

The Impact of Pfizer's Acquisition of Biohaven on Firm Value

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Abstract. With rising Research and Development (R&D) costs and increasing innovation pressure in the pharmaceutical industry, mergers and acquisitions (M&A) have become a major way for pharmaceutical companies to achieve strategic expansion. This paper takes Pfizer's 2022 acquisition of Biohaven as a case study to analyze the strategic motivations of M&A and its potential impact on corporate value. The paper employs case study and event study methods to examine market reactions before and after the acquisition, and evaluates the impact by analyzing changes in daily financial indicators before and after the acquisition. The results show that the cumulative abnormal return rate showed an upward trend after the acquisition announcement, indicating a positive market response. However, from a financial perspective, post-acquisition profitability indicators still fluctuated, suggesting uncertainty regarding the long-term development of the company. In conclusion, this acquisition has potential for resource integration and R&D synergy at the strategic level, but its value realization still requires observation of the subsequent cooperation effects.

Keywords: corporate mergers and acquisitions, pharmaceutical industry, mergers and acquisitions value.

1. Introduction

Over the last several years, as competition in the pharmaceutical industry intensifies around the globe, such a strategy as mergers and acquisitions (M&A) have become one of the most prominent means through which pharmaceutical companies have improved themselves both in terms of growth and strategic reimagining. Owing to the lengthy development process, high expenses and great unpredictability of the successful rates of the new drug development, internal Research and Development (R&D) is not enough to suit the long-term development demand of the enterprises anymore. It is also on this industry background that the concept of M&A acquisition of mature products or future R&D pipelines has become a critical means by which most multinational corporations are making moves to improve their competitiveness.

Simultaneously, the problem of the patent cliff has also introduced a growing pressure on the large pharmaceutical corporations. When core drugs expire, generic drugs will be available in the market, and the income of the original core drugs of the company normally reduces dramatically. Thus, businesses should constantly pursue new value to ensure the level of revenues and market value. In recent years, M&A activity in the pharmaceutical industry has grown to a high level all over the globe. This is not just a trend in the industry development, but also the decisions of

companies concerning the changes in the outside environment. Pfizer is a large-scale pharmaceutical corporation with headquarters on the global market and has accelerated its revenue inflows during the Coronavirus Disease 2019 (COVID-19) pandemic as a result of vaccines and treatments. But over time, with the pandemic suppressed, the demand in this category of products decreased, and the company had to experience growth pressure which appears in the post-pandemic period. It is against this background that Pfizer declared in 2022 the acquirement of Biohaven at about 43 billion. The first company is Biohaven, a biopharmaceutical that deals with neurologic diseases with technological and product benefits in migraine therapy. The market viewed this acquisition as an essential strategic change that Pfizer would go through in the post-pandemic period and therefore, the news sparked a lot of interest among investors and academia. On the issue of whether mergers and acquisitions are really able to create value to companies, the academia has varied consideration. One of the studies cites that acquisition and mergers may assist firms to increase their size, synergies, and long-term profitability through integration of resources hence raising the value of corporations. Nonetheless, other reports indicate that mergers and acquisitions tend to be costly and integration risks are likely to exert some pressure on corporate financial performance at the short-term level. Hence, mergers and acquisitions do not necessarily have a positive influence on the corporate value but also depend on various factors. It is within this context and theoretical discussion that this paper will examine the case of Pfizer acquiring Biohaven. In terms of strategic motivation and firm value and as an integrative strategy, forming the event study techniques and the variations to financial data, this paper aims at clarifying whether the acquisition was positively rated in the capital market and in what ways it is likely to influence firm value. In particular, the paper will concentrate on the following questions: What were the core strategic considerations with Pfizer in this acquisition? What was the short term assessment of this decision by the market? How could the acquisition affect the operation performance of the company?

Overall, this paper examines Pfizer acquisition of Biohaven on its strategic reasons as well as capital market response, and how the acquisition will affect firm value in relation to financial performance changes. The purpose of the research is to hope that a more precise idea about the role and possible risks of mergers and acquisitions into the long-term evolution of enterprises can be realized.

2. Literature review

2.1. Motivations of mergers and acquisitions based on strategy

The available literature indicates that M&A are a significant strategic instrument that businesses can use to grow their sizes and add value to them [1]. In situations whereby the cost of R&D is stiff and innovation cycles are delayed, M&A is used to give the companies an alternative to internal R&D, allowing them to come up with new sources and markets faster [2]. Strategically, there have been studies that suggest that M&A can assist firms to avoid expenses, enhance operational efficiency as well as economies of scale. Other researches claim that M&A may assist corporations to survive the competition and uncertainty in the industry, and thus reinforce their stand.

Overall, the available sources present the fact that M&A is typically predetermined by various strategic factors and its impacts are usually impactful by the specifics of a company and environmental factors in the industry [3].

2.2. Mergers and acquisitions

The connection between M&A and firm value has been a significant issue that has attracted academic literature since the time there has not yet been a consensus. According to some studies, M&A might lead to an increase in the future value of the firm because it can improve the future cash flow, increase the scale of future growth, and enhance the competencies of the firm [4]. Nonetheless, other research indicates that the impact of M&A on firm value is ambiguous, and its result might depend on the increased prices of the M&A, complications with integration and the workability of the post-merger management [5]. Thus, not every M&A activity generates value to firms.

In examining whether M&A affects the value of firms, event study is another technique that some studies usually employ in examining the market response. The above researches can show that the effects of M&A on the firm value can be further contributed by certain case studies.

3. Case study

3.1. Introduction and strategic drivers of the acquisition

In 2022, Pfizer declared plans to purchase Biopharmaceutical company Biohaven to the tune of 43 billion dollars in an acquisition. This was a major strategic measure by Pfizer to increase its innovative drug portfolio besides improving its research and development pipeline [6]. This acquisition is a leading case study which is analyzed in this paper.

Strategically, Pfizer could have taken over Biohaven due to various reasons [7]. To begin with, the acquisition contributed to the uniting of the R&D resources of Biohaven to the current product pool of Pfizer, thus increasing the range of innovative drugs. Second, by purchasing an already established bio-pharmaceutical organization, Pfizer will be able to decrease the risk of uncertainty related to the in-house research. Moreover, when Pfizer acquired it, the company was able to use its size and brand name to increase the market potential of associated R&D outcomes.

3.2. Market reaction

3.2.1. Research design and event study methodology

In order to determine the short run effects of the acquisition of Biohaven by Pfizer in the capital market, an event study approach is adopted in this paper [8-10]. The event date ($t=0$) is the date of making the announcement of the acquisition. The estimation period used in this study to estimate the normal level of return of the stock will be a period of trading days leading up to the announcement of the acquisition. At the same time, the event window is selected to be a few trading days before and after the announcement date in order to see the change in the way the market reacts to the acquiring information before and after the acquisition disclosure. Normal returns are then calculated during the estimation period using stock returns data which concern the normal returns in the study after which abnormal returns are calculated during the event window. Cumulative abnormal return (CAR) is calculated on the basis of this and utilized to determine the short-term effect that the acquisition announcement has on stock price of Pfizer company.

3.2.2. Market reaction analysis

After news of the merger announcement, Pfizer stock price was fluctuating, in the short run. According to the event study approach, the paper will compute abnormal returns and cumulative

abnormal returns of a number of trading days prior to and following the merger announcement date in the attempt to examine the short-term response of the market to the merger. It is here that the short-term response of the market upon the announcement of available merger information is emphasized, and not the affect of the merger on the long-term financial performance of the company. The cumulative abnormal return (CAR) has an overall increasing trend, as Figure 1 indicates, following the date of merger announcement. This shows that the capital market responded favorably to the acquisition of Biohaven by Pfizer, as a general indicator that investors are optimistic that the merger would contribute to strengthening the potential of the company to grow in future and improve its long-term value. It also involves an elaborate evaluation of the integration cost, as well as, the uncertainties of the merger. Despite the fact that the fluctuation of CAR has been more or less on individual trading days, the market expectation towards overall development of the merger news was positive. It is necessary to note that the short-term alterations of CAR are not an inevitable indication of the long-term value of the merger. Thus, the results of market reactions are evaluated along with the further financial results and efficacy of the strategic integration.

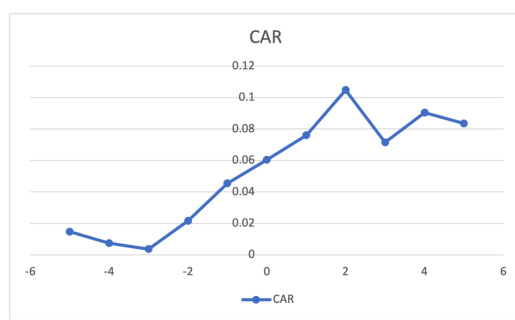


Figure 1. The Cumulative Abnormal Returns (CAR) of the merger announcement

3.3. Alterations in the financial performance

In order to further examine how the acquisition can affect the enterprise value, this paper compares the transformation of the significant financial indicators of Pfizer prior to the acquisition and the post-acquisition. As indicated in Table 1, between the year 2021 and 2023, the operating revenue of the company, net profit, and earnings per share varied somewhat. However, such variations were between the years. In a way this change, it is the sum of the external market influence, and business restructuring of the company.

Pfizer, in its turn, managed to keep its R&D investment at the high level during the post-acquisition period, which proves the fact that the company remains focused on development of innovation capabilities during the post-acquisition period. Conversely, short-term returns on profitability variables like net profit and earnings per share were volatile and it could be attributed to the integration costs of the acquisition, higher R&D spending as well as the alteration of the market environment. It is necessary to state that the transformations in the following financial indicators cannot entirely be related to this acquisition yet they allow offering significant financial background regarding the potential effect of the acquisition on the operating performance of the company and the enterprise value. The trends above rely on economic assessments of the annual reports of Pfizer 2022 to 2023.

Table 1. Key financial indicators of Pfizer, 2021-2023

Index	2021	2022	2023	Description of changes
Operating revenue (millions of US dollars)	\$81,288	\$100,330	\$58,496	Overall income remained at a high level, but with significant annual fluctuations.
Net profit (millions of US dollars)	\$21,979	\$31,372	\$2,119	Profitability indicators fluctuate in the short term after the acquisition.
Earnings per share (EPS, in US dollars)	\$3.85	\$5.47	\$0.37	EPS is affected by merger and acquisition integration costs and market environment.
Research and development expenditure (millions of US dollars)	\$23,196	\$37,717	\$10,501	Maintaining high R&D investment after the acquisition

Note: Data in the table is compiled from Pfizer's annual reports for 2021-2023.

4. Discussion

4.1. Interpretation of research results

The research results should be interpreted in a way that informs the study that is applicable in real-world situations. This paper examines the acquisition of Biohaven by Pfizer in terms of case analysis and short term market response. The findings suggest that the acquisition can affect the long-term value in both strategic and financial paths. Specifically, the market response around the announcement date indicates that it reassessed information involving acquisitions. Nevertheless, the short-run market is mostly portraying the expectations of the investors; this does not indicate the value of the acquisition at the long term. Thus, reaction in the market gives important information on the sentiment of the investors, but it does not imply that the acquisition will bring about value in the long run.

4.2. The possible advantages of the acquisition

Strategically, the acquisition of Biohaven by Pfizer might come with a number of possible advantages. First, the acquisition would assist in incorporating the funding of the Biohaven R&D into the Pfizer current innovative drug- pipeline, therefore improving the long-term expansion of the company. Second, Pfizer could utilize its core competencies, the abilities to distribute its assets, and its sales placed in different corners of the world to enhance the commercial prospects of the asset it purchased. Moreover, when purchasing increment outside innovative assets, Pfizer had the chance to minimize the ambiguity carried by its in-house R&D. These possible advantages are mostly in line with the current research results; even in different conditions, acquisitions can assist in promoting corporate growth and competitiveness.

4.3. Risks and limitations

Despite the fact that acquisitions have some advantages, there are also a number of risks and constraints associated with it. The process of integration can have issues of organizational coordination and allocation of resources that influences the attainment of desired synergies. Moreover, there can be certain pressure on the financial performance of the company in the short-term concerning the increased investment in R&D and costs associated with acquisitions. Moreover, there are some methodological limitations of this study. The study is limited to a single acquisition case

and the findings can hardly be extended to other organizations. Further, the event study technique is a reflection of the short term market, which could be distorted by the external market conditions and the mood of investors. Thus, this study must be approached with the results with caution.

5. Conclusion

In this paper, Pfizer acquiring Biohaven is considered as an object of research and case study and event research are used to identify the possible effects that the acquisition has on the firm value. This paper provides the possible direction through which the acquisition can affect firm value in several aspects based on the analysis of the strategic motivations behind the acquisition, market reactions, and related financial performance.

The findings indicate that the acquisition announcement was responded to in the market. In general, the cumulative abnormal return (CAR) exhibited an upward trend in the range of -5 days to + 5 days prior to the announcement date (May 10 th, event date 0) and after the announcement date. The post others CAR growth since the announcement date shows that the short-term response of the market to the acquisition of Biohaven by Pfizer was favorable, and investors highly expected the acquisition. Acquisitions can impact the firm value in terms of strategic and financial avenues, but the long-term value creation impact is also not clear. Due to such a method of analysis (case study and description) the corresponding statements can only be perceived cautiously in this paper. Existing studies might be developed in future to investigate the ultimate impacts of acquisitions by increasing sample size or using alternative empirical approaches.

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