

# *The Impact of the COVID-19 on Pfizer: Past, Present and Future*

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**Abstract:** Towards the end of 2019, COVID-19 was discovered in Wuhan, Hubei Province, China, and rapidly spread worldwide, resulting in significant impact on the global economy. Despite the pandemic being a disaster for the world, it has also created business opportunities for some healthcare companies, with Pfizer being a prime example. During the COVID-19 pandemic, Pfizer and BioNTech jointly developed Cominate, a vaccine that has been instrumental in combating the infection and death crisis. At the same time, Pfizer also engaged in the development of effective drugs. However, Pfizer has also been exposed to some negative news, which has had a significant impact on its business performance and stock price. The impact of the pandemic on Pfizer can be reflected through the changes in Pfizer's operating performance before and after the pandemic. In the future, the ever-changing factors of the COVID-19 pandemic will continue to have a certain influence on Pfizer's future, and the company will need to develop new strategies to address future challenges in order to achieve long-term stable development.

**Keywords:** COVID-19, pfizer, challenge

## 1. Introduction

According to Pfizer's 2021 annual report, the company generated \$36,781 million in revenue from Comirnaty (COVID-19 Vaccine mRNA), accounting for more than half of Pfizer's top 10 medicines and vaccines [1].

In December 2019, a new coronavirus disease, called COVID-19, was found in Wuhan, China, which was caused by SARA CoV-2 virus. It is highly contagious and rapidly spreading globally. The main manifestation of COVID-19 is respiratory symptoms, such as common cold, influenza or pneumonia. However, it can also affect other parts of the body. As of March 12, 2023, according to data released by the WHO, the cumulative number of COVID-19 cases has reached 759408703, with a total of 6866434 deaths, and this number is still on the rise [2].

With the COVID-19 pandemic escalating globally, pharmaceutical companies around the world have actively developed corresponding vaccines, drugs, and other healthcare products. For instance, Pfizer's 2021 annual report shows that it earned \$36781 million through Comirnaty (COVID-19 Vaccine mRNA).

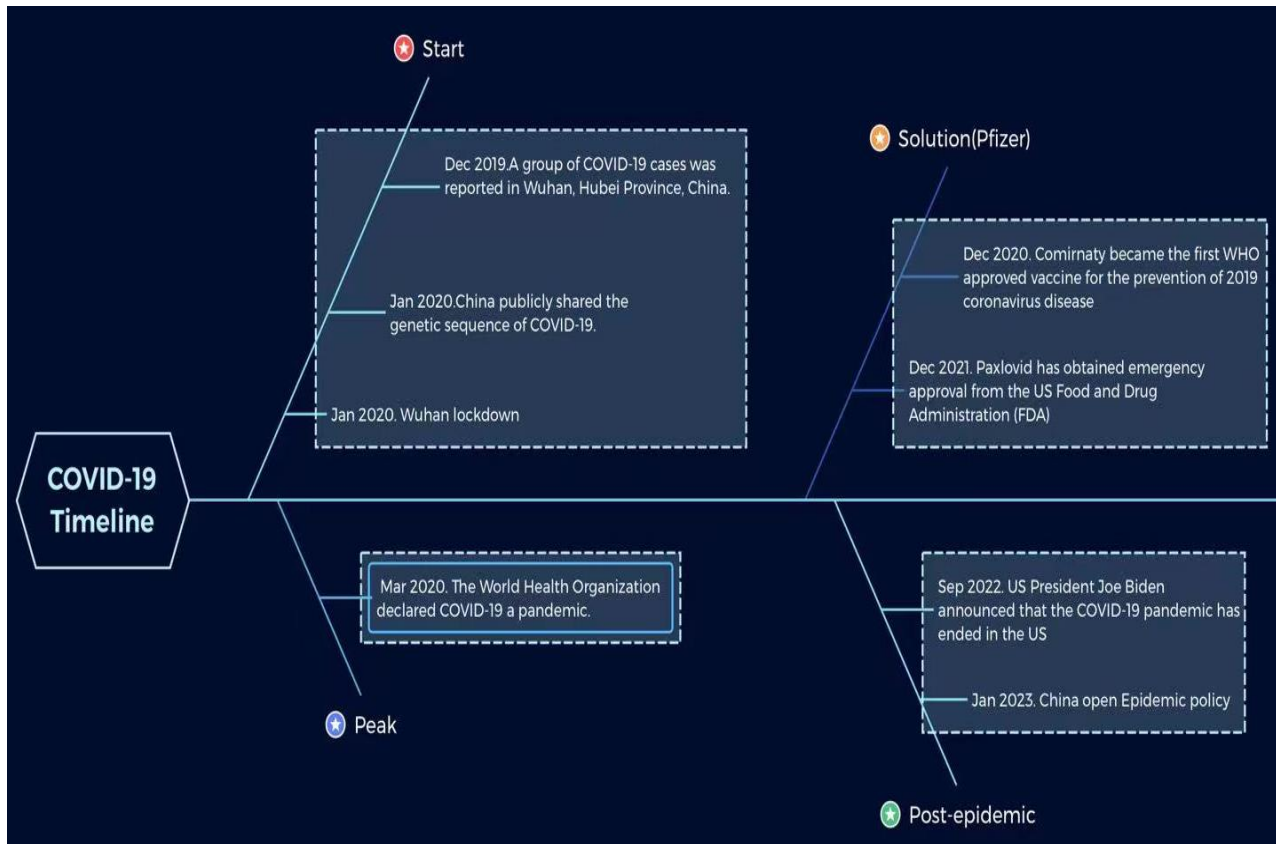


Figure 1: Covid-19 Timeline.  
Content credit: World Health Organization [3]  
Photo credit: Original

Figure1 is a timeline chart that summarizes some important events and their timeline since the outbreak of the COVID-19 pandemic. The objective of this article is to analyze the impact and changes of Pfizer during the COVID-19 pandemic by examining the company's business operations and significant events prior to and during the pandemic, as well as considering the global economic context. Furthermore, this article aims to provide a reasonable prediction and evaluation of the company's future development.

The essay is structured as follows: Section 2 analyzes the pharmaceutical market landscape prior to the Covid-19 pandemic, while Section 3 examines Pfizer's performance during the pandemic. Finally, Section 4 provides a concise summary of the essay and offers predictions for the future.

## 2. The International Pharmaceutical Market Pattern before Covid-19 Pandemic

### 2.1. Global Economic Environment

#### World's GDP fluctuation

The following table shows the GDP (trillion dollars) data of China, the United States, the European Union and the whole world from 2015 to 2019 [3].

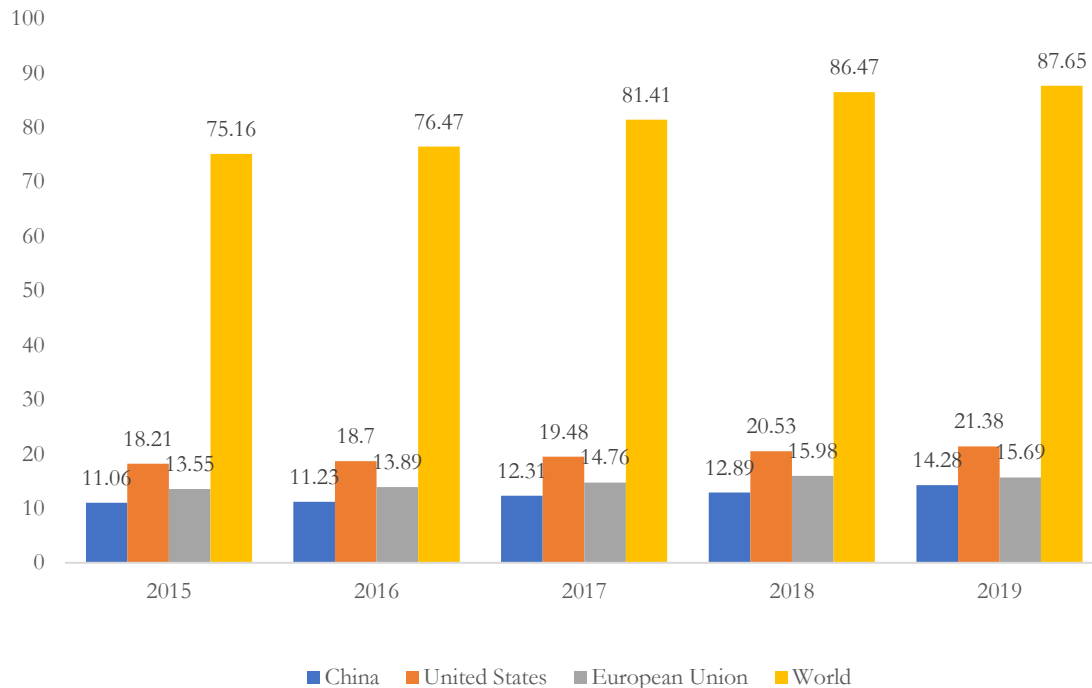


Figure 2: GDP from 2015 to 2019.

Data source: [https://www.kylc.com/stats/global/yearly\\_overview/g\\_gdp.html](https://www.kylc.com/stats/global/yearly_overview/g_gdp.html) [4]

Photo credit: Original

According to Figure 2, the three aforementioned entities represent the largest contributors to global GDP. Data shows that in the five years before the COVID-19 pandemic, the global economy was on a steady upward trajectory. During this period, China's total GDP increased by 3.22 trillion dollars, the United States by 3.17 trillion dollars, while the European Union only increased by 2.14 trillion dollars.

### Important event

COVID-19 was discovered at the end of 2019 and spread rapidly afterwards, but a major event also occurred in the period from 2018 to 2019 before that, which was the beginning of the trade war between United State and China.

Public is generally believed that the China-United States trade war began on March 22, 2018 and has continued to this day. At the beginning, the United States has started imposing tariffs and other trade barriers on China, with the aim of forcing China to change what it claims has been unfair trade practices and intellectual property theft for decades [5].

Evaluation: Due to trade wars, the frequency of transactions between China and the United States has decreased. Although the United States has not imposed tariffs or other restrictions on China's pharmaceutical industry, the negative trading relationship between the two countries still affects the relevant markets to a certain extent, and the United States also has restrictions on some chemical products, which still has a significant impact on China's pharmaceutical industry.

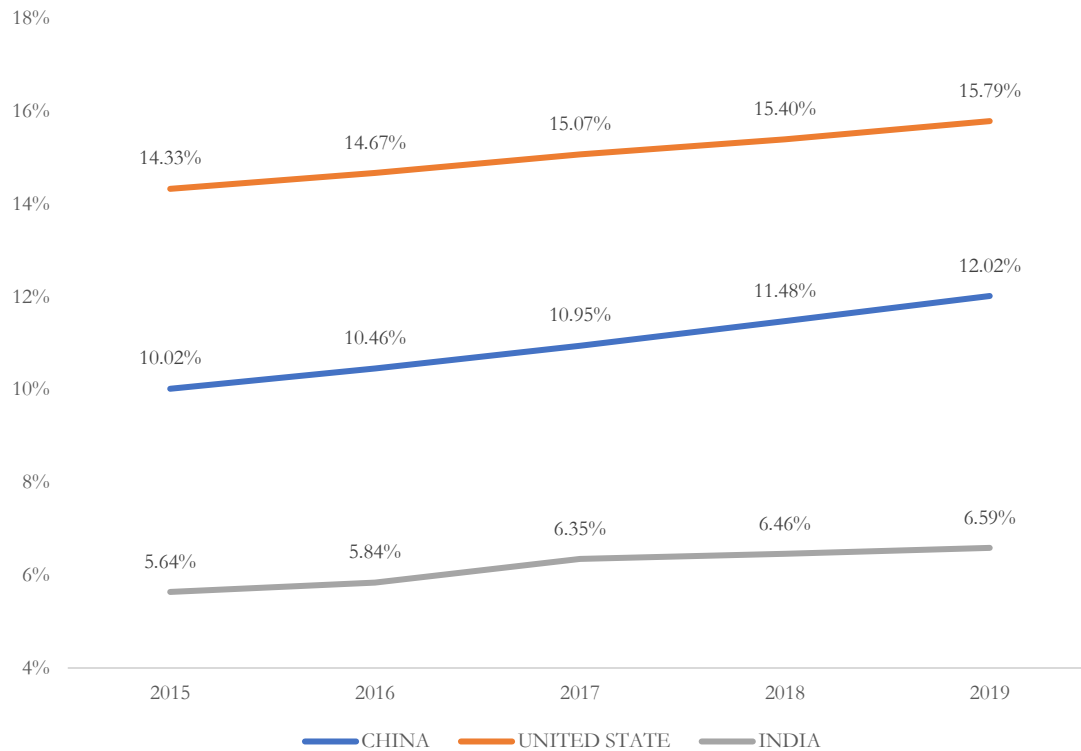


Figure 3: Aging population.

Data source:

[https://www.kylc.com/stats/global/yearly\\_overview/g\\_population\\_65above\\_perc.html](https://www.kylc.com/stats/global/yearly_overview/g_population_65above_perc.html) [6]

Photo credit: Original

According to Figure 3, before the pandemic, the aging of the population has been a very serious problem. The proportion of the elderly over the age of 65 is increasing year by year worldwide, which also means that more elderly people need products from the pharmaceutical industry, including medical appliances and drugs.

As a major event affecting the world economy, politics and other aspects, the whole process of Britain's Brexit continued for a long time. Although Britain's formal Brexit took place on January 31, 2020, as early as September 21, 2018, "Brexit" statement was announced to the world. This action had a great impact at that time, and there were both positive and negative aspects in the view of the future of Britain. Some people believe that this is an advantage. The UK no longer needs to pay expensive membership fees to the EU, and cannot receive returns from them, while the UK don't have to accept refugees and immigrants from EU member states, ensuring domestic security and employment. The free trade system is also a benefit for the UK economy. However, the people who hold the opposite idea argue that Britain would no longer benefit from the free trade between EU member countries and could not enjoy the influence provided by the EU on Britain [7].

## 2.2. Pharmaceutical Market Environment

The data in Figure 4 shows the transfers from government domestic revenue (allocated to health purpose) of the United States and China in the five years from 2015 to 2019. The United States and China are among the countries most affected by the pandemic. However, before the pandemic, transfers from government domestic revenue (allocated to health purposes) have been increasing year

by year. The main reason was that the country's economic development is getting better, and the public pays more attention to and spends more on health.

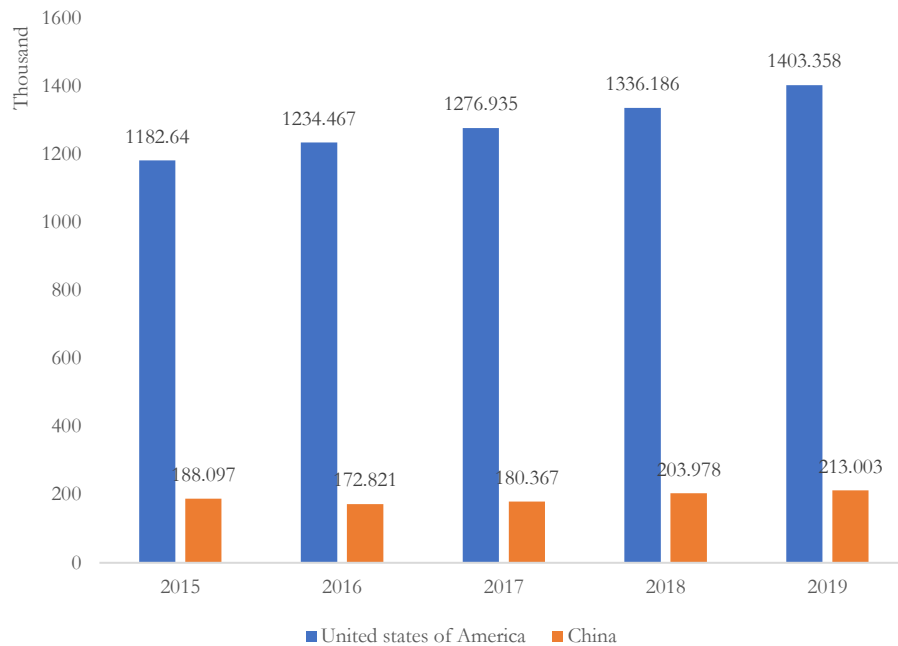


Figure 4: Transfers from government domestic revenue (allocated to health purposes).

Data source: World Health Organization [8]

Photo credit: Original

### 2.3. Marketing of Pfizer

Figure 5 shows the revenue of Pfizer from 2015 to 2019. According to the data, between 2015 and 2016, Pfizer's revenue had a slow upward trend. During the period of 2016 to 2017, the overall performance of Pfizer was relatively stable, maintaining a slight growth trend for a period of time in the first half of the year, while in the second half of the year, the data began to slowly decline. Only from 2017 to 2018, there was a large decline.

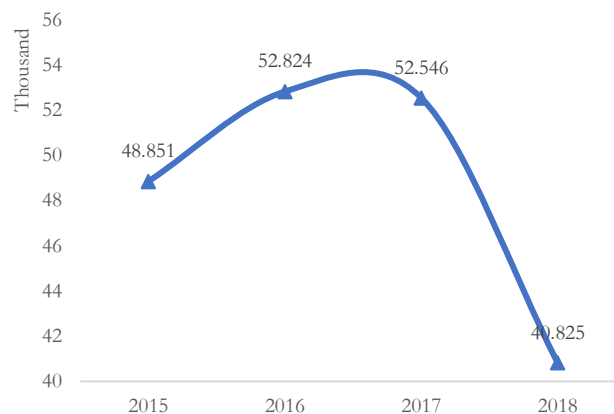


Figure 5: Pfizer's Revenue from 2015 to 2018.

Data source: Macrotrends [9]

Photo credit: Original

### 3. Pfizer in the Pandemic

In general, Pfizer's revenue in the pandemic period and post- pandemic period has been significantly improved. Figure 6 summarizes the revenue data of Pfizer from 2019 to 2022.

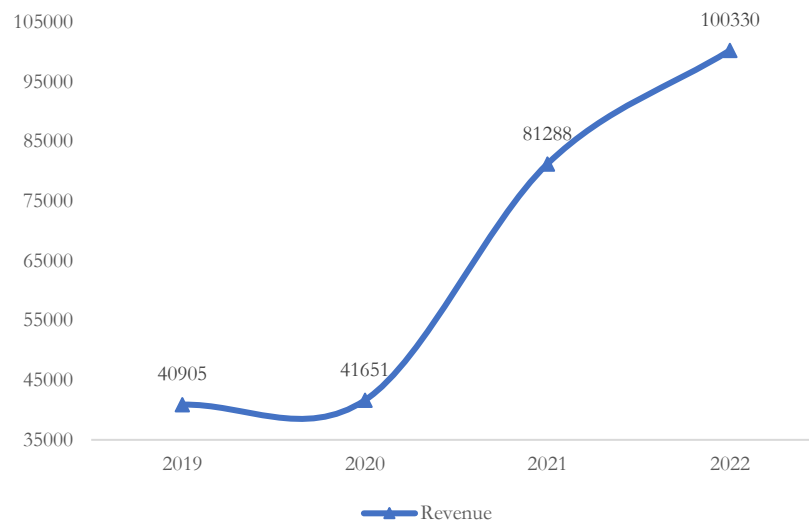


Figure 6: Pfizer's Revenue from 2019 to 2022.

Data source: Macrotrends [9]

Photo credit: Original

#### 3.1. Vaccine Development

The US Food and Drug Administration approved Pfizer BioNtech COVID-19 vaccine, also known as Comirnaty vaccine in the market. The main effect of this vaccine is to prevent people aged 12 years and above from contracting COVID-19. It was announced on August 23, 2021.

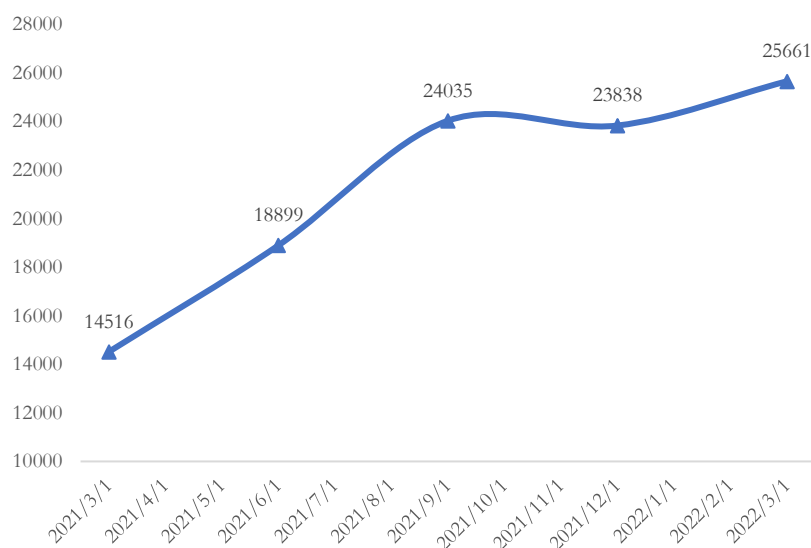


Figure 7: Pfizer's revenue by quarter.

Data source: Macrotrends [9]

Photo credit: Original

When refining the revenue data into quarters and combining the time of Pfizer's vaccine development, according to Figure 7, it can observe that there was a significant increase between 2021-06-30 and 2021-09-30, and it rose to a higher level after the next quarter.

The process of Pfizer's COVID-19 vaccine development can be roughly divided into three stages: research and development, clinical trials, and production. In the research and development stage, the World Health Organization announced the outbreak of COVID-19 in January 2020. Pfizer announced on March 17th of the same year that it would collaborate with the German company BioNTech to develop a COVID-19 vaccine. Pfizer's stock price closed at \$29.75 on that day. From May to September 2020, Pfizer conducted three clinical trials and announced on November 9th that the results of the third phase of the trial showed an efficacy rate of over 90%. The company's stock price closed at \$41.99 on that day. Finally, in the production stage, in December of the same year, the FDA granted authorization of emergency use for Pfizer's COVID-19 vaccine, which was rapidly put into production and launched on the market. In 2021, Pfizer continued to conduct clinical trials of the vaccine for children and adolescents under 16 years old [10, 11].

### **3.2. Research and Development of Special Drugs**

Although PAXLOVID has not yet been approved, The US Food and Drug Administration has authorized children (over 12 years old, weighing at least 40kg) to use the drug to treat moderate COVID-19.

Compared to its COVID-19 vaccine, Pfizer's development of the antiviral drug PAXLOVID has not yet reached the production stage. As early as the beginning of 2020, Pfizer began looking for compounds that could combat COVID-19, but it wasn't until the end of 2020 and the beginning of 2021 that the development of PAXLOVID entered the clinical trial phase. In November 2021, Pfizer announced the results of its second-stage safety trial for the antiviral drug, stating that the drug can reduce the risk of death in COVID-19 patients. Because the development of antiviral drugs overlaps to some extent with the development time of vaccines and is relatively slower, the fluctuations in Pfizer's stock price in 2020 may not fully reflect the impact of the development of antiviral drugs on the company. However, it is worth noting that in November 2021, Pfizer's stock price had greatly increased to fluctuate between \$51 to \$56, compared to the beginning of the year [9].

### **3.3. News of Creating a COVID-19 Variant**

In 2021, Pfizer identified the variant of the coronavirus in South Africa, but it was not publicly disclosed until August of the same year. The delay in publicizing the information raised questions. Pfizer's development of vaccines and therapeutics has also faced criticism. In June 2021, the German newspaper Der Spiegel reported that Pfizer had used unauthorized laboratories. In November of the same year, Pfizer recalled a large quantity of its vaccine in the United States due to potential quality issues. However, these events had little impact on Pfizer's stock price, with only minor fluctuations, indicating that the public still has high hopes for Pfizer's future prospects.

In early 2023, it was disclosed that Pfizer is developing COVID-19 variant vaccines. In response, Pfizer officials promptly stated that this research enables them to quickly evaluate the efficacy of an existing vaccine in generating neutralizing antibodies against newly identified variants of concern.

## **4. Future of Pfizer: SWOT Analysis**

The following content is a SWOT analysis of the future development of Pfizer.

**Strengths:** Firstly, with the continued demand for vaccines worldwide, Pfizer has sufficient experience in vaccine and drug research and development. Secondly, the joint development of the



vaccine by Pfizer and BioNTech has improved the company's reputation. Thirdly, Pfizer's production scale is larger compared to other research and development companies.

Weaknesses: Firstly, public skepticism about the side effects of vaccines and drugs will seriously affect sales. Secondly, the high prices of vaccines and drugs may only be affordable for a limited group of people.

Opportunities: There are still a large number of emerging variants of the virus, providing an opportunity for Pfizer to develop or improve vaccines and drugs and expand its market. Secondly, the aging of the world's population may become a future opportunity for pharmaceutical companies.

Threats: Many competitors are also developing vaccines and drugs, which may take away Pfizer's market share and require the company to maintain innovation. Secondly, many legal restrictions on vaccine and drug research and production exist, and economic and political instability may cause market fluctuations in the vaccine industry.

## 5. Conclusion

Overview of the influence of the COVID-19 pandemic on Pfizer, the essay conducted research from the pre- pandemic and the pandemic (including the current post pandemic period) and the future prediction for Pfizer. The essay analyzed the overall performance of Pfizer during different stages of the pandemic from multiple perspectives. When analyzing Pfizer before the pandemic, the article mainly explained the world economic environment through world GDP fluctuations, important events that affect the world economy, and the aging population, while also analyzing the pharmaceutical market situation and Pfizer's performance at that time. Then, the essay reviewed Pfizer's performance during the pandemic and selected three vital events for Pfizer during the pandemic (developing the vaccine, developing effective drugs, and the news of creating COVID-19 variant), combined with Pfizer's performance during the same period, to show the impact of the pandemic on Pfizer. In the future analysis stage, the article mainly used SWOT analysis to comprehensively analyze and predict the internal and external advantages and disadvantages of Pfizer.

In this article, there is a large amount of information and data from Internet and other channels, as well as some previous research conclusions and ideas. This article combines these contents and proposes new analysis based on them, showing the changes of Pfizer before and during the pandemic, and makes predictions and analysis for the future of Pfizer.

## References

- [1] Pfizer's financial performance in 2021. Pfizer's financial performance in 2021 | Pfizer 2021 Annual Report. (n.d.). Retrieved March 26, 2023, from [https://www.pfizer.com/sites/default/files/investors/financial\\_reports/annual\\_reports/2021/performance/](https://www.pfizer.com/sites/default/files/investors/financial_reports/annual_reports/2021/performance/)
- [2] World Health Organization. (2023). Who coronavirus (COVID-19) dashboard. World Health Organization. Retrieved March 12, 2023, from <https://covid19.who.int/>
- [3] World Health Organization. (2020). Who timeline - covid-19. World Health Organization. Retrieved April 1, 2023, from <https://www.who.int/news-room/detail/27-04-2020-who-timeline---covid-19>
- [4] GDP data of various countries in the world. GDP data of various countries in the world--Kuaiyi Data. (n.d.). Retrieved March 26, 2023, from [https://www.kylc.com/stats/global/yearly\\_overview/g\\_gdp.html](https://www.kylc.com/stats/global/yearly_overview/g_gdp.html)
- [5] China US trade - PWC CN: PricewaterhouseCoopers China. (n.d.). Retrieved March 25, 2023, from <https://www.pwccn.com/zh/research-and-insights/publications/china-us-trade.pdf>
- [6] Proportion of elderly population (65 and over) in the total population of each country worldwide -- Kuaiyi Data. (n.d.). Retrieved March 26, 2023, from [https://www.kylc.com/stats/global/yearly\\_overview/g\\_population\\_65above\\_perc.html](https://www.kylc.com/stats/global/yearly_overview/g_population_65above_perc.html)
- [7] What is Brexit? La Moncloa. (n.d.). Retrieved March 26, 2023, from <https://www.lamoncloa.gob.es/lang/en/brexit/AboutBrexit/Paginas/index.aspx>
- [8] World Health Organization. (n.d.). World Health Organization. Retrieved March 26, 2023, from <https://apps.who.int/nha/database/ViewData/Indicators/en>



- [9] *Pfizer revenue 2010-2022: PFE. Macrotrends. (n.d.). Retrieved March 26, 2023, from <https://www.macrotrends.net/stocks/charts/PFE/pfizer/revenue>*
- [10] *PFIZER INC PFE. NYSE. (n.d.). Retrieved March 26, 2023, from <https://www.nyse.com/quote/XNYS:PFE>*
- [11] *Pfizer and BioNTech Announce Vaccine Candidate Against COVID-19 Achieved Success in First Interim Analysis from Phase 3 Study. Pfizer. (2020, November 9). Retrieved March 26, 2023, from <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-announce-vaccine-candidate-against>*