

# *A Financial Analysis and Valuation of Pfizer*

Yutong Wei<sup>1,a,\*</sup>

<sup>1</sup>Finance School, Tianjin University of Finance and Economics, Tianjin, 300221, China

a. weiyutong@stu.tjufe.edu.cn

\*corresponding author

**Abstract:** The rational valuation of the healthcare industry and the analysis and research of the financial risks faced by enterprises can not only provide a basis for rational investment and transaction pricing decisions, but also help enterprises to find out the shortcomings of the production and operation, so as to improve the management mode of the enterprise, and help enterprises to achieve the maximisation of management. Firstly, this paper analyse the risks faced by Pfizer from a financial point of view by quantitatively comparing the data of Pfizer and its two competitors, Amgen and Unitedhealth Group, and then qualitatively analysing their characteristics in terms of liquidity, solvency and profitability and the reasons for this. Next, Pfizer is valued by looking at its leverage, business risk, earnings per share, etc. to measure the financial risk of the business and the reasons for the capital structure. It then gives investors an objective investment recommendation by forecasting Pfizer's future share price. The study concludes that Pfizer Inc. is illiquid, has poor corporate solvency, is at risk of debt servicing, and has suffered a significant decline in profitability. Valuing Pfizer, the forecast suggests that Pfizer's stock is currently undervalued.

**Keywords:** Company Valuation, Liquidity, Solvency, Profitability, Business Risk.

## 1. Introduction

Despite the influence of some emerging countries, the United States continues to dominate the global pharmaceutical market. The United States is home to some of the largest pharmaceutical companies in the world and, at a cost, American consumers have access to some of the most advanced medicines in the world [1]. The United States is now entering a "golden age" for pharmaceutical companies. These supply-side trends are combined with an inflection point for new technologies and continuous manufacturing. With the proliferation of these new methods and technologies, such as biologics, cellular and genetic manufacturing, experts believe that the United States is in an extremely strong position as it continues to be the global centre of pharmaceutical innovation [2]. In recent years, the U.S. has accounted for nearly half of the world's total pharmaceutical sales revenue. In 2021, five of the world's 10 leading pharmaceutical companies will be from the U.S. Pfizer is the top-ranked U.S. company in terms of global prescription drug revenues. Of these, Pfizer is the number one US company in global prescription drug revenues, and its COVID-19 vaccine called Comirnaty, developed in collaboration with German biotech company BioNTech, has contributed significantly to this growth. Pfizer has thus become the centre of world attention [3]. Pfizer relies on the manufacture and sale of biopharmaceutical products for the majority of its revenues, they also sell products to detect certain diseases and provide end-to-end research and development services to

biotech companies that choose to innovate [4]. Of Pfizer's \$58.5 billion in sales in 2023, Primary Care amounted to \$30.6 billion, or 52.3 per cent, down 58 per cent year-on-year; Specialty Care amounted to \$15.0 billion, or 25.6 per cent, up 9 per cent year-on-year; and Oncology amounted to \$11.6 billion which accounted for 19.8 per cent, down 4 per cent year-on-year. Unsurprisingly, Pfizer's 2023 revenue comes mainly from its primary care business [4]. Pfizer's key products in 2023 are COVID-19 vaccine Comirnaty, Eliquis for the prevention of blood clots, pneumococcal vaccine prevnar family, Ibrance for the treatment of metastatic breast cancer, Ibrance for the treatment of transthyretin amyloid polyposis, and Vyndaqel family for the treatment of neuropathy. neuropathy Vyndaqel family, Paxlovid for COVID-19, etc., with Comirnaty accounting for 19% of total revenues and Eliquis and prevnar family accounting for nearly 11% [4]. Pfizer's total revenues decreased \$41.8 billion, or 42%, to \$58.5 billion in 2023 from \$100.3 billion in 2022, and operating income decreased \$40.8 billion, or 41% . The decrease in operating was primarily due to a significant decline in revenues from Comirnaty and Paxlovid, including a \$3.5 billion reversal of non-cash revenues from Paxlovid in the fourth quarter of 2023. Pfizer's net cash flow generated in the operating period also declined by 70% to \$8.7 billion in FY2023 from \$29.3 billion in 2022 [4]. On 14 December 2023, Pfizer completed the acquisition of Seagen, a global biotechnology company that discovers, develops and commercializes transformative cancer drugs. The acquisition restructured Pfizer's commercial organization and adequately positioned the R&D platform business.

The company believes it will generate nearly \$1 billion in cost benefits in the third full year following the closing of the transaction.

## 2. Performance Evaluation

### 2.1. Liquidity

Table 1: Liquidity ratios of Pfizer and its competitors.

Company Name	Current ratio	Quick ratio	Cash ratio
Pfe	0.91	0.50	0.27
Amgen	1.65	1.13	0.60
Unh	0.79	0.73	0.30

Data source: Yahoo Finance

Enterprise liquidity is an ability of an enterprise to obtain cash or cash equivalents and is used to assess the financial health of an enterprise. Enterprise liquidity risk is the risk of loss due to lack of accessible cash and cash equivalents. Maintaining corporate liquidity at a normal level represents the normal production and operation of the company and its ability to be sustainable. Liquidity affects the company's performance and credit risk. Inadequate liquidity deprives the company of the opportunity to obtain favorable discounts or earn more profits. Liquidity difficulties may also lead to the company having to sell investment projects and assets, raise funds at high costs, and in the worst case scenario, go bankrupt. In addition, liquidity helps firms to remain flexible and gain an advantage when market conditions change and to react to the strategies of competing firms [5].

The healthcare industry requires a large amount of investment throughout the development process, and the risks and rewards coexist, and the research and development of innovative drugs is an important driving force for the development of the healthcare industry. As can be seen from Table 1, the healthcare industry generally has average current ratios and all have high debt ratios. Most of the investment in the US pharmaceutical market, the company mainly focuses on drug discovery and development, the healthcare industry is more focused on talent, technology and innovation, which helps the company to improve the flexibility and ability to adapt to the market. The current ratios of Pfe and Unh are 0.91 and 0.79 respectively, which means that the companies do not have enough

funds to pay off their short-term debts, which might lead to financial risk. In its 2023 Annual Report, Pfizer states that the main component of its high current liabilities is short-term borrowings, consisting mainly of commercial paper and principal. On 14 December 2023, Pfizer acquired Seagen for \$229 per share in cash, the total fair value of the consideration transferred was \$44.2 billion (\$43.4 billion, net of cash acquired), and the company is committed to paying these amounts as soon as possible within one year of the acquisition, which requires Pfizer to efficiently finance itself with short-term borrowings in the short term. Pfizer's cash ratio, while not exactly high, is above 20%, indicating that it still has some cash left in the company and proving that it has a good capital utilization rate. However, Amgen is special in that it has a current ratio >1 which means that it has more than enough funds to cover short-term debts without any major risks of a liquid nature. Amgen's cash ratio of 0.60 means that Amgen can easily pay off 60% of its current liabilities, which indicates that the company has a good ability to pay off its current liabilities directly. This reflects the financial stability of the company on one hand, but on the other hand it also means that the company has a lot of money lying around that is not being fully utilized. From Table 1, it can still be found minus the effect of inventory the difference between the quick ratio and cash ratio still exists, in the Pfizer 2023 annual report can be found, this part is mainly distributed in the equity method of investment and short-term investment, as of 31 December 2023 Pfizer still holds 32% of the shares of Haleon and the book value of the investment in Haleon is \$11.5 billion, the use of the equity method of investment. Short-term assets are invested in money markets primarily in U.S. Treasuries and government bonds [4].

## 2.2. Solvency

Table 2: Solvency ratios of Pfizer and its competitors.

Company Name	Total Debt Ratio	Long-Term Debt Ratio	Times-interest-earned
Pfe	0.61	0.27	0.45
Amgn	0.94	0.65	3.73
Unh	0.64	0.36	9.97

Data source: Yahoo Finance

Solvency ratios provide an indication of a company's financial position and a judgement that it will be able to meet its financial obligations over the long term.

Total debt ratio is the proportional relationship between a firm's total liabilities and total assets. It measures the proportion of a firm's assets that are tied up in financing through borrowing [6]. As can be seen in Table 2, Pfe's total debt ratio and long-term debt ratio are 0.61 and 0.27 respectively, based on Pfe's 2023 annual report, it can be seen that its total liabilities have increased by 35% year-on-year as compared to 2022, and the composition of total liabilities is mainly short-term and long-term debt, Pfe has successfully integrated the acquired businesses, developed and commercialized the acquired products in 2023, which requires the company to obtain additional equity or debt financing [4]. Pfe's recent acquisition of Seagen, which owes a significant amount of debt, was partially funded by the company's issuance of \$31bn of long-term debt in May 2023, plus an additional \$8bn of short-term debt issued prior to the acquisition. While Amgn's total debt ratio and long-term debt ratio are 0.94 and 0.65 respectively, which are higher compared to Pfe and Unh, suggesting that the business has a disproportionately large debt-to-assets ratio, implying that the business has taken on more debt, indicating a higher financial risk. Based on the Amgn 2023 annual report, it can be seen that the main component of total liabilities is long term debt and its reliance on long term debt is high [7]. The cash provided by Amgn's financing activities in 2023 is mainly from net proceeds of \$27.8bn from long term debt, mainly related to the acquisition of Horizon. Higher debt reduces a company's operational

or financial flexibility and also creates some risk. Times-interest-earned is the ratio of a company's EBITDA to interest expense, which is used to measure the ability to repay interest on borrowings, it is a measure of a company's ability to pay interest on its debt. As can be seen from Table 2, Pfe's times-interest-earned is only 0.45, which means that the company has high debt, heavy pressure on interest, and little profit, and the enterprise is unable to cover the interest on debt through its own cash flow, and there is a high risk of default. Pfe's EBITDA is significantly lower than the other two firms, and the company's earnings are heavily dependent on vaccines and top-selling drugs, with the end of the pandemic, demand for coronavirus vaccines has fallen, so the earnings generated by vaccines have dropped considerably. Unh, on the other hand, has a times-interest-earned of 9.97, while it has a total debt ratio of 0.64, the company does not need to generate earnings from a lot of innovation and development of drugs, but rather through premium payments, so the company raises less money through debt financing, resulting in low interest expenses, which indicates a strong long-term solvency.

### 2.3. Profitability

Table 3: Profitability ratios of pfizer and its competitors.

Company Name	Profit Margin	Operating Margin	Asset Turnover
Pfe	3.62%	1.81%	0.28
Amgn	23.83%	28.01%	0.35
Unh	6.02%	8.71%	1.43

Data source: Yahoo Finance

Profitability ratios provide an indication of how well a company's management is running its business. Investors can use them, along with other research, to determine if a company is a good investment. Profit margin are a company's ability to convert sales into profits and are an important measure of a company's profitability. Asset turnover ratio reflects the speed of flow of all assets from input to output during the operating period of a company, reflects the quality of management and the efficiency of utilization of all assets of a company, and comprehensively reflects the operating ability of the overall assets of a company [8].

According to Table 3, it can be seen that Pfizer's profit margin and operating margin are 3.63% and 1.81% respectively, and from Pfizer's 2022 annual report it can be found that for the year 2022 it has reached 31.27% and 34.61% respectively. This is due to massive sales during the pandemic and Pfizer is now the world's leading pharmaceutical company by revenue from drug sales [4]. The New York City-based company generated a record total revenue of over \$100 billion in 2022. However, with the end of the pandemic and a reduction in COVID-19 vaccinations, sales in 2023 fell to \$58bn, a 41% year-on-year decline. This led to a significant decline in Pfizer's profit margin and operating margin in FY2023. Amgn's profit margin and operating margin of 23.83% and 28.01%, respectively, demonstrated its success in converting revenues into profits and operating efficiencies. The increase in Amgen's total product sales in FY2023 was driven by higher sales of REPATHA, TEZSPIRE, EVENITY PROLIA, and BLINCYTO, as well as the acquisition of Horizon from June to December, which contributed \$954 million to product sales. Unh, on the other hand, has a dominant and stable profit margin and operating margin, reflecting its operational dynamics in the fast-growing healthcare and insurance sectors. According to Unh 2023 annual report can be concluded that UnitedHealth Group revenue reached \$371.622 billion, an increase of \$47.5 billion, an increase of 14.6% year-on-year, of which, premium income of \$290.827 billion, accounting for 78.26%; product income of \$42.583 billion, accounting for 11.44%; service income of \$34.123 billion, accounting for 9.18%; investment revenue of \$4,089 million, or 1.1 per cent [9]. Factors driving UnitedHealth's growth

include 1) acquisitions are generating growth in the healthcare services segment, primarily in the Optum segment; 2) Medicare Advantage and Medicaid continue to drive strong growth. Unh has an asset turnover ratio of 1.43, proving that the company is highly efficient and profitable.

### 3. Valuation

Table 4: Financial valuation of Pfe and its competitors.

	Pfe	Amgn	Unh
Market value of equity	146.03B	143.24B	404.91B
Market value of debt	59.19B	53.67B	29.16B
Leverage	35.03%	32.81%	14.41%
Debt to equity ratio	84.37%	1049.79%	68.17%
Marginal corporate tax rate	14.0%	12.0%	22.0%
Equity Beta ( $\beta$ )	0.57	0.60	0.55
Expected cost of equity capital ( $R_e$ )	9.5%	9.1%	7.9%
expected cost of debt capital ( $R_d$ )	6.2%	6.4%	4.5%
Weighted average cost of capital (WACC)	8.3%	8.0%	7.5%
Asset Beta ( $\beta_A$ )	0.95	0.96	0.66
Earning per share	0.37	12.49	23.86

Data source: Yahoo Finance

#### 3.1. Forecast

Unh, by virtue of being the world's largest health insurance and health services company offering diversified health benefits, has seen significant growth in its Optum Health division's value-added arrangement services while collecting stable premiums. As can be seen Table 4, its market capitalization is way ahead of Pfe and Amgn, Based on Pfe's 2022 annual report, its market capitalization in 2021 amounted to \$ 331.43 B. As a result of the sudden decline in the new crown business, Pfe's operating and financial position is in a shrinking trend and its market capitalization is gradually declining, and by 2024, its market capitalization has declined by 55.94% compared to 2021 [4].

Secondly, a common feature of Pfe and Amgn's capital structure is that they have higher leverage ratios compared to Unh. This suggests that Pfe and Amgn have a more aggressive capital structure compared to Unh, implying that when the market performs well, the firm can earn more, but conversely, when the market is unfavorable, it can magnify its losses, and they have a relatively higher risk of default and financial distress.

For debt to equity ratio, Amgn has an extraordinarily high debt to equity ratio, which means that the firm has taken on more debt, indicating a higher financial risk. According to Amgn 2023 annual report, it can be seen that its reliance on long-term debt is high and mainly related to Amgn's financing activities for the acquisition of Horizon [7].

In terms of business risk ( $\beta_A$ ), Pfe and Amgn have higher business risk compared to Unh. This indicates that Pfe and Amgn have higher business risk, higher risk of lower expected returns to shareholders due to uncertainties such as changes in business strategy during the course of the company's operations, and the business is not as stable as that of Unh. From the earnings per share, it can be seen that Pfe has the lowest earnings per share, followed by Amgn and Unh. this shows that Pfe's recent business operations and the company's profitability is weak compared to the other two companies.



It is worth noting that this analysis is based on financial data only and does not take into account other factors that may affect the overall performance of the company. Why does Pfe have such an aggressive capital structure? Why do these three companies rank the business risks the way they do? It will explain the discussion and findings in the next section.

### 3.2. Strategy

Given the current uncertain macroeconomic environment of high interest rates and Pfizer's heavy reliance on vaccines and blockbuster drugs for its revenues, the division is highly vulnerable to regulatory changes, policy changes, competitive pressures, and economic volatility, highlighting the vulnerability to market fluctuations and patent expirations, and making its financial outlook more susceptible to changes in the competitive landscape [10].

The variability of product demand and sales prices affects Pfizer's business risk. For example, with the end of the pandemic, demand for the coronavirus vaccine declined, and therefore the vaccine generated lower revenues, reflecting a higher sensitivity to market-wide risk, and investors were exposed to greater risk of a potential decline in revenues [11].

Next is the risk of drug discovery, the complexity and uncertainty of drug discovery also poses a challenge to its higher commercial risk, and Pfizer may face difficulties in developing new drugs or vaccines that satisfy market demand, regulatory standards or compete effectively with other products. Then there is patent expiration and drug competition risk. As Pfizer's patents expire, its products face competition from cheaper generic or biosimilar drugs, which may affect market share and pricing power.

Then there are regulatory and political hurdles, with authorities such as the FDA, EMA and WHO strictly regulating Pfizer's products and services. Non-compliance can lead to delays, denials, fines, recalls or lawsuits. These risks highlight the challenges Pfizer faces in maintaining its competitive position, responding to the regulatory environment, managing intellectual property, and ensuring smooth operations in the global marketplace to enhance its value.

In addition, the company's rapid response to global health emergencies, such as the development and distribution of the COVID-19 vaccine, while enhancing its industry position, has created significant operational challenges, including supply chain management, compliance and market demand forecasting. In addition, its strategy of growth through acquisitions introduced a complex layer of financial and operational risk, as the integration of new assets and technologies required careful management to ensure value creation.

Despite the potential for revenue volatility in the wake of a pandemic, investor confidence in Pfizer remains strong thanks to its successful response to the pandemic and its strategic growth initiatives. The outlook for Pfe stock is bright, with analysts predicting that the stock will remain profitable and profitable through 2024, despite the fact that sales of the COVID-19 vaccine are projected to decline, and that Pfe shares have retreated somewhat over the past year. This is primarily due to the expected decline in COVID-19 vaccine sales as more people are vaccinated and the outbreak subsides. However, Pfizer's acquisition of Seagen will help the company expand its sales and product lines, which are expected to total more than \$10 billion by 2030, and Pfizer still has a strong pipeline of new drugs and vaccines to offset this decline and drive long-term growth.

Estimated to be valued at \$29 per share, Pfizer's stock is considered currently undervalued based on current projections, and Pfe stock offers an attractive alternative for investors looking to profit from price volatility and trends at one of the world's largest pharmaceutical companies.

## 4. Conclusion

This paper looks at the annual reports of Pfizer and its competitors and obtains data on their liquidity, solvency, and profitability, and analyses Pfizer's financial position quantitatively and qualitatively by comparing them. It is found that Pfizer is illiquid, has poor solvency, is at risk of debt servicing, and has suffered a significant decline in profitability over the past two years. Then in the valuation section of Pfizer, based on data such as leverage, business risk, earnings per share, etc.

It is analyzed that the factors that make Pfizer business risky are influenced by the current uncertain macroeconomic environment with high interest rates and Pfizer's heavy reliance on vaccines and top-selling drugs for revenues as well as the variability of product demand and selling prices, drug discovery risks, patent expiration and drug competition risks, regulatory and political hurdles. Finally the valuation of Pfizer found that the business is well run and managed with some growth potential and although the investment is risky, its successful response to the pandemic and strategic growth initiatives as well as expanded sales and product lines from acquisitions make it expected to maintain profitability and revenues. The projections suggest that Pfizer's stock is currently undervalued, making Pfe a worthwhile investment for investors.

## References

- [1] Lakdawalla, D. N. (2018). *Economics of the pharmaceutical industry*. *Journal of Economic Literature*, 56(2), 397-449.
- [2] Hatton, R. C., Leighton, G., & Englander, L. (2022). *Countries manufacturing pharmaceuticals for the US market: a 10-year analysis of public data*. *Annals of Pharmacotherapy*, 56(10), 1106-1112.
- [3] Alkhyeli, S., Abdulla, F., Alshehhi, A., Aldhaheeri, N., Alhosani, M., Alseraidi, A., & Nobanee, H. (2021). *Financial analysis and performance evaluation of Pfizer*. Available at SSRN 3896385.
- [4] PFIZER INC. (2023). *2023 Annual Report*. Retrieved from <https://annualreport.stocklight.com/nyse/Pfe/23658781.pdf>
- [5] Gao, J., & Zhang, Y. (2023). *Assessing the Financial Stability & Investment Potential of Pfizer Inc*. *Highlights in Business, Economics and Management*, 15, 27-32.
- [6] Jackson, A. B. (2022). *Financial statement analysis: a review and current issues*. *China Finance Review International*, 12(1), 1-19.
- [7] Zhang, J., Haselkorn, M., & Ahmed, S. U. (2009). *Financial analysis of global pharmaceutical companies for 2006 and 2007*. *International Journal of Organizational Innovation (Online)*, 1(3), 19.
- [8] Palepu, K. G., Healy, P. M., Wright, S., Bradbury, M., & Coulton, J. (2020). *Business analysis and valuation: Using financial statements*. Cengage AU.
- [9] Fleming, C. E. (2019). *Historical Study of United Healthcare's Communication Themes from 2010 to 2015*, Grand Canyon University.
- [10] Okafor, A., Adeleye, B. N., & Adusei, M. (2021). *Corporate social responsibility and financial performance: Evidence from US tech firms*. *Journal of cleaner production*, 292, 126078.
- [11] South, B. J. (2023). *Business adaptive strategies in crisis: the case of Pfizer's COVID-19 vaccine*, Portuguese Catholic University.