# SUSTAINABLE GROWTH OF CIPLA DURING COVID-19 PANDEMIC – A DETAILED STUDY

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**Keywords and phrases:** Cipla, Covid-19, Pandemic, Corona virus, Hydroxychloroquine, Pharmaceutical sector, Stock Market, Economy.

**Abstract** Economic growth of India has retrenched with the sets—forth of Nationwide lockdown in the year 2020 due to Covid-19 crisis. The multitude of Indian sectors where affected by the implementation of lockdown. Nevertheless, the pharmaceutical sector has seen an adroit optimum trend in the economy. At present the pharmaceutical sector holds a crucial role in the global healthcare due to COVID-19, as for the demand of Hydroxychloroquine (HCQ) has increased all over the world. Several countries across the globe process a high demand of the supply of HCQ from India to their countries, including Spain, Germany, Maldives, Nepal, United States. Especially former US president Mr. Donald Trump requested India to supply HCQ. Hence, the production of HCQ has shoot-up. It is to noted that the HCQ is manufactured by Cipla Limited. In this paper, we intend to study the sustainable growth of Cipla during Covid-19 pandemic and analyze the uptrend rate corresponding to the rate of infection of Corona virus in India.

#### 1 Introduction

Share market which is otherwise known as stock market, is the place where stocks are bought and sold. Stocks can also be sold from one owner to another through stock brokers. The price of the shares rises and falls according to the demand for that particular share. The price of the share goes up if the number of people willing to buy are more than the number of stocks available and similarly, the price goes down if more stocks are being sold and only a few people are ready to buy them. Bombay Stock Exchange s(BSE) and National Stock Exchange (NSE) are the two major stock exchanges in India. They are referred as SENSEX and NIFTY respectively. NIFTY Pharma is an index which measures the pharmaceutical sector. The Indian pharmaceuti-

cal market gained third largest production of volume and 14th in value. The production of drugs was increased so as to fight against the Corona virus. Cipla limited is an Indian multinational

pharmaceutical company, whose headquarters is in Mumbai. Cipla focuses on development of medicines for cardio vascular diseases, arthritis, diabetes, weight control, depression and many other health conditions. Its goal is to "ensure that no patient shall be denied access to high quality and affordable medicine and support". Khwaja Abul Hamied, the founder of the Chemical, Industrial and Pharmacuetical Laboratories in 1935 in Mumbai and later the name was changed as "Cipla Limited" on 20 July 1984. On August 17, 1935 Cipla was registered as public limited company. The equity shares of Cipla are listed on the Bombay Stock Exchange and National Stock Exchange. Cipla is ranked as the 3rd largest Pharma in India and also 3rd largest private pharma in South Africa.

# 2 Preliminaries

**Open:** The open price is the initial price at which the trade begins. **High:** The high is the highest price during the trading period. **Low:** Low represents the lowest price during the trading period.

Close: Close price means the final price at which the trade ends during the period.

#### Volume:

A stockâĂŹs volume refers to the number of shares that are sold or traded over a certain period of time. The more active the share, higher would be its volume. If the close is higher than the open, then the trade day is considered as positive otherwise it is considered as negative.

#### **Technical Indicators:**

There are several technical indicators like SMA, EMA, MACD, RSI, Williams %R, Stochastic Oscillator, Bollinger Band (BB) etc., for analyzing the price movements. In this paper, we have used Stochastic oscillator and Bollinger Band (BB) indicators to study the stock and the price trend of Cipla limited.

#### **Bollinger Band:**[1]

Bollinger Band was developed by John Bollinger. It is used to measure a marketâĂŹs volatility and identify whether the particular stock is overbought or oversold. Bollinger Band consists of three bands, namely, upper, lower and middle band. The volatility is measured with the help of standard deviation which is calculated for 20 days.

$$\label{eq:middleBand} MiddleBand = 20DSMA$$
 
$$\label{eq:upperBand} UpperBand = 20DSMA + (20D\ standard\ deviation*2)$$
 
$$\label{eq:lowerBand} LowerBand = 20D\ SMA - (20D\ standard\ deviation*2)$$

The price will fluctuate between the upper and lower band. Middle Bollinger Band represent the 20 days moving average of the close price. The convergence and divergence of upper and lower band is based on the volatility of prices. Low volatility will be found when the bands are narrow (convergence).

High volatility will be found when the bands are wider (divergence). When the price moves near the upper band, then it indicates the overbought (trading at a level above its intrinsic value) market. Meanwhile, it indicates the oversold (trading at a level below the intrinsic value) market, when the price are nearest to the lower band.

# STOCHASTIC OSCILLATOR: [1]

âĂIJStochastic measures the momentum of price. If you visualize a rocket going up in the air before it can turn down, it must slow down. Momentum always changes direction before price.âĂİ-George Lane

The stochastic oscillator is a momentum indicator. This indicator was developed by George Lane in late 1950s. It is used to find the speed or the momentum of price. It compares the present close price to the high-low range over the given period. The default setting for stochastic oscillator is 14 periods which can be days, weeks and months.

$$\%K = \frac{currentclose-lowestlow}{higesthigh-lowestlow} * 100$$

$$%D = 3D \ SMA \ of \ \%K$$

The Stochastic oscillator is expressed in two lines namely, %K and %D. When the Stochastic oscillator is above 80, then it indicates the overbought price, whereas if it is below 20, then the price is considered as oversold. Oversold market has high chance of pushing down the stock value, while the overbought has high chance of rising up the value of the stock.

# 3 TECHNICAL ANANLYSIS OF CIPLA LIMITED

Technical Analysis was developed by Charles Dow in 19th century to analyze the value of a stock by analyzing patterns and signals over a period of time. Technical Analysis is used for examining and predicting price movements in the financial markets by using historical price charts. The historical price chart comprises of open, high, low, close and volume of stock.

# 3.1 BOLLINGER BAND (BB)

We have collected the historical prices of Nifty Index, Nifty Pharma index and Cipla Limited in particular for the past two years and we performed technical analysis. Standard Deviation and 20 day SMA were calculated to arrive at the upper, lower and middle bandwidth values. The following are the graphical representation of our study.

# **BOLLINGER BAND FOR THE FY19-20**

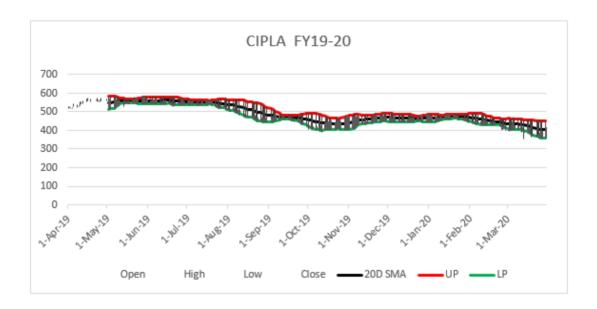


Figure 1. Graph 3.1(a)

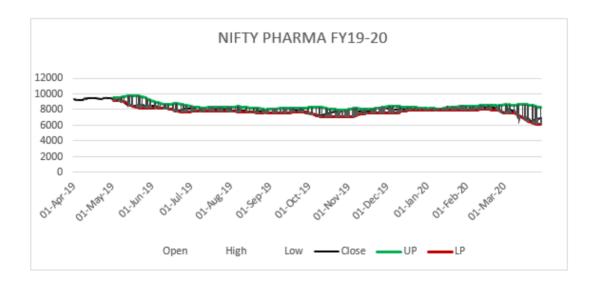


Figure 2. Graph 3.1(b)

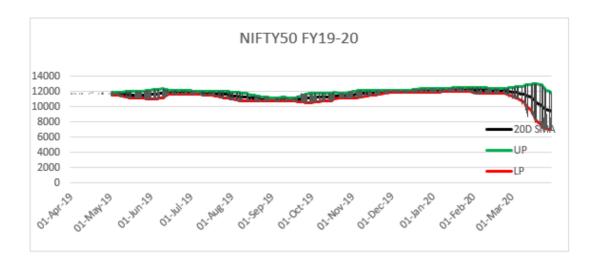


Figure 3. Graph 3.1(c)

The above graphs illustrate that during FY 2019-2020, the two bands (upper and lower) were narrow which indicates a dip in the stock price. But at the end of FY19-20 (March), the two bands were wider in position which indicates increase in the stock value.

# **BOLLINGER BAND FOR THE FY20-21**

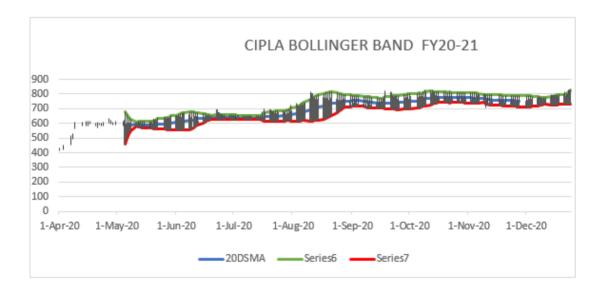


Figure 4. Graph 3.1(d)

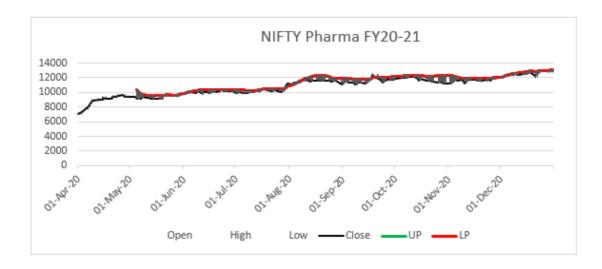


Figure 5. Graph 3.1(e)

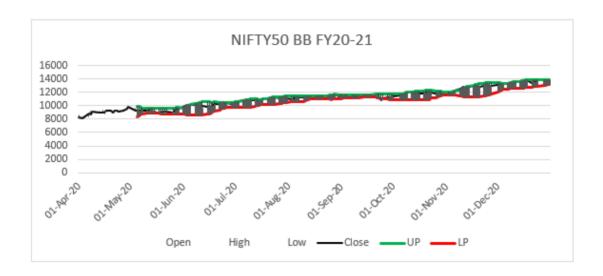


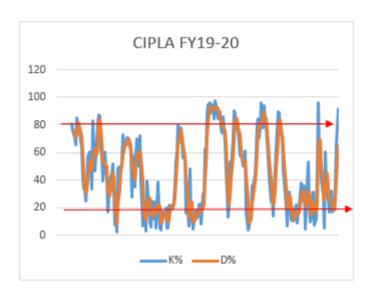
Figure 6. Graph 3.1(f)

From the above graphs, we notice that during FY2020-2021(April to December) the bands are wider, which shows an uptrend in the stock price. In particular, it indicates the overbought market as the stock price has been seen repeatedly touching the upper band.

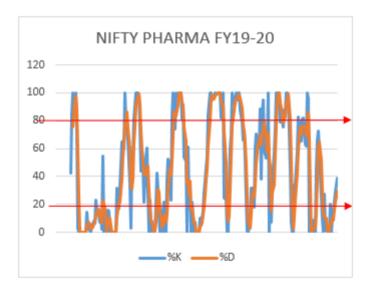
#### 3.2 STOCHASTIC OSCILLATOR

The following graphs have been obtained by considering the historical price of Nifty Index, Nifty Pharma index and Cipla Limited. The ratio of the difference between the current close and lowest low and the difference between the highest high and lowest low was calculated and its percentage has been named as %K. Further, the 3-day SMA of %K was calculated and it is termed as %D. Using these two percentages, we have made an attempt to interpret the performance of NSE and in particular the Cipla Limited for the considered period.

# STOCHASTIC OSCILLATOR FOR THE FY19-20



**Figure 7.** Graph 3.2(a)



**Figure 8.** Graph 3.2(b)

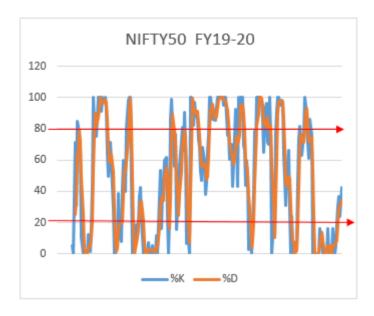
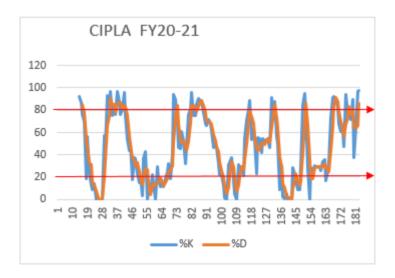


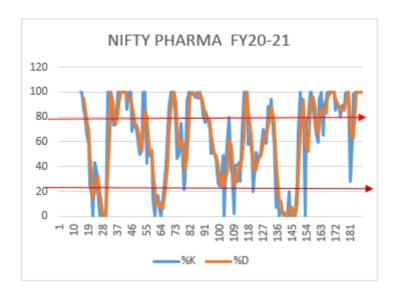
Figure 9. Graph 3.2(c)

From the above graphs, we notice that during FY2020-2021(April to December) the bands are wider, which shows an uptrend in the stock price. In particular, it indicates the overbought market as the stock price has been seen repeatedly touching the upper band.

#### STOCHASTIC OSCILLATOR FOR THE FY20-21



**Figure 10.** Graph 3.2(d)



**Figure 11.** Graph 3.2(e)

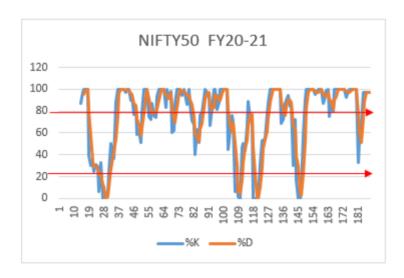


Figure 12. Graph 3.2(f)

Stochastic oscillator for the FY2020-2021 (April- December) reveals the momentum or the speed of the stock price. From the above graphs, we notice that almost all the %K line crosses over the %D line which shows the bullish trend of the close price. Here, consecutively the stochastic oscillator has been seen swinging above 80, which indicates that the stocks were âĂIJoversoldâĂİ. This concludes that there is an uptrend in the stock and it is evident that the Covid-19 pandemic has become the boon at least for the pharma sector which supports the Indian economy to some extent as of now.

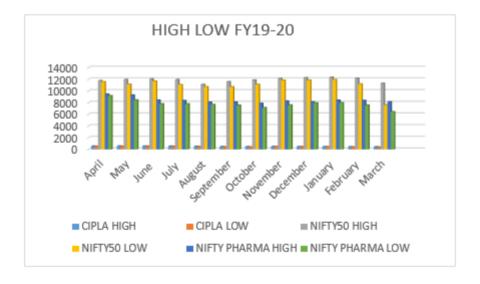
# **COMPARISION OF FY2019-2020 & FY2020-2021**

From the above technical analysis, the indicators (Bollinger & Stochastic) reflect the massive growth in stock price of Cipla as both NIFTY 50 and in particular the NIFTY Pharma index too have outperformed the regular market. FY20-21 has been observed to be in bullish trend while comparing to the FY19-20 as the stocks were seen in oversold range during FY20-21(April to

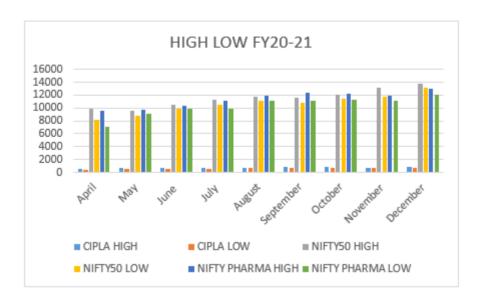
December). The Cipla stock price reached the topline of Rs.833 in December 2020 which being the 52 week high, clearly indicates the tremendous demand for the stocks of the company. It is to be noted that the stocks of the Cipla Limited were actually trading for Rs.578 in FY19-20. Corona Virus has not only topped the infection rate in India but it has also helped the Indian pharmaceutical sectors to reach the new heights. Post relaxations of lockdown regulations, gradually NIFTY 50 has just crossed 14,000 mark which even touched the bottom curve of 8000 during the Covid-19 pandemic. No wonder that, NIFTY Pharma Index has also reached 12,908.95, which was actually 9461 in the FY19-20.

# 4 IMPACT OF COVID-19 OVER THE BULLISH TREND OF CIPLA LIMITED

Coronavirus is a prototype of deadly common virus that infects human, leading to upper respiratory infection (URI). Quintessence of the virus, had led the way to greater reliability of the Pharmaceutical sector to support and fight at odds with the virus. Thus, the productivity of medicines was escalated, proclaiming the massive growth of Pharmaceutical sector. The occurrence made a firm orchestration between the government and Pharmaceutical sectors to fight against the COVID-19. As of now only very few companies have come out with vaccines and still they are also in their initial stages of testing. Until then, Hydroxychloroquine (HCQ) (used to treat malaria and rheumatoid conditions such as arthritis) was being highly recommended. The stipulation of (HCQ) has increased all over the world. India manufactures 70% of the worldåÄŹs supply of HCQ on the basis of Indian Pharmaceutical Alliance (IPA). Numerous pharmaceutical companies were demanded by the government for the production of HCQ where Cipla played a vital role in the production. Cipla combined with CSIR, IICT ICMR and the ministry of Health to develop medications for the treatment of COVID-19.



**Figure 13.** Graph 4.(a) HIGH / LOW PRICE OF NIFTY, NIFTY PHARMA & CIPLA PRECOVID-19



**Figure 14.** Grpah 4.(b) HIGH / LOW PRICE OF NIFTY, NIFTY PHARMA & CIPLA DURING COVID-19

The total number of infected patients, death and recovery cases in India is around 10,245,326, 148,475 and 9,834,141 respectively till December 2020. During the national lockdown, there occurred a financial crisis of economy in stock market. But Pharmacuetical sector to some extent managed to grip the Indian economy from taking a deep fall. The following graphical representation will give a vivid picture about the performance of pharmaceutical sector during the Covid-19 pandemic.

âĂć During FY19-20, i.e during precovid period the CiplaâĂŹs stock price ended with Rs.431.25 and Nifty pharma ended with 6896. But during the third quarter of FY20-21, the CiplaâĂŹs stock price increased to Rs.833 and Nifty Pharma increased to 12,823.90 at the end of December 2020 which reflects the tremendous growth of the sector and said company in particular.

âĂć In the initial stages of covid i.e in January 2020, the virus began to spread moderatly everywhere in our country and it began to spread rapidly during the month of May by then the CiplaâĂŹs stock was trading at Rs.648 and Nifty Pharma index was at 9768 while the NIFTY50 was merely at 9580.

âĂć Even after the relaxation of lockdown, the virus didnâĂŹt lose its rigor and that caused an high demand for the stocks of Cipla and thus its stock price increased consecutively for about 24 trading days from 16-June-2020 to 17- July-2020.

âĂć Comparing the growth of the stock movement between the FY19-20 and FY20-21, the above graphs 4.1 and 4.2 indicate the uptrend of Cipla, Nifty Pharma and NIFTY 50.

#### 5 CONCLUSION

From our Technical Analysis, we arrive at a conclusion that Cipla Limited is highly sustaining in the crisis period despite general falling of the Indian stock market trend. It is evident from our study that both Nifty 50 and Nifty Pharma index have crossed new scales at the end of the third quarter of FY20- 21. CiplaâAZs stock movement remains to be unbelievable and it yet again proves that anything is possible in the stock market. This time, Covid-19 has at least helped the pharmaceutical sector, which in turn contributed a significant share in NIFTYâAZs uptrend. The positive impact of pharmaceutical sector seems to sustain till the virus is restrained. But this virus seems to be unstoppable as it has now mutated and formed a different structure. Thus, causing much more demand over the stocks of the pharmaceutical sector. Though it is not healthy for the mankind, as of now it helps the Indian economy to return to its path and in that note and of course only in that note, CiplaâAZs contribution in the Indian Stock Market is vital.

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