The Strategy Research of Pharmaceutical Enterprises-Taking Pfizer as an Example

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Abstract. The entire pharmaceutical industry has experienced high-speed growth in the past 30 years using different strategies. This paper will evaluate different kinds of strategies run by pharmaceutical enterprises, taking Pfizer as an example, and see how effective they are. The issues and obstacles of the strategies will also be addressed. In this paper, we can see that Pfizer keeps benefitting from its strategies such as blockbuster drugs, M&As and restruction of employees in the last two decades, which helps it lead the pharmaceutical industry. In the future, Pfizer will continue researching blockbuster drugs and conducting M&As supported by the considerable Covid-19 vaccine income to remain the seat in the industry.

Keywords: Pharmaceutical industry, Pfizer, Blockbuster drugs, Covid-19, Mergers & Acquisitions

1 Introduction

Over the past few decades, there has been a tremendous amount of growth in the total pharmaceutical industry due to the development and innovation of science and technology. This work will take Pfizer which is the 1st pharmaceutical firm now as an example to judge what kinds of strategies it takes to keep expanding. Besides, the issues encountered will also be evaluated. This essay will start with the following sections: the first one is the typical blockbuster model of the company. The second is the mergers and acquisitions made by the firm, the third is some other strategies used by Pfizer, and the last but not least is to discuss how well Pfizer does during the Covid-19 situation. Then, the conclusion will be given in the last part. This study provides a reference for the development strategy of pharmaceutical companies.

2 The Blockbuster strategy

The pharmaceutical industry is one of the most vital research-based industries. There is a large stream of drugs developed in order to save lives worldwide. According to data from the European Federation of Pharmaceutical Industries and Associations (2020),

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R&D fees in the United States increased from approximately 6.8 billion to 62.2 billion between 1990 and 2018. Behind such a huge R&D expense, a large number of blockbuster drugs are born. Li indicates that blockbuster drugs represent patented drugs that achieve more than $1 billion dollars sales per year nowadays [1]. Those blockbuster drugs with a 20-year patent are aimed to use in the treatment of chronic or long-term medical issues like cancer and evolve as the main source of revenue in the industry.

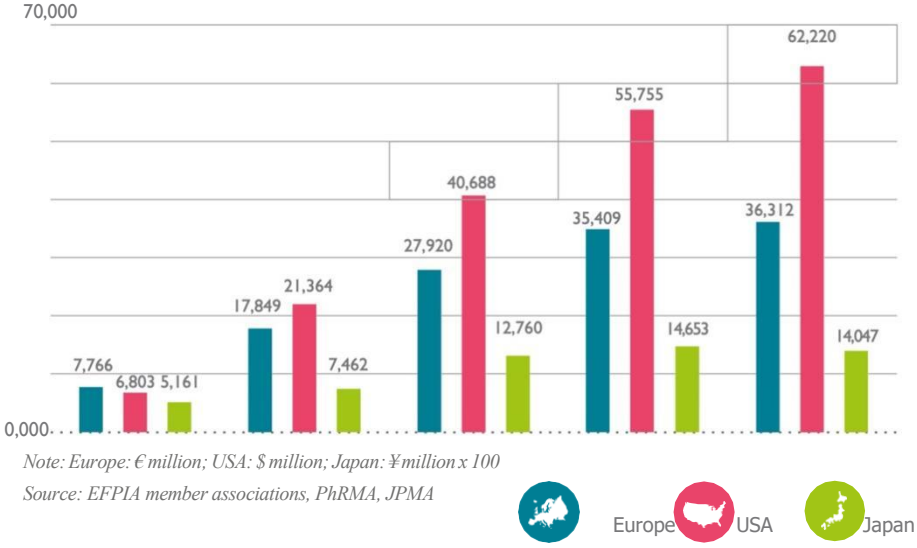

Fig. 1. Pharmaceutical R&D expenditure in Europe, USA and Japan, 1990-2018 [2]

When it comes to Pfizer, Arnum shows that it remained the top one in the pharmaceutical industry in the last two decades while it only ranked 14th in 1990 [3].

One possible reason to explain this situation of this Brooklyn-based firm founded in 1849 is the appearance and prevailing wave of Lipitor, which is a prescription drug used to lower so-called “bad” cholesterol and fats, and raise “good” cholesterol to reduce the risk of stroke, heart attack and blood vessel issues.

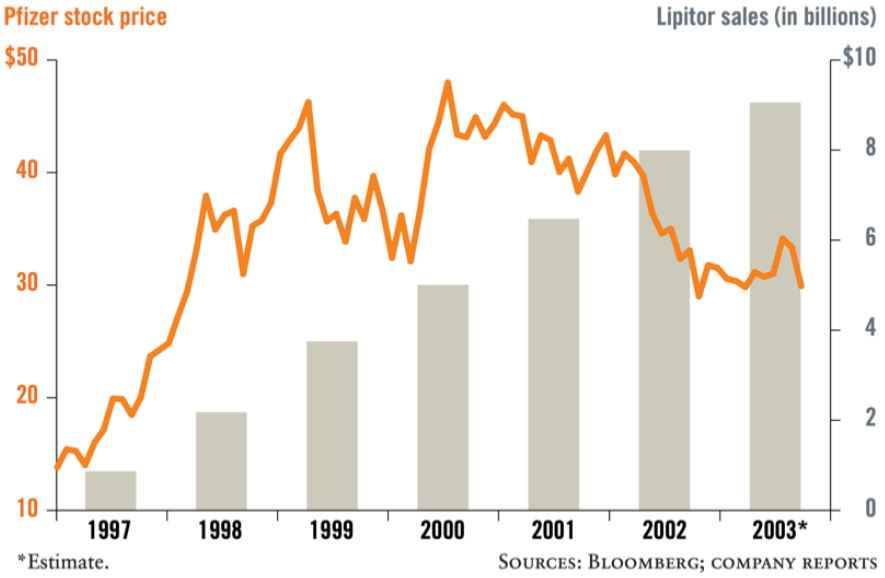

Fig. 2. Pfizer stock price and Lipitor sales

From the chart above, Lipitor's sales since it was introduced into the market in 1997 grew about eight-fold in 5 years [4]. Pfizer's share price increased more than 130 percent as a result of its strong sales performance. It is obvious that, to some extent, there is a positive relationship between a successful blockbuster drug and the share price of the company.

Although the blockbuster model has been such a success, it has also met some challenges in the past few decades. Initially, the expiry on the patent of the blockbuster drug was lethal to the firm. After the patent expires, there will be a huge number of generic medicines produced by other firms in the industry come to the market, which will deprive the company of most of the total market for this blockbuster drug. Without the protection and restrictions of patents, those substitutes can easily carve up the market so that the margin profit of the firm will show a precipitous fall in the short term. What Pfizer did to face the expiring patent was to cut the price of Lipitor when alternatives were available in order to gain a minimum revenue that would not even exist if they did not lower the price. Although other companies will take the majority of the margin profit, they are still guaranteed a basic revenue from Lipitor. Another critical issue is the increasing R&D expenditure and the cycle of blockbuster drugs. Nowadays, the cost of the research process is relatively higher than before. It also takes more time to develop a newly licensed drug in the labs due to the current technology and stricter regulations by government departments like the FDA. Hence, the failure rate of drug research is always at a comparatively high level, which brings billions of costs to the firms and produces nothing. Such a situation will generate a negative feedback loop

among the industries, which indicates that the higher the failure rate of drug development, the more unwilling the companies are to develop the new drugs. As a result, it is extremely important for companies like Pfizer to have adequate and high-quality drugs in their pipeline to deal with the above-mentioned crisis and recoup the profit within a relatively high R&D costs in a limited period.

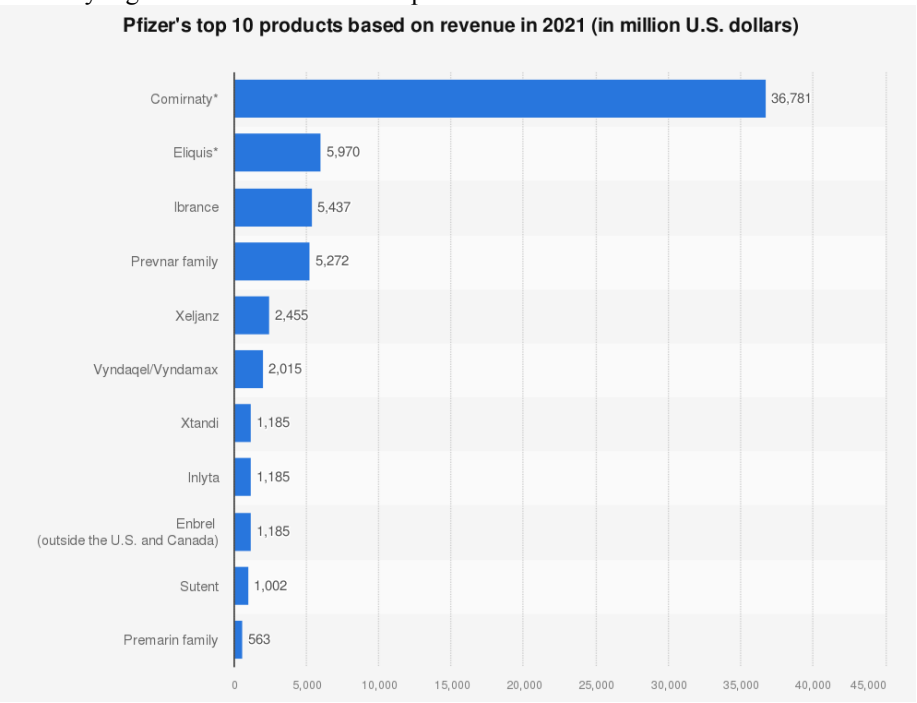

Fig. 3. Pfizer's top 10 products based on revenue in 2021

According to Statista, Pfizer currently has 10 active blockbusters [5]. This is an effective blockbuster drug that will contribute more than 62 billion in revenue to the company in 2021. With such consistent income, Pfizer has enough money to develop new drugs.

3 Mergers & Acquisitions

Pfizer has pursued multiple acquisition strategies over the past two decades to diversify and diversify its drug portfolio. Besides, M&A is also a good way to cut the R&D costs among the pharmaceutical enterprises as it produces synergies and integrates resources of science and technology so that duplicated research will be optimized and R&D costs will decrease significantly. Consequently, M&A methods are popular among pharmaceutical industry. Based on LaMattina, Pfizer represents a typical stance of M&As in the industry as it had never done an important M&A before 1999 [6]. However, this

situation has changed since 2000.In less than 10 years, it acquired three famous companies, which are Warner-Lambert, Pharmacia, and Wyeth in the same industry, and several smaller firms. Pfizer's most expensive M&A was the acquisition of Warner-Lambert in 2000, which cost $90.2 billion dollars. After the M&As, Pfizer not only reduces its R&D expenditures but also integrates the resources it owns. For instance, Pfizer closed several research sites including those developing Lipitor and other blockbusters after M&As so that it could reallocate resources and expertise to optimize the research process and productivity.

Besides, M&A activities can directly increase and diversify the effective drugs in firms' pipelines. The patents of the acquired enterprises' drugs will be transferred to the parent companies directly so that there will be a considerable margin profit generated for those who make an acquisition. Lipitor, one of Pfizer's most successful drugs, is also the result of a product or corporate merger. Compared to acquiring licenses from other companies and developing the products, Pfizer chose to directly buy Warner-Lambert in 2000 at a record-breaking price under the competition with American Home Products. It proves that a successful M&A will become a key element for the firm to grow to the next stage. Pfizer expanded its product portfolio in biologics and biosimilars by acquiring Wyeth and Hospira. Kinch et al. show that after Pfizer made several major acquisitions in the 1990s such as Warner-Lambert, Pfizer's portfolios of new molecular entities were 4 times greater than Eli Lily whose growth rate remained largely the same from the mid-20th century to 1990 [7].

However, LaMattina believes that mergers and acquisitions will have a negative impact on R&D [6]. For example, following Wyeth's acquisition, approximately 40% of drugs in phase 2 were developed more than three years ago, which is far below the average level. Because of commercial sensitivity and intellectual property rights, it appears that the early stages of development will be affected and slowed down by the negative side of M&As.

It can be seen that while mergers and acquisitions in the pharmaceutical industry help companies diversify risks and product lines, they may also become obstacles to the research and development of new drugs, resulting in the stagnation of the research and development process.

4 Other Strategies

Despite the blockbuster and M&As strategies, Pfizer also conducts a series of other strategies in marketing and management. Smirnova illustrated that Pfizer was the pioneer in building up sales groups including a large number of sales representatives and sending them to the fields in order to sell the drugs they owned [8]. Pfizer invested a lot of resources in the sales representatives. As a result, it had some positive consequences around the year 2000, and the total number of sales representatives in the United States increased by about 8% in only two years. However, when the pharmaceutical industry grows, sales representatives find it much harder to get time with doctors, so such a strategy comes to the dusk. Pfizer then chose to cut thousands of sales representatives in 2007 and restructure the management team. In addition, Pfizer has

also significantly increased spending on advertising, sales and administration. These expenditures amounted to $20 billion, even more than the R&D spending that year. In the short term, the strategy of cutting jobs and restructuring the management team seems to be working. But it costs thousands of employees and raises the unemployment rate so that social welfare will be damaged in the long run. Besides, whether there should be a huge expenditure on advertising and sales is still worthy of discussion.

5 Performance during Covid-19

In 2019, with Covid-19 sweeping the world in such a short period of time, pharmaceutical companies seized the opportunity to develop new vaccines.. However, the obstacles are very apparent. As it is known, the duration of new drug research is extremely long and the failure rate is also high. Since the conventional way of developing the Covid-19 vaccine cannot work in a limited period, most of the giants like Pfizer, AstraZeneca, and J&J in the industry find that innovating through messenger RNA technology might be a possible way to make the antidote. They also decided to run the different phases simultaneously under the green light of government approval so that the research period of a brand new vaccine could be reduced from more than 10 years to only a few months. However, not all firms chose the new way to develop the vaccine. One typical example is the association between GSK and Sanofi which are the world's 9th and 10th pharmaceutical enterprises respectively. Despite the mRNA research, they still insist on old-fashioned research technology. Accompanied by a dosage mistake in their initial trials, the process of the research was delayed for months and finally failed so that their revenues in 2021 were relatively lower than others as they did not have the Covid-19 vaccine revenues during that situation. Hence, the ranks of those two companies in total revenues also fall apparently.

Compared to the dilemma of those two companies, Pfizer, instead, has an excellent performance during the Covid-19 issues. Since the Covid-19 issues occurred in China, Pfizer made a quick response which is associating with the German company BioNTech to develop the new vaccine called Comirnaty through the aggressive mRNA method. One year after the coronavirus was identified, Comirnaty became the first vaccine to gain the approval of FDA the for emergency use in the late 2020s, which is really a rare circumstance that a drug maker could develop a new vaccine in solely one year. This new vaccine was claimed to be over 95% effective after two doses within a 2-month gap. Suddenly, Pfizer, to some extent, became a savior to the whole world. Kollewe indicates that since the vaccine was approved, governments immediately ordered about 780 million shots from Pfizer [9]. In the US and EU, each dose of the vaccine costs about 15 to 20 dollars. After a year of pandemic, Kollewe claims that the revenues of Comirnaty achieved about $37 billion in 2021, which was almost half of the total revenues on Pfizer [10]. She also claims that although the revenue of Pfizer doubled to over $80 billion, it will keep rocketing to about $100 billion in 2022, which is exactly a record breaker in the industry. Thus, the share price of Pfizer and BioNTech experienced different dynamics of growth, which is about 2 percent on Pfizer and incredibly over 150 percent on BioNTech in such one year. Pfizer increased its R&D

expenditures by nearly 20% as a result of the lucrative coronavirus vaccine revenues and plans to maintain the growth in the coming years.

6 Conclusion

Overall, this paper outlines the growth of the pharmaceutical industry. We evaluate strategies like the blockbuster model, M&As and others by using Pfizer as our example. We can conclude that in recent years, pharma entities have mainly depended on the blockbuster model. However, right now, they are facing issues like higher R&D expenses and failure rate so that new drug stagnation occur. Pharmaceutical firms like Pfizer then decide to make acquisitions to enrich their pipeline, diversify the risks and share information. Pfizer also seeks to restructure the employees and recruit sales representatives in order to increase drug sales. From the evidence of Covid-19, the association between Pfizer and BioNTech is also proved to be one of the successful strategy coping with the pandemic. However, our discussion of those strategies is circumscribed because of space constraints so the research depth may not be enough. Some details in the typical blockbuster model of the pharmaceutical industry are still worthy of discussion in the future.

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