM Healthcare Ltd IPO	2018	Discount	1
14	Bharat Dynamics Ltd IPO	2018	Discount	0
15	ICICI Securities Ltd IPO	2018	Discount	1
16	Fine Organic Industries Limited IPO	2018	Premium	0
17	Varroc Engineering Limited IPO	2018	Premium	1
18	CreditAccess Grameen Limited IPO	2018	Discount	0
19	Metropolis Healthcare Limited IPO	2019	Premium	0
20	Ujjivan Small Finance Bank Ltd IPO	2019	Premium	0
21	Prince Pipes and Fittings Ltd IPO	2019	Discount	1
22	Happiest Minds Technologies Ltd IPO	2020	Premium	0
23	Route Mobile Ltd IPO	2020	Premium	0
24	Computer Age Management Services Ltd IPO	2020	Premium	1
25	UTI Asset Management Company Ltd IPO	2020	Discount	1
26	Equitas Small Finance Bank Ltd IPO	2020	Discount	0
27	Indigo Paints Limited IPO	2021	Premium	0
28	Anupam Rasayan India Limited IPO	2021	Discount	1
29	Laxmi Organic Industries Limited IPO	2021	Premium	1
30	Kalyan Jewellers India Limited IPO	2021	Discount	0

source-www.moneycontrol.com

**Table 7:** Table for % Premium/Discount

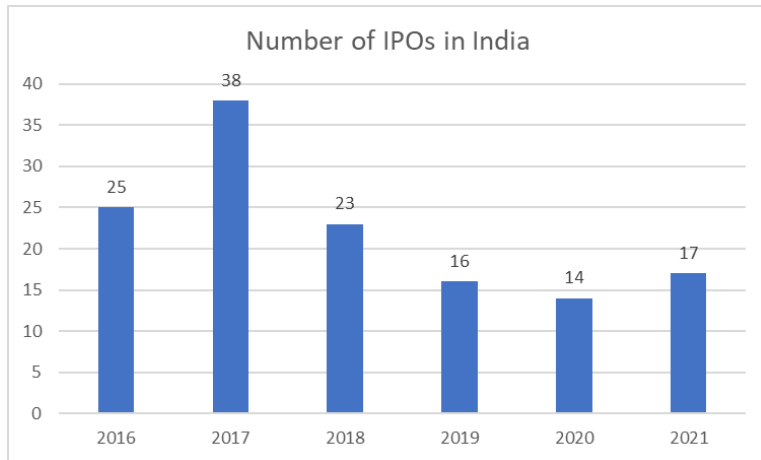
	<b>% Premium</b>	<b>% Discount</b>
<b>2016</b>	100	0
<b>2017</b>	33.3333	66.6667
<b>2018</b>	50	50
<b>2019</b>	66.6667	33.3333
<b>2020</b>	60	40
<b>2021</b>	50	50

**Source-** Authors' work

It can be seen that 100% companies were listed at a premium in 2016 while only 50% were listed in 2021. A decline in value has been observed from 2019 which shows that the pandemic has affected the listing of the companies.

Also, it can be seen that 50% of the companies have been affected by the Covid-19 pandemic negatively. For further analysis, the number of IPOs issued in the past 5 years were looked at which is depicted in the Figure 8.

**Figure 4:** Number of IPOs issues in India 2016-2021.



**Source-** Authors' work

It can be seen that 2020 saw the lowest number of IPOs issued in the last 5 years and this shows that Covid-19 has affected the primary market in a negative way. However, it can be seen that in 2021, 17 IPOs have already been issued from Jan 2021 to May 2021. This shows that the Primary market is doing well despite the pandemic and has successfully bounced back.

## Regression Analysis

**Table 8:** Regression Analysis of IPOs issued in 2016.

<b>Summary Output</b>							
Regression Statistics							
Multiple R	0.727294						
R Square	0.52895						
Adjusted R Square	0.489703						
Standard Error	0.039633						
Observations	53						
<b>ANOVA</b>							
	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>Significance F</b>		
Regression	4	0.0847	0.021	13.475	1.9499E-07		
Residual	48	0.0754	0.001571				
Total	52	0.16007					
<b>Intercept</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T stat</b>	<b>p-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>	<b>Hypothesis</b>
Intercept	0.00988	0.0056	1.7643	0.08403	-0.00137	0.02114	
Mahanagar Gas	0.21452	0.0717	2.9912	0.00437	0.0703	0.3587	Reject
Dilip Buildcon	0.0282	0.03157	0.894323	0.3756	-0.03524	0.09174	Accept
Endurance	0.0316499	0.03746	0.844783	0.4024	-0.0436	0.106979	Accept
PNB Housing	0.153198	0.04585	3.341127	0.001622	0.06100	0.2439	Reject

**Source:** Author's Work

R Square value at 52 percent show moderate correlation of these companies with the BSE Sensex returns. Looking at the f-significance, it was very low and hence the null hypothesis can safely be rejected.



The Beta values for all the 4 companies were found to be very low when compared to the market beta of 1. This means that the volatility was very low as all of them are less than 0.25. Based on p-values, it can be seen that for 2 of the companies Null Hypothesis were rejected and for the other two it got accepted it.

**Table 9:** Regression Analysis of IPOs issued in 2017.

Summary Output							
Regression Statistics							
Multiple R	0.7879						
R Square	0.62084						
Adjusted R Square	0.555842						
Standard Error	0.040427						
Observations	42						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	6	0.09366	0.015611	9.5516	3.161E-06		
Residual	35	0.057202	0.001634				
Total	41	0.150867					
<b>Intercept</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>T stat</b>	<b>p-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>	<b>Hypothesis</b>
Intercept	0.008877832	0.006741533	1.316886	0.196434	-0.0048082	0.022564	
H&U Corp	0.19208494	0.063266805	3.03611	0.004504	0.06364	0.320523	Reject
Eris Life	0.07132849	0.070006	1.018877	0.315253	-0.0707932	0.21345	Accept
Central Deposit	0.0086423	0.072849927	0.118632	0.906245	-0.1392509	0.156536	Accept
S&I Services	0.180031084	0.081435554	2.210718	0.033684	0.01470812	0.345354	Reject
Godrej Agro	0.075322	0.116694036	0.645468	0.522833	-0.16157	0.31224	Accept
Indian Energy Ex	0.08719755	0.091745	0.950429	0.348412	-0.0990557	0.273451	Accept

**Source:** Author's Work

R Square value at 62 percent show high correlation of these companies with the BSE Sensex returns. Looking at the f-significance, it was very low and hence the null hypothesis can safely be rejected. The Beta values for all the 6 companies were found to be very low when compared to the market beta of 1. This means that the volatility was very low as all of them are less than 0.25. Based on p-values, it can be seen that for 2 of the companies Null Hypothesis were rejected and for the other 4 it got accepted it.

**Table 10:** Regression Analysis of IPOs issued in 2018.

Summary Output							
Regression Statistics							
Multiple R	0.82866						
R Square	0.68668						
Adjusted R Square	0.5777						
Standard Error	0.042291						
Observations	32						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	8	0.09016	0.01127	6.3017	0.000235843		
Residual	23	0.04114	0.001789				
Total	31	0.13129909					
Intercept	Coefficient	Standard Error	t stat	p-value	Lower 95%	Upper 95%	Hypothesis
Intercept	0.00367	0.009933	0.3696	0.714993	-0.01687	0.0242207	
AMBER ENTIP	-0.00364095	0.07515	-0.04845	0.961778	-0.159105	0.151841	Accept
GALAXY SURF	0.14568	0.11338	1.280119	0.213264	-0.0897	0.3811025	Accept
ASTER DM	0.0545483	0.09161	0.595433	0.557368	-0.13496	0.2440607	Accept
BHARAT DYN	0.0158115	0.05874	0.269142	0.79022	-0.1057177	0.1373407	Accept
ICICI SEC	0.106347992	0.08030	1.32422	0.19844	-0.0597858	0.2724818	Accept
FINE ORG	-0.121400158	0.102216	-1.18767	0.24708	-0.3328521	0.0900517	Accept
VARROC	0.081614284	0.07868	1.037249	0.310403	-0.0811548	0.244833	Accept
CA GRAMEEN	0.080010447	0.070996	1.12695	0.271381	-0.0668577	0.2268	Accept

R Square value at 68 percent show high correlation of these companies with the BSE Sensex returns. Looking at the f-significance, it was very low and hence the null hypothesis can safely be rejected. The Beta values for all the 8 companies were found to be very low when compared to the market beta of 1. Based on p-values, it can be seen that all got accepted.

**Table 11:** Regression Analysis of IPOs issued in 2019.

Summary Output							
Regression Statistics							
Multiple R	0.0904567515						
R Square	0.818242389						
Adjusted R Square	0.7728029						
Standard Error	0.04164027						
Observations	16						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	3	0.093669	0.031223	18.0073	9.71399E-05		
Residual	12	0.020806	0.001734				
Total	15	0.114476336					
<b>Intercept</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>t stat</b>	<b>p-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>	<b>Hypothesis</b>
Intercept	0.03045	0.013128	2.31958	0.038797	0.0018489	0.059058	
Metropolis	-0.05703	0.103438114	-0.55136	0.591502	-0.2824044	0.16834	Accept
Ujjvan	0.549706	0.0931127	5.903664	7.21E-05	0.346831	0.7525818	Reject
Prince Pipe	-0.002708	0.046687	-0.05801	0.954698	-0.10443	0.0990149	Accept

Author's Source

R Square value at 81 percent show high correlation of these companies with the BSE Sensex returns. Looking at the f-significance, it was very low and hence the null hypothesis can safely be rejected. The Beta values for all the 3 companies were found to be very low when compared to the market beta of 1. Some companies even showed a negative beta which implies that the price returns of these companies are moving in the opposite direction of the market returns. Based on p-values, it can be seen that 1 of the companies could reject the null hypothesis and the other 2 accepted it.

**Table 12:** Regression Analysis of IPOs issued in 2020.

Summary Output							
Regression Statistics							
Multiple R	0.520038						
R Square	0.27044						
Adjusted R Square	2.64779						
Standard Error	0.08459						
Observations	6						
ANOVA							
	df	SS	MS	F	Significance F		
Regression	5	0.0026525	0.000663145	0.092672	0.96964		
Residual	1	0.0071558	0.0071558				
Total	5	0.0098083					
Intercept	Coefficient	Standard Error	t stat	p-value	Lower 95%	Upper 95%	Hypothesis
Intercept	0.01096	0.064943	0.1688	0.8935	-0.8142	0.8361	
Happiest Mind	-0.054543	0.57642	-0.0946	0.9399	-7.3786	7.269	Accept
Route Mobile	0.1226278	0.556022	0.22055	0.8618	-6.942	7.187306	Accept
CAM Services	0.1104706	0.311108132	0.35508	0.7827	-3.8425	4.0634	Accept
UTI Asset Management	-0.06156	0.524801776	-0.1173	0.925656	-6.7298	6.60667	Accept
Equitas	0.075253		0.46908	0.6634	-0.37015	0.52066	Accept

R Square value at 27 percent show a very weak correlation of these companies with the BSE Sensex returns. Looking at the f-significance, it was close to 1 and hence the null hypothesis can safely be accepted. The Beta values for all the 5 companies were found to be very low when compared to the market beta of 1. Some companies even showed a negative beta which implies that the price returns of these companies are moving in the opposite direction of the market returns. Based on p-values, Null hypothesis got accepted.

**Table 13 :** Regression Analysis of IPOs issued in 2021.

Summary Output							
Regression Statistics							
Multiple R	0.7425						
R Square	0.551306						
Adjusted R Square	0.102612						

Standard Error	0.012971						
Observations	9						
<b>ANOVA</b>							
	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>Significance F</b>		
Regression	4	0.000826832	0.000207	1.2286	0.42331		
Residual	4	0.000672938	0.000168				
Total	8	0.00149977					
<b>Intercept</b>	<b>Coefficient</b>	<b>Standard Error</b>	<b>t stat</b>	<b>p-value</b>	<b>Lower 95%</b>	<b>Upper 95%</b>	<b>Hypothesis</b>
Intercept	-0.00827	0.008771677	-0.94245	0.3993241	-0.03262	0.016087	
Indigo Paints	0.393395	0.179376265	2.193127	0.0933656	-0.104633	0.89142	Reject
Anupam Rasayan	0.038616	0.11974417	0.322484	0.7632381	-0.29384	0.3710786	Accept
Laxmi Organic	0.028501	0.083105	0.342954	0.7488988	-0.202235	0.25923	Accept
Kalyan Jewellers	-0.08544	0.1460487	-0.584986	0.589961	-0.490932	0.32006	Accept

R Square value at 55 percent show a moderate correlation of these companies with the BSE Sensex returns. Looking at the f-significance, it was close to 1 and hence the null hypothesis can safely be accepted. The Beta values for all the 3 companies were found to be very low when compared to the market beta of 1. Some companies even showed a negative beta which implies that the price returns of these companies are moving in the opposite direction of the market returns. Based on p-values, Null hypothesis got accepted except for Indigo Paint

**Table 14 :** Regression analysis results.

<b>Year</b>	<b>Null Hypothesis</b>
2016	Rejected
2017	Rejected
2018	Rejected
2019	Rejected
2020	Accepted
2021	Accepted

**Source:** Authors Work

It can be seen that the regression models for the years 2016-2019 got rejected which means that the price returns IPOs issued in these 4 years were moving with the market returns. The regression models for 2020-2021 got accepted which

means that the price returns IPOs issued in these 4 years were not moving with the market returns. Overall, we can reject that 3<sup>rd</sup> hypothesis and safely say that there is relationship between the returns of the companies and the stock returns of the index

**t-test** With completion of the t-test analysis, it was found out that 60% of the companies rejected the null hypothesis and hence they were impacted by the Covid-19 pandemic.

**Table 15:** t-test results.

S.No	Issuer Company	T-stat	P- Value - two tailed	Result
1	Mahanagar Gas Limited IPO	1.789966	0.074313882	Accepted
2	Dilip Buildcon Ltd IPO	3.547018	0.000439134	Rejected
3	Endurance Technologies Ltd IPO	1.462312	0.144535419	Accepted
4	PNB Housing Finance Ltd IPO	2.184298	0.029570915	Rejected
5	Housing and Urban Development Corporation Ltd IPO	2.837433	0.004795548	Rejected
6	Eris Lifesciences Limited IPO	2.636759	0.008720061	Rejected
7	Central Depository Services (India) Limited IPO	1.293487	0.196643089	Accepted
8	Security and Intelligence Services (India) Ltd IPO	3.40186	0.000741582	Rejected
9	Godrej Agrovet Limited IPO	2.578661	0.010299895	Rejected
10	Indian Energy Exchange Ltd IPO	1.206779	0.228280023	Accepted
11	Amber Enterprises India Limited IPO	1.930653	0.054281577	Accepted
12	Galaxy Surfactants Limited IPO	1.572694	0.116635203	Accepted
13	Aster DM Healthcare Ltd IPO	2.483558	0.013445047	Rejected
14	Bharat Dynamics Ltd IPO	2.819993	0.005058932	Rejected
15	ICICI Securities Ltd IPO	1.868959	0.062411981	Accepted

16	Fine Organic Industries Limited IPO	2.229426	0.026380458	Rejected
17	Varroc Engineering Limited IPO	2.980289	0.0030685	Rejected
18	Credit Access Grameen Limited IPO	2.256328	0.024628532	Rejected
19	Metropolis Healthcare Limited IPO	1.271688	0.204276453	Accepted
20	Ujjivan Small Finance Bank Ltd IPO	3.72815	0.000225673	Rejected
21	Prince Pipes and Fittings Ltd IPO	2.112531	0.010299895	Rejected
22	Happiest Minds Technologies Ltd IPO	1.928537	0.055536827	Accepted
23	Route Mobile Ltd IPO	2.3789	0.018543306	Rejected
24	Computer Age Management Services Ltd IPO	3.193304	0.001712045	Rejected
25	UTI Asset Management Company Ltd IPO	1.76836	0.079103628	Accepted
26	Equitas Small Finance Bank Ltd IPO	1.994284	0.049065979	Rejected
27	Indigo Paints Limited IPO	2.018581	0.047419261	Rejected
28	Anupam Rasayan India Limited IPO	-1.07123	0.291396081	Accepted
29	Laxmi Organic Industries Limited IPO	1.406562	0.168905137	Accepted
30	Kalyan Jewellers India Limited IPO	2.973177	0.005562172	Rejected

**Source-** Authors Work

As presented in Figure 15, it was found out at that for 60% of the 30 companies, the hypothesis was rejected which means that 60% of the companies got impacted because of the Covid-19 pandemic. The tests aimed to realize how much the price returns deviated from the S&P 500 returns. If the hypothesis not rejected, it shows that the variation was significant and the price returns of the companies showed a different movement. Hence, 60% of the companies in total were affected.

## Event Study Results

**Table 16:** t-test results of the event study.

S.No	Issuer Company	t- test 16 <sup>th</sup> March	2 Days		5 Days		10 Days	
			Pre	Post	Pre	Post	Pre	Post
1	Mahanagar Gas Limited IPO	-2.7894	-2.40065	-7.102	-0.59496	-4.29712	-2.8665	-0.8862
2	Dilip Buildcon Ltd IPO	-6.40112	-6.61545	-0.0192	-1.3509	-12.7701	-3.1197	-3.0929
3	Endurance Technologies Ltd IPO	-5.45166	-4.48963	-1.9209	-0.00307	-9.51434	0.5734	-1.4826
4	PNB Housing Finance Ltd IPO	-1.48429	-4.16189	2.81023	-2.50426	-6.13199	-1.8717	4.1623
5	Housing and Urban Development Corporation Ltd IPO	-4.7226	-5.07423	1.70372	-1.9779	-9.08033	-2.2442	-1.2686
6	Eris Lifesciences Limited IPO	-0.8708815	-3.72385	-1.15614	0.24279	-3.22697	0.7558	-0.799
7	Central Depository Services (India) Limited IPO	-4.1419	-3.06645	0.40435	-1.24948	8.801058	-2.9534	0.2296
8	Security and Intelligence Services (India) Ltd IPO	-3.1652211	-3.42946	-2.617	-1.34404	-8.72363	-2.0196	-1.5063
9	Godrej Agrovet Limited IPO	3.01282577	-5.03287	-5.13484	-0.4778	-3.66547	-1.7464	3.3864
10	Indian Energy Exchange Ltd IPO	-1.6393	-5.12891	-0.75462	-1.30232	-3.64871	-3.0373	-0.793
11	Amber Enterprises India Limited IPO	-4.91686	-6.26125	-1.50715	1.26934	-6.75645	-1.5072	-2.058
12	Galaxy Surfactants Limited IPO	-2.31319	-2.32255	-4.10079	-0.75516	-3.98137	0.2679	1.5806
13	Aster DM Healthcare Ltd IPO	-1.49047	-8.15479	-1.8235	-1.034	-4.81619	-2.3544	-0.3578
14	Bharat Dynamics Ltd IPO	-4.466187	-5.52696	-0.19026	-2.39838	-8.64556	-5.6987	-0.5016
15	ICICI Securities Ltd IPO	-2.103985	-2.66555	-3.19367	-1.12571	4.659689	-1.0182	0.4456
16	Fine Organic Industries Limited IPO	-2.8690669	-2.38292	-2.72532	0.107655	-8.41466	-1.4973	-1.764
17	Varroc Engineering Limited IPO	-4.0035466	-6.71869	-1.50604	0.271643	-6.90504	-0.0293	-2.2621
18	CreditAccess Grameen Limited IPO	-8.9344876	-3.0704	-5.31114	-0.02952	-7.39758	-2.2463	-2.2314
19	Metropolis Healthcare Limited IPO	-3.8626959	-1.96976	-1.21533	-1.34448	-10.6842	0.2633	-3.2632

Source- Authors' work



**Table 17:** p-values results of the event study.

S.. No	Issuer Company	p-value 16 <sup>th</sup> March	2 Days		5 Days		10 Days	
			Pre	Post	Pre	Post	Pre	Post
1	Mahanagar Gas Limited IPO	0.0063116	0.018196	1.76E-10	0.553199	3.99E-05	0.005051	0.37762
2	Dilip Buildcon Ltd IPO	4.90147E-09	1.8E-09	0.984721	0.179731	8.35E-23	0.00236	0.002563
3	Endurance Technologies Ltd IPO	3.4716E-07	1.9E-05	0.057557	0.997554	1.05E-15	0.567648	0.141293
4	PNB Housing Finance Ltd IPO	0.140844	6.65E-05	0.005946	0.013871	1.7E-08	0.064144	6.64E-05
5	Housing and Urban Development Corporation Ltd IPO	7.52804E-06	1.78E-06	0.091508	0.050665	9.5E-15	0.027001	0.20751
6	Eris Lifesciences Limited IPO	0.38588	0.000323	0.25035	0.80866	0.001687	0.451502	0.426144
7	Central Depository Services (India) Limited IPO	7.16137E-05	0.00278	0.68787	0.214378	3.89E-14	0.00391	0.818856
8	Security and Intelligence Services (India) Ltd IPO	0.00204852	0.000877	0.010233	0.181947	5.75E-14	0.046069	0.135114
9	Godrej Agrovet Limited IPO	0.00327185	2.11E-06	1.38E-06	0.633824	0.000396	0.083788	0.00101
10	Indian Energy Exchange Ltd IPO	0.10419367	1.41E-06	0.452232	0.195768	0.000419	0.003038	0.429614
11	Amber Enterprises India Limited IPO	3.4129E-06	9.38E-09	0.134893	0.207235	9.21E-10	0.134893	0.042168
12	Galaxy Surfactants Limited IPO	0.022739	0.02221	8.34E-05	0.451909	0.000129	0.789341	0.1171
13	Aster DM Healthcare Ltd IPO	0.139216	9.97E-13	0.071186	0.303606	5.15E-06	0.020487	0.721215
14	Bharat Dynamics Ltd IPO	2.07985E-05	2.55E-07	0.849485	0.018303	8.52E-14	1.2E-07	0.617065
15	ICICI Securities Ltd IPO	0.037862531	0.008951	0.001874	0.262957	9.69E-06	0.311011	0.656853
16	Fine Organic Industries Limited IPO	0.005013769	0.019046	0.007573	0.914483	2.72E-13	0.137424	0.080757
17	Varroc Engineering Limited IPO	0.00019261	1.1E-09	0.135178	0.786451	4.54E-10	0.976691	0.025834
18	Credit Access Grameen Limited IPO	1.98495E-14	0.002746	6.51E-07	0.97651	4.19E-11	0.02686	0.027865
19	Metropolis Healthcare Limited IPO	0.000178039	0.051605	0.227072	0.181806	2.8E-18	0.792847	0.0015404

**Source-** Authors' work

It was observed that all the 19 Firms showed significant impact on 2 Days prior to the event and 5 Days after the event. The impact 10 Days prior and 10 Days

after the event was significant in lesser number of companies. This rejects the Null Hypothesis and indicates that lockdown did affect the listed company post listing and there is significant impact of Covid-19 on the stock returns of Companies which came out with IPOs post listing.

**Table 18:** Results of the ratio analysis.

S.No	Issuer Company	Beta	ROE		EPS		P/E		Negative Impact by Covid
			Initial	Final	Initial	Final	Initial	Final	
1	Mahanagar Gas Limited IPO	0.5	18	26.9	51.5	80.3	22.2	10.2	0
2	Dilip Buildcon Ltd IPO	0.93	24.7	11.2	19.6	29.6	12.7	7.1	1
3	Endurance Technologies Ltd IPO	0.5	20.6	18.8	1.9	2.2	32.7	15	0
4	PNB Housing Finance Ltd IPO	1.03	10.2	9.8	50.5	38.5	25.6	4.2	1
5	Housing and Urban Development Corporation Ltd IPO	0.91	9.3	13.8	3.2	8.5	13.3	2.2	0
6	Eris Life sciences Limited IPO	0.13	43.5	22.5	18	26.2	37.4	22.3	1
7	Central Depository Services (India) Limited IPO	0.85	19	14.7	8.7	9.2	28.6	28.1	1
8	Security and Intelligence Services (India) Ltd IPO	0.49	18.9	20.1	16	24.9	24.6	15.7	0
9	Godrej Agrovet Limited IPO	0.48	24.7	15.3	12	16	29.9	32.1	0
10	Indian Energy Exchange Ltd IPO	0.40	44.6	39.2	5.5	6.9	30.2	48.2	0
11	Amber Enterprises India Limited IPO	0.64	9.2	14	11.1	50.4	46.2	24.4	0
12	Galaxy Surfactants Limited IPO	0.65	22.9	21.6	29	65	33.7	18.1	0
13	Aster DM Healthcare Ltd IPO	0.58	-14	1	0	5	29.5	9.5	0
14	Bharat Dynamics Ltd IPO	0.79	2.6	20.5	24.5	29.1	14.5	6.4	0
15	ICICI Securities Ltd IPO	0.54	60	44.8	7.4	16.8	6.2	16.4	0
16	Fine Organic Industries Limited IPO	0.63	30.5	26.6	25	54	27.8	35.5	0
17	Varroc Engineering Limited IPO	0.76	21.2	0	38.4	0	18.3	12.7	1
18	Credit Access Grameen Limited IPO	0.93	12.2	12.2	23.2	23.4	12.2	21.6	0
19	Metropolis Healthcare Limited IPO	0.28	27.5	26.1	15.2	24.3	0	50.6	0
20	Ujjivan Small Finance Bank Ltd IPO	0.88	0	0	01	2.2	0	12.5	0
21	Prince Pipes and Fittings Ltd IPO	0.86	27	21.2	7	20.2	4.7	20.7	0

22	Happiest Minds Technologies Ltd IPO	0.41	2.6	29.6	0	14	0	46	0
23	Route Mobile Ltd IPO	0.39	64	6.5	10.3	4.1	0	339.7	1
24	Computer Age Management Services Ltd IPO	0.33	27.2	33.5	16.7	33.6	NA	NA	0
25	UTI Asset Management Company Ltd IPO	0.47	14.7	11.9	18.3	24.4	NA	NA	1
26	Equitas Small Finance Bank Ltd IPO	0.82	5.2	11.3	1.3	2.1	0	17	0
27	Indigo Paints Limited IPO	0.15	-16.3	12.6	-5.6	15.6	0	154	0
28	Anupam Rasayan India Limited IPO	0.79	29	9.4	12.7	14.8	NA	NA	0
29	Laxmi Organic Industries Limited IPO	1.56	10.5	17.8	25.6	16	NA	NA	0
30	Kalyan Jewellers India Limited IPO	0.58	7.7	7.6	1.4	1.9	NA	NA	0

**Source-Authors' work**

The companies who don't seem to be performing good considering the ration and beta are given a '1' and the ones who are doing better and haven't had much of a negative impact are given a '0'. We can see from the graph that only 7 out of the 30 companies i.e., 23.33% are affected by the pandemic and hence we can safely say that with reference to the ratios, covid has not played much role in the performance of the IPOs listed in the last 5 years.

**Conclusions and Recommendations**

The Covid-19 pandemic hit the whole world and came to India in the year 2019 and the pandemic is still going on in 2021 with the second wave. Like all the sectors in the economy, the primary market too was impacted. This study was held to test the impact on the IPOs that were issued in the years 2016-2021 due to the crisis in hand. After conducting all the selected tests, it can be safely concluded that the pandemic affected the primary market negatively. The trend analysis and Industry comparison showed us that about 50% of the companies out of the chosen 30 had a significant impact due to the pandemic. It was also seen that 2020 saw the lowest number of IPOs issued in the last 5 years and it proved the impact of the pandemic. However, we see an increase in 2021 and it is hoped that the situation will get better. The regression Analysis was done to see the performance of the company in the last 5 years and it was analyzed that the companies that got listed in the years 2016-2019 were performing better than the

companies which got listed in 2020-2021. A t-test was also conducted to look at the impact on the price returns of the companies in relation with the market returns and it was seen that 60% of the companies had their price returns deviating from the market returns significantly. Also, event study and financial ratio analysis (Appendix I) suggest firms got impacted by Covid 19. 2 Days and 5 Days Return showed maximum impact as compared to 10<sup>th</sup> Day pre and post event. Moreover, firms which got impacted had lower ratios such as P/E, EV/EBITDA, Price to Sales etc. as compared to median value of industry peer firms.

So overall, it can be concluded that the Covid-19 pandemic hit the primary market as well and has negatively impacted the IPOs that were already listed and it has also reduced the overall activity of the primary market significantly.

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