



# “COVID 19 IMPACT ON PHARMACEUTICAL STOCK ”

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## **ABSTRACT**

In light of the recent Covid 19 epidemic, this research will analyze the performance of top pharmaceutical companies trading on India's National Stock Exchange. We have picked 10 major pharmaceutical businesses registered with NSE, and the decision was completely based on the market capitalisation of the companies. The study's overarching hypothesis was that pharmaceutical equities will go in the opposite direction of the market (contrarian effect). The time frame that was examined was split into two parts: before and after the Covid 19 crisis. There are a total of 123 daily price observations for the 10 pharmaceutical firms included in this study. The duration of research is extending from 3rd September 2019 to 28th February 2020. According to the data, the momentum effect is still at work in the pharmaceutical stock market, with pharmaceutical equities tracking the general benchmarking index's movements. The total number of companies is reduced.

## **GENERAL INFORMATION**

The 2019 coronavirus disease (COVID-19) is a respiratory illness caused by a new coronavirus strain. A coronavirus was identified in December of this year. The illness, which began in Wuhan, China, has now spread to almost every nation, making it a worldwide pandemic. The flu-like illness known as COVID-19 causes symptoms include a high temperature, dry cough, and a pounding head.

Many people have died with COVID-19 n, which causes respiratory problems. Those who are already dealing with xn health issues and the elderly are at increased risk for getting life-threatening illnesses.

Contact with nasal discharges or coughing or sneezing saliva droplets is the primary mode of transmission of the COVID-19 infection.

There is currently no cure or vaccination available for COVID-19. Prevention strategies for COVID-19 include regular hand washing with soap, using alcohol-based sanitizer to cleanse hands, using face coverings like masks, and refraining from touching one's face with unclean hands.

Clinical studies for COVID-19 may be able to be canceled if measures are taken to reduce or eliminate opportunities for person-to-person transmission can one of the strategies proposed to prevent people from catching the coronavirus. This suggests keeping at least two meters of space between you and other people at all times while you're not in your own house, among other common. As an added bonus, this method prevents people from congregating in large numbers in places where there may be an overpopulation problem. Since the motivation for this strategy is the hypothesis that some persons may transmit the coronavirus while showing no symptoms, the fear of catching the virus via clinical trials is likely to deter participants.

The purpose of this article is to analyze how COVID-19 has affected the manufacturing sector. The study is primarily concerned with the clinical studies conducted on COVID-19 in the m-health sector. In this work, we look at what may be done to mitigate the effects of COVID-19 on clinical trials and our capacity to conduct them.

## **ABOUT THE COMPANY / INDUSTRY / SECTOR**

India is well recognized as the world's leading supplier of generic pharmaceuticals and a leading producer of low-cost vaccinations and generic medications. After starting from scratch and rising at a CAGR of 9.43% over the previous nine years, the Indian pharmaceutical sector is now ranked third in pharmaceutical output by volume. The Indian pharmaceutical market is very diverse, with several important subsectors including generic pharmaceuticals, OTC medications, bulk meds, vaccines, contract research & production, biosimilars, and biologics. Approximately 8% of the global API market comes from India's 500 API companies, and the country's pharmaceutical production facilities are in conformity with US Food and Drug Administration (USFDA) regulations.

The Indian pharmaceutical industry meets more than half of the worldwide demand for different vaccines, forty percent of the demand for generic drugs in the United States, and twenty-five percent

of the total medication demand in the United Kingdom. Three thousand pharmaceutical firms and ten thousand and five hundred production facilities make up the domestic pharmaceutical sector. When it comes to the pharmaceutical industry, India is among the world's top players. There is a big number of scientists and engineers in the nation that might help lead the way in taking the sector to new heights. Today, Indian pharmaceutical companies provide more than 80% of the antiretroviral medications needed to treat AIDS (Acquired Immune Deficiency Syndrome) throughout the world. India's cheap prices and good quality have earned it the nickname "pharmacy of the world."

### **Market share of India's pharmaceutical industry**

The domestic market is projected to increase by a factor of three during the next decade, as reported by the Indian Economic Survey 2021. In 2021, India's domestic pharmaceutical industry was valued at US\$ 42 billion. This is expected to rise to US\$ 65 billion by 2024 and then to US\$ 120–130 billion by 2030. Biopharmaceuticals, bio services, bio agriculture, bioindustry, and bioinformatics are all part of India's thriving biotechnology sector. In 2020, the Indian biotechnology market was worth \$70.2 billion, and by 2025, that number is projected to increase to \$150 billion. In FY20, the market for medical equipment in India was valued at US\$10.36 billion. From 2020 to 2025, the market is forecast to grow at a CAGR of 37%, all the way up to US\$50 billion. By the end of the forecast period beginning in August 2021, CARE Ratings anticipates that the pharmaceutical market in India will have grown at an annual pace of 11% to reach a value of more than US\$ 60 billion.

### **ABOUT MAJOR COMPANIES IN THE INDUSTRY**

As the leading pharmaceutical firms take the lead in the battle against COVID-19, the pharmaceutical sector worldwide is likely to see growth.

The consumer health division of Johnson & Johnson saw revenue rise by 0.3% year over year, thanks in large part to increased sales in the US market and the favourable effect of acquisitions and divestitures, which added 1.6% to overall sales growth.

The pharmaceutical division's revenue increased by 3.6%, with the immunology (\$13.95bn) and cancer (\$10.69bn) portfolios being the primary contributors. BALVERSATM (erdafitinib), XARELTO® (rivaroxaban), SPRAVATO® (esketamine), INVOKANA® (canagliflozin), and STELARA® were just some of the new prescription medications authorized this year (ustekinumab).

Although J&J's pharmaceutical business growth is expected to stay above industry growth in 2020, the company anticipates some disruptions. However, certain subsegments within consumer health may be harmed by fewer people making purchases and more social isolation.

Using the Ad26® vector technology and the PER.C6® manufacturing platform, J&J is progressing toward the creation of a vaccine against COVID-19.

The potential vaccine was first disclosed in March of 2020, and preparations for manufacture began in June of that year. Clinical studies started in September 2020, and results were anticipated in December 2020. Initial doses of the vaccine for urgent use are projected to become available in the first quarter of 2021.

The biopharma division accounted for 76.2% of Pfizer's total sales despite the company's overall 4% revenue reduction. Anti-infective product sales in China, namely for the company's antibiotic medicine Sulperazon, accounted for 54% of the company's revenues from international markets. The remaining 46% of sales were made in the US, where the introduction of generic alternatives to Lyrica for the treatment of seizures has had a negative impact.

The firm and GlaxoSmithKline (GSK) have combined their consumer healthcare activities under the auspices of a newly created joint venture. The ownership stake in the joint venture is split 68% to 32% between Pfizer and GSK.

It was reported that the Upjohn business unit will be merged with Mylan to establish a new pharmaceutical firm called Viatrix. Pfizer spent \$11.2 billion to purchase Array BioPharma and \$340 million to buy Therachon Holding. This was in addition to the \$1 billion it spent to purchase the small molecule anti-infectives division of AstraZeneca. Moreover, the firm has obtained the patent for ANGPTL3-LRx, an experimental antisense treatment developed by Akcea Therapeutics.

Pfizer's revenue dropped in the first quarter of 2020 as a result of the lockdown limitations and the subsequent decrease in patient visits. Investment in R&D for the creation of anti-infective medicines and a COVID-19 vaccine code-named BNT162 mRNA is set to grow by \$500 million. The vaccine's phase 2b/3 trials kicked off in July 2020, and depending on the findings, regulatory clearance is anticipated in the fourth quarter of 2020.

## Roche

Pharmaceutical sales of new medications including Ocrevus, Hemlibra, Tecentriq, and Perjeta boosted Roche's pharmaceutical division's revenue by 11% year-over-year. While the biosimilars business in Europe and Japan performed poorly, Tecentriq in cancer and Actemra/RoActemra and Esbriet in immunology contributed considerably to the company's sales.

Sales in the US were negatively affected by \$1.55bn due to competition from biosimilars, primarily of MabThera/Rituxan, Herceptin, and Avastin. Although the United States continues to be the company's most important sales area, the Chinese market has grown by 36% as a result of the company's increased efforts to break into that region. The \$4.8 billion purchase of Spark Therapeutics was a major deal for the pharmaceutical industry during the year.

As a result of the COVID-19 pandemic, revenues for Roche are anticipated to increase. The Actemra and Roaster cancer medicines are being tested in phase three clinical studies for the treatment of severe COVID-19 pneumonia. Based on the findings, it is intended to enhance medicine production.

For 2019, Novartis's sales increased by 6% year-over-year, with 79% coming from the new pharmaceuticals segment and 21% from Sandoz. Established markets such as the United States, Canada, Western Europe, Japan, Australia, and New Zealand accounted for the bulk of the company's sales.

## INTRODUCTION OF THE STUDY

The global community has been under extreme pressure ever since the COVID-19 epidemic broke out. The coronavirus epidemic has had devastating effects on the health and well-being of the population. The global economy and financial markets have not had a very good 2020.

The Indian stock market suffered one of its worst falls ever as a result of this crisis. Since the beginning of March 2020, both the SENSEX and the NIFTY have dropped drastically, by roughly 20%. There was widespread red ink throughout markets and economic spheres. Companies of all sizes were hit hard during this period of market volatility. In spite of the enormous fall in share prices across the board, the pharmaceutical industry has been showing signs of recovery. Keep reading to learn how the coronavirus is affecting the pharmaceutical industry.

### **The State of the Markets during the COVID-19 Pandemic**

Investors, both retail and institutional, are frantically exiting cyclical equities as the number of COVID-19 cases rises throughout the nation and the globe. Stock prices have plummeted and market volatility has skyrocketed as a result of the widespread selling frenzy.

All non-essential services have been outlawed and production across all sectors has practically stalled due to the 21-day shutdown imposed in India, adding to the load. The adverse pressure on stock markets has only increased as there has been no sign of a cure so far.

## Drug company share prices affected by the coronavirus

Contrarily, despite the current situation, investors have begun to see the value in pharmaceutical equities. Most pharmaceutical firms, with a few notable exceptions, have closed each trading day in the green, giving the impression that they are on a spending frenzy. S&P BSE Healthcare and Nifty Pharma, two important indexes that monitor pharmaceutical firms, both increased by about 36% and 42% from March 23, 2020, as of April 16, 2020. Investors, both little and large, may profit greatly from the recent surge in the price of pharmaceutical companies.

The stock prices of diagnostic labs have risen precipitously alongside those of pharmaceutical firms. Both Dr. Lal Pathlabs and Thyrocare, two of the largest diagnostics companies in India, have had their share prices soar by roughly 20% and 14% since March 23, 2020, as of April 16, 2020. As people became more conscious of the need of taking care of their health, the demand for preventative exams and diagnostic lab work skyrocketed, driving up stock values dramatically.

When markets are unstable, why do pharmaceutical stocks tend to do well?

Now that you know how coronavirus affects pharmaceutical stocks, let's examine what's driving this increase in depth.

## LITERATURE REVIEW

The global pharmaceutical industry was negatively impacted by the Covid-19 epidemic. There is currently no accepted protocol or medication for treating Novel Corona virus infection. The pharmaceutical sector is helping governments meet the unmet requirements of Covid-19, such as doing research and development on alternative treatment techniques, and ensuring a stable supply of medicines during an emergency.

The high rates of illness and death brought on by the Covid-19 pandemic had a chilling effect on people's standard of living and ability to provide for themselves. Especially during pandemics, when the medications supply chain might be overburdened for a variety of causes, the pharmaceutical sector plays a crucial role in producing high-quality healthcare services. One of them is a dependence on age-old production and distribution channels, such as those based in India and China.

In addition, lockdowns, such as those enacted in the early days of the Covid-19 outbreak, restricted in-country and cross-border mobility, which had a significant effect on the delivery of pharmaceutical supplies. With most pharmaceutical producers keeping just two to three months' worth of bulk

pharmaceuticals on hand, the Covid-19-related disruption has caused an extreme scarcity of APIs beginning in May 2020.

Many pharmaceutical factories in India were only able to produce at 20-30% capacity due to a shortage of APIs and other active ingredients. Further evidence pointed to rising API acquisition expenses. The factories weren't running at full capacity because to issues like lockdown and government instructions on physical separation in the workplace. In the pharmaceutical industry, the standard stockpile duration is 180 days. In most cases, a 60-day maximum storage duration is acceptable for retail pharmacies' stock.

As the need for pharmaceuticals, vaccines, and medical equipment rises, Covid-19 may be considered a once-in-a-century opportunity for the pharmaceutical industry. Immediate effects of Covid19 on the healthcare industry include a shift in demand, supply shortage due to shortage of inventory of input materials to manufacture drugs, panic buying and stockpiling, new regulations, and a shift in communication and promotion to remote interactions via technology and research & development process changes. It is possible that the pandemic and limitations in the supply chain have caused a shift in demand, resulting in a scarcity in the case of induced demand and panic-buying of oral home medicine, especially for chronic illness.

According to the research, "panic-buying" of medicines for chronic diseases is expected to increase global pharmaceutical market 5 demand by +8.9% by March 2020 [8]. There was a 65% rise in the use of asthma drugs and a 25% increase in the use of type 2 diabetes medications, according to a research conducted in the United States between March 13 and 21, 2020. The API and bulk commodity markets in India have already seen the effects of this shortfall. The observed average rise was about 10-15%, while it might go as high as 50% in some situations, such as paracetamol APIs.

To achieve their primary objective of making vital medications available at reasonable prices, pharmaceutical industries are battling to preserve natural market flow in the wake of the recent pandemic. The pharmaceutical business may see a slowdown in growth as a consequence of the coronavirus epidemic, which caused economic slowdowns in numerous nations. Supply chain expenses, including local freight rates, air and sea fares, and fuel surcharges, all went up as a result of the interruption to international shipping.

## **BACKGROUND OF THE STUDY**

The pharmaceutical market plays a significant role in international trade.

An increasing and aging population, new medical problems, and the introduction of illnesses all bode well for the industry's long-term growth prospects. The Over the last 50 years, the Indian

pharmaceutical business has flourished, expanding into new local and international markets. In 2020, "Made in India" medications will account for 80% of the Indian pharmaceutical market, up from 5% in 1969 (when global pharmaceuticals had a 95% share). In addition, the nation has become the "Pharmacy of the world" for its dominant position in the worldwide market for generic drugs during this time. India's pharmaceutical sector supplies a whopping 62% of the world's vaccinations and over 20% of its generics. With a 9.8 percent increase over its 2018 total (US\$18.12 b), India's home pharmaceutical industry is now worth US\$20.3 b. Despite a slow start to the year owing to the pandemic, the domestic market increased by 2.2% from April to September of 2020, as compared to the same period in 2019. In FY20, Indian pharmaceutical exports hit \$20 billion, an increase of 8.4% from FY19.

On March 11, 2020, after a flu-like epidemic was initially detected in Wuhan, China in early December 2019, the World Health Organization (WHO) proclaimed COVID-19 infection, i.e., Severe Acute Respiratory Coronavirus infection (SARS-CoV-2). Uncertainty over the effect of the COVID-19 pandemic on the global and Indian pharma sector supply chain has been a particular topic of worry as nations and firms continue to struggle with the extraordinary problems brought up by the new coronavirus (COVID-19).

China, the world's largest producer and exporter of APIs by volume, supplies around 70-75% of India's APIs and critical beginning raw materials. Paracetamol, penicillin, and anti-asthma pharmaceuticals, among others, have seen price increases in India of 40-50% due to disruptions in the supply chain. Due to labor shortages and the reduction of several facilities to a single shift, pharmaceutical production was running at barely 40-50% of capacity.

Transportation difficulties for employees were exacerbated by pass requirements and limits on using public transportation to go to factories. Another important difficulty at the time was the lack of transportation infrastructure for delivering supplies. Some of the sectors that provide the pharmaceutical industry's support functions, such as the manufacture of packaging for medications, have not yet been designated as critical. This created a severe problem for packaging suppliers in locating the raw materials needed to make the drug packaging, which might have a major effect on the pharmaceutical industry as a whole. Innovative medication research has also been impacted by the reduction in imports.

## OBJECTIVES OF THE STUDY

- The purpose of this discussion is to examine how COVID-19 has affected clinical trials in the pharmaceutical sector.
- looks at how COVID-19 may affect clinical trials and what may be done to mitigate its effects so that testing can proceed.

## RESEARCH METHODOLOGY

### METHODS FOR DATA COLLECTION & VARIABLES OF THE STUDY

#### Methods for data collection

Secondary Data

#### Secondary Data

Secondary source of data was collected from

Books

Journals

Magazines

Web's big data es

#### Sampling

The sample technique utilized for data gathering is convenient sampling. The convenience sampling method is a non-probability strategy.

#### Sampling size

Big data indicates the numbers of people to be surveyed. Though large samples give more reliable results than small samples but due to constraint of time and money,

#### Plan of analysis

- Diagrammatic representation through graphs and charts
- Big data able inferences will be made after applying necessary statistical tools.
- Findings & suggestions will be given to make the study more useful.

## CONCLUSION/SUGGESTIONS

The emergence of COVID-19 has disrupted current clinical studies and threatened to derail the whole initiative. Both currently underway clinical studies using established procedures and future clinical trials using untested methods or unwritten regulations need adherence to established protocols. The negative effects of COVID-19 must be mitigated. Due to the current COVID-19 epidemic, it is necessary to adjust monitoring procedures to meet the challenges it presents.

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