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Equity Valuation: Pfizer, Inc.

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Master in Finance,

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ISCTE Business School

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BUSINESS
SCHOOL

Department of Finance

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Resumo

Este trabalho de projeto de mestrado tem como intuito avaliar a empresa Pfizer, Inc. Esta empresa é uma das maiores empresas farmacêuticas mundiais com um vasto portefólio de produtos, tratamentos e vacinas no mercado. Continua a ser uma das grandes impulsionadoras de inovação no mercado, como foi o caso da descoberta da vacina contra a Covid-19. Atualmente, com a aquisição da Seagen, uma empresa de oncologia, espera atingir o objetivo de liderar o mercado da oncologia.

Com essa finalidade, é efetuado uma análise para estimar o valor justo das ações da empresa. Este valor vai permitir depois aferir uma opinião sobre se os potenciais investidores devem comprar, manter ou vender a posição nesta empresa.

Foi apresentado um olhar geral de toda a envolvente da empresa e do mercado em que se insere para um contexto prévio e detalhadas as metodologias que foram usadas ao longo do trabalho. Para este projeto foram utilizadas duas metodologias para a obtenção do valor intrínseco das ações da empresa: o modelo de Fluxos de Caixa Descontados e a Avaliação Relativa.

Os resultados de ambos os modelos sugerem que as ações da Pfizer se encontram subvalorizadas no mercado no período de análise. Por consequência, a recomendação final de investimento é a compra das ações da empresa, com uma boa margem de potencial ganho.

Palavras-chave: Pfizer, Inc.; Avaliação de empresas; Fluxos de Caixa Descontados; Avaliação Relativa

Classificação JEL: G30, G32

Equity Valuation: Pfizer, Inc.

Abstract

This master's project aims to evaluate Pfizer, Inc. This company is one of the largest global pharmaceutical companies, with a vast portfolio of products, treatments, and vaccines in the market. It continues to be a significant driver of innovation, as seen in the discovery of the COVID-19 vaccine. Currently, with the acquisition of Seagen, an oncology company, Pfizer aims to become a leader in the oncology market.

The purpose of this analysis is to estimate the fair value of Pfizer's stock. This valuation will help determine whether potential investors should buy, hold, or sell their positions in the company.

A general overview of the company and the market it operates in was provided to give context, and the methodologies used throughout the project were detailed. Two valuation methods were applied to estimate the intrinsic value of the company's stock: the Discounted Cash Flow (DCF) model and a Relative Valuation approach.

The results from both models suggest that Pfizer's shares were undervalued in the market during the period of analysis. Consequently, the final investment recommendation is to buy the company's stock, given the significant upside potential.

Keywords: Pfizer, Inc.; Equity Valuation; Discounted Cash Flow; Relative Valuation

Classificação JEL: G30, G32

Equity Valuation: Pfizer, Inc.

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Glossary

AI – Artificial Intelligence

APT - Arbitrage Pricing Theory

APV - Adjusted Present Value

BOD - board of Directors

CAGR - Compound Annual Growth Rate

CDMO - Contract Development and Manufacturing

CGMP - Current Good Manufacturing Practice

CAPM - Capital Asset Pricing Model

CEO – Chief Executive Officer

CMS - Centers for Medicare and Medical Services

CNS - Central Nervous System

DCF - Discounted Cash Flow

DEA - Drug Enforcamento Administration

EBIT – Earnings before Interest and Taxes

EBITDA – Earnings before Interest, Taxes, Depreciation and Amortization

ECF - Equity Cash Flow

EV – Enterprise Value

FCF – Free Cash Flow

FCFE - Free Cash Flow to the Equity

FCFF - Free Cash Flow to the Firm

FDA - Food and Drug Administration

FDII - Federal-Derived Intangible Income

FTC - Federal Trade Commission

GAGR - Global Average Growth Rate

IMF - Internacional Monetary Fund

IRA - Inflation Reduction Act

LTM - Last Twelve Months

M&A - Merges and Acquisitions

mRNA - Messenger RNA

NOPLAT - Net Operating Profit Less Adjusted Taxes

NYSE - New York Stock Exchange

P/S - ratio Price to Sales

PBMs - Pharmacy Benefit Managers

OECD - Organization for Economic Co-operation and Development

R&D - Research and Development

ROIC - Return on Invested Capital

SI&A - Selling, Informational and Administrative Expenses

TCJA - Tal Cuts and Jobs Act

USA – United States of America

WACC - Weighted Average Cost of Capital

Introduction

As one of the world's premier innovative biopharmaceutical companies, Pfizer has been shaping future for better care with its diversified offerings that include cutting-edge therapies, treatments and vaccines. Its influence covers various therapeutic areas, such as oncology, cardiovascular health, immunology, and rare diseases. Today, after more than 170 years in business and with its pioneering nature of continuously developing new drugs to meet the world market needs as well, Pfizer is amongst one of best-known pharmaceutical companies globally, with a strong market presence and status.

Pfizer places an emphasis on research and development as a component of its business strategy. Over the past few years, the company has allocated significant resources to R&D, especially in response to the COVID-19 pandemic, where it developed Comirnaty, the first mRNA COVID-19 vaccine approved for use. This has positioned Pfizer at the forefront of the fight against the pandemic, while at the same time showing the capability to supply life-saving therapies in conditions that were considered truly critical. Pfizer's commitment to R&D remains a core driver of its growth, with future advancements expected to come from its strong oncology, vaccines, and rare diseases pipeline.

This paper focuses on the valuation of Pfizer, Inc. The valuation of Pfizer is not only particularly relevant given its significant market capitalization, historical revenue performance, but also, its strategic acquisitions, such as the purchase of Seagen in 2023, aimed to strengthen its oncology pipeline. This acquisition aligns with Pfizer's broader strategy to increase its oncology pipeline, one of the fastest-growing segments in pharmaceuticals.

The unique market conditions in 2023, marked by a significant decrease in demand for COVID-19 treatments and increased competition in the pharmaceutical sector, emphasizes the importance of incorporating various models to account for different aspects of the company’s operations and market conditions. To conduct a detailed valuation of Pfizer, this project employs a combination of two models detailed below.

This report will comprise five main sections. The first section will be the Literature Review, where the crucial models for this report and its aspects will be discussed. The second one will be an overview of the company and its main business, followed by an outline of the general market and specifically of the industry where Pfizer operates, in chapter three. Finally, the process of the company’s evaluation will be detailed through the Discounted Cash Flow approach and the Relative Valuation model that will lead to the main conclusion of this report, on whether a given investor should buy, hold or sell the position on the company.

1. Literature Review

1.1. Valuation

There is a substantial difference between price and value. The price is determined by an agreement between two parties, reflecting what one is willing give up in exchange for the asset's anticipated value contribution. On the other hand, the value can vary from different buyers depending on what attributes each of them places the greatest importance on and the different perceptions that each one has of the asset (Fernández, 2002).

As Damodaran (2012) said, for some, the price is justified if there is another investor willing to accept it. Though, for investors, the price should not fall under those assumptions but on the cash flows that that asset might generate and that is where valuation is important. Besides being the crucial means for investment decisions, valuation has also other very important purposes. It also entails the company's strategic planning, it is a huge help to identify the value drivers of the company, and the value creation attributes that then the executives can assess (Fernández, 2002).

Using valuation as a tool to understand the process involved in company valuation is essential to identify where value is being created or lost within the company, identifying the value drivers and strategically deciding which businesses to maintain or abandon, managers can improve corporate governance and create lasting value, leading to a healthier company (Fernández, 2002; Koller et al., 2010).

No matter how good it may be, valuation has its catches. The inputs that we need for the valuation process leave plenty of room for subjective interpretation. The ultimate value derived from these models is affected by our biases. It is widely recognized that equity research analysts are more inclined to issue buy recommendations than sell recommendations, meaning they typically view firms as undervalued rather than overvalued. This can be partly attributed to the difficulties analysts face in accessing information on companies they have rated as sell, and partly to the pressure exerted by portfolio managers, some of whom may hold substantial positions in the stock (Damodaran, 2012).

In the end, to evaluate an asset, we need to understand its characteristics to find which approach fits better. According to Damodaran (2012), we can separate valuation into three different methods. There is the discounted cash flow valuation, the base for the other valuation approaches, which is the value of any asset is calculated based on the present value of projected future cash flows.

Following, there is relative valuation, the most used method by analysts. Most assets are valued based on the market price of comparable and similar assets by using a comparable variable such as earnings, cash flows, book value, or revenues. This method assumes that the market generally values stocks accurately on average, but occasionally misprices individual stocks, with these errors being gradually corrected over time.

Lastly, in contingent claim valuation, if an asset's cash flows depend on the occurrence of a specific event, the asset may be valued higher than the present value of the expected cash flows. This approach uses option pricing models because of the similarities in characteristics.

Considering Pfizer's overall characteristics and financial situation, the chosen valuation methods are Discounted Cash Flow (DCF) analysis and relative valuation which will be covered in more detail in the following sections.

1.2. Discounted Cash Flow Valuation

As stated by Damodaran (2012), the discounted cash flow valuation method is the foundation for all other valuation approaches. Understanding this method will make it easier to understand the other methods because they are all based on understanding the basic concepts of the DCF method. This method is settled in the present value principle, which says that the value of an investment is the discounted value of future expected cash flows.

Discounted cash flow valuation operates on a spectrum, at one end, default-free zero-coupon bonds are valued by discounting assured future cash flows at a riskless rate. Moving up, corporate bonds with default risk are valued by discounting cash flows at a rate reflecting that risk. At the highest risk level, equities are valued by discounting uncertain expected cash flows at a rate reflecting their uncertainty (Damodaran, 2012).

In discounted cash flow valuation, the goal is to determine the intrinsic value of an asset by analyzing its fundamental factors. This can seem challenging, especially with young companies where the future is highly uncertain. However, making well-informed estimates and persisting in valuing the asset can be rewarding, as markets often misprice assets. While market prices may stray from the intrinsic value based on fundamentals, the expectation is that they will eventually align (Damodaran, 2012).

1.2.1. Free Cash Flow model

A company's value is primarily influenced by its capacity to achieve a return on invested capital (ROIC) that exceeds its weighted average cost of capital (WACC), and secondly, by its potential for growth. High returns and growth lead to substantial cash flows, thereby increasing value (Koller et al., 2010).

Companies secure funds from both equity investors and lenders to finance their projects. Both types of investors expect to earn a return on their investments. Lenders, for instance, anticipate a return that compensates them for the risk of default, which is referred to as the cost of debt. When looking at the overall financing of the company, the combined cost is calculated as a weighted average of the costs associated with equity and debt. This overall measure is known as the cost of capital (Damodaran, 2012).

In the later method, the free cash flow to the equity (FCFE) is valued by the equity part of the firm and in the other, the free cash flow to the firm (FCFF), debt part is added. The problem with doing the valuation using the pre-debt cash flows, is that sometimes it can cover real problems in the firm related to its financial stability and that will not be reflected in the FCFE, contrary to the FCFF (Damodaran, 2012). Many practitioners and academics prefer FCFF because it focuses exclusively on the actual cash flow of the company, rather than potentially misleading accounting-based earnings (Koller et al., 2010).

Although these two methods utilize varying definitions of cash flow and discount rates, they will produce consistent equity value estimates if our valuation assumptions remain consistent. In fact, we have three distinct, yet equivalent valuation methods based on how they handle tax shields: WACC (tax shield included in the cost of capital), Adjusted Present Value (APV) (tax shield valued separately), and Equity Cash Flow (ECF) (tax shield included in the debt cash flow). By keeping net operating profits less adjusted taxes (NOPLAT), which represent the earnings from the company's main business activities after accounting for the income taxes related to those activities, and free cash flow (FCF) independent of leverage, we can more accurately assess the company's operating performance over time and, in comparison to competitors. A clear measure of historical operating performance leads to more accurate forecasts. Discounting cash flows to equity at the cost of capital will result in an overestimated equity value, whereas discounting cash flows to the firm at the cost of equity will lead to an underestimated firm value (Damodaran, 2012; Koller et al., 2010).

The DCF method is most effective for assets or firms with positive cash flows that can be reliably projected into the future, and where a suitable risk proxy for determining discount rates is available. Although both DCF approaches involve discounting expected cash flows, the specific cash flows and discount rates differ between methods. The critical aspect of DCF valuation is that the discount rate must account for the inherent risk associated with the cash flows. Determining this rate is crucial and involves considering the risk and historical volatility of the cash flows. In practice, the minimum discount rate is often influenced by the expectations of the involved parties, such as buyers or sellers, who require a certain return on investment (Damodaran, 2012; Fernández, 2002).

1.2.1.1. Enterprise Value

The enterprise value is calculated by taking the present value of a firm's expected future cash flows and including a terminal value. Since estimating cash flows indefinitely is not feasible, the process usually involves forecasting cash flows up to a specific future date, after which a terminal value is computed to represent the firm's value from that point onward.

$$Enterprise\ value = \sum_{t=1}^{t=n} \frac{CF_t}{(1+k_c)^t} + \frac{Terminal\ value_n}{(1+k_c)^n} \quad (1)$$

Where $CF_t = \text{Cash Flows}$ and k_c= Cost of capital

As a firm grows, it becomes harder to sustain high growth, and eventually, its growth rate will match or fall below the growth rate of the economy it operates in. This stable growth rate can continue indefinitely, allowing us to calculate the value of all future cash flows as a terminal value for the company (Damodaran, 2012).

We will assess a firm's size relative to its market, its current growth rate, and its competitive advantages. Additionally, we will consider the possibility that firms may not last forever and might be liquidated in the future. (Damodaran)

According to Damodaran (2012), there are two ways to conclude a valuation: by assuming the firm will continue to generate cash flows indefinitely (going concern) or by assuming the business will eventually be shut down and its assets sold (liquidation). To value a firm as a going concern, we assume its cash flows will grow at a constant rate indefinitely. This stable growth rate allows us to estimate the terminal value using a perpetual growth model, as follows:

$$Terminal\ value_n = \frac{Cash\ flow_{t+1}}{(r - g_n)} \quad (2)$$

Where $g_n = \text{Stable growth rate.}$

When an investment is strong, most returns are realized upon selling the equity rather than through dividends or other cash flows. The terminal value is intended to reflect this price appreciation. Therefore, as stated by the formulas, the higher a business' growth potential, the more significant the terminal value becomes in its overall valuation.

1.2.1.2. Discount rates

1.2.1.2.1. Weighted Average Cost of Capital

When calculating discounted free cash flow to the firm with the WACC, the tax benefits of debt are inherently accounted for through the after-tax cost of debt component, along with the added risk from increased debt levels (Damodaran, 2012).

According to Koller et al. (2010), the cost of capital is not a cash cost. It is what investors could earn if they invested in other investments with the same level of risk, hence, an opportunity cost. And, to evaluate a firm's opportunity cost, most analysts use the WACC.

$$WACC = \frac{D}{V} k_d (1 - Tm) + \frac{E}{V} k_e \quad (3)$$

where D/V = Target level of debt to enterprise value using market-based (not book) values

E/V = Target level of equity to enterprise value using market-based values

Kd = Cost of debt

Ke = Cost of equity

Tm = Company's marginal income tax rate

To ensure consistency, the cost of capital must incorporate several important factors. It should reflect the opportunity costs associated with all sources of capital, including debt and equity, as free cash flow is available to all investors who expect compensation for the risks they take. Additionally, it must be weighed according to the target market proportions of each type of capital, rather than their historical book values. The cost of capital should be calculated after accounting for corporate taxes, as seen in the adjusted present value method. The FCF is measured in after-tax terms, and any tax benefits must be included in the cost of capital or valued separately. Furthermore, the cost of capital must be expressed in the same currency as the free cash flow and, if the free cash flows are stated in nominal terms, the cost of capital should also be in nominal terms. To determine the weighted average cost of capital, you need to calculate the cost of equity, the after-tax cost of debt, and the company's target capital structure (Koller et al., 2010).

1.2.1.2.2. Cost of Equity

The cost of equity is the return that investors expect for investing in a company's stock. This return compensates them for the market risk associated with their investment and represents the cost of equity (Damodaran, 2012).

When calculating the cost of equity is not only necessary to estimate the market return but also adjust for its risk and to do that, we can use one of three methods: the Arbitrage Pricing Theory (APT), the Fama-French three factor model and the capital asset pricing model (CAPM). The three models vary mainly in their definitions of risk. The CAPM sees a stock's risk in terms of its responsiveness to market fluctuations. In contrast, the Fama-French three-factor model assesses risk based on how a stock responds to three different factors: overall market performance, company size, and book-to-market ratios. In the CAPM, which is believed to be still the best model to adjust for the assets risk, the risk-free rate and the market premium, which is the difference between the expected market return and the risk- free rate, are common to all companies, only the beta varies (Koller et al., 2010).

$$E(R_i) = r_f + \beta_i[E(R_m) - r_f] \quad (4)$$

Where $E(R_i)$ = security i's expected return, r_f = risk-free rate, β_i = stock's sensitivity to the market and $E(R_m)$ = expected return of the market.

Financial theory and practical experience both suggest that riskier investments must offer higher returns to justify their risk. Financial models argue that the risk associated with an investment should

reflect the perspective of a well-diversified investor, and the expected return should be based on this risk assessment (Damodaran, 1999).

Risk free rate

An asset is considered risk-free if its returns are known with certainty, meaning the actual return always matches the expected return. To be truly risk-free, two conditions must be met. First, there must be no risk of default, which typically excludes any securities issued by private entities, even the most stable ones. The second condition, often overlooked, is the absence of reinvestment risk. For instance, if we are evaluating a five-year investment and seek a risk-free rate, using a six-month Treasury bill rate is inadequate because it introduces reinvestment risk—there is uncertainty about what the Treasury bill rate will be in six months (Damodaran, 2012).

Risk is measured through the default risk for bonds. The increase in risk is translated into a spread that is then paid for by the firm above the risk-free rate. The only security that could be risk free would be the government securities but even those assets have risk associated due to the rate in which the coupons would be invested in. However, the best proxy would be the government bond if we account for the default risks and the currency risks (Damodaran, 2012).

To discount cash flows accurately, ideally, we would match the bond maturity to the cash flow period, for example using a 10-year zero-coupon bond for a 10-year cash flow. In practice, a single yield from a government bond, such as the 10-year U.S. bond, is often used for simplicity. However, using short-term bond yields can misestimate the opportunity cost for long-term investments due to the need for reinvestment at potentially higher rates (Koller et al., 2010).

Market risk premium

The market risk premium, defined as the difference between the market's expected return and the risk-free rate, is a highly contested issue in finance. Just like the expected return on a stock, the expected return on the market is not directly observable. Due to their aversion to risk, investors demand a premium to choose stocks over bonds (Damodaran, 2012; Koller et al., 2010).

Following Damodaran (2012), the expected return on an investment can be written as:

$$Expected\ return = Risk - free\ rate + \sum_{j=1}^{j=k} \beta_j (Risk\ premium_j) \quad (5)$$

According to Koller et al. (2010), there are three main approaches to estimating the market risk premium. One approach involves analyzing historical excess returns and using this data to predict future premiums. Another approach employs regression analysis to correlate current market variables, such as the aggregate dividend-to-price ratio, to the expected market risk premium. The third

approach utilizes DCF valuation, integrating estimates of return on investment and growth, to infer the market's cost of capital.

Beta

Damodaran (1999) tells us that only the risk that is added to a well-diversified portfolio should be measured and rewarded, the risk that is not diversifiable. Therefore, an investment can have a high level of individual risk but low risk from a market perspective. For instance, there are many risk and return models in finance and they all specify the variance in actual returns relative to the expected returns as a measure of risk, and state that risk must be evaluated from the point of view of the marginal investor.

In theory, the beta of an asset can be determined by analyzing its returns relative to the returns of a market portfolio index over an appropriate time frame. However, beta regression has some limitations. According to Damodaran (2012) regression betas are significantly influenced by the chosen estimation parameters, such as the time period, return interval, and index used, which is often referred to as "The index problem." To address this, a global index can be employed, even though this approach may result in a wide range of estimated betas or a higher standard error, known as "The noise problem". Additionally, since the regression is based on historical data, it reflects the firm's characteristics during the estimation period rather than its current state, highlighting "The problem of firms changing over time".

As an alternative, Damodaran (1999) states that considering the fundamental decisions a firm makes regarding where to invest, the type of cost structure it plans to maintain, and how much debt it takes on, another method to estimate beta is the bottom-up approach.

The combined beta of two assets is a weighted average of their individual betas, with the weights determined by their market values. Therefore, a firm's overall beta is a weighted average of the betas of all the different businesses it operates in. Therefore, to estimate the bottom-up beta for a firm, one can start by determining the unlevered beta(s) for the various business segments the firm operates.

The unlevered beta is the beta without any debt, is as follows:

$$\beta_u = \frac{\beta_L}{1 + (1 + t)\left(\frac{D}{E}\right)} \tag{6}$$

Where β_u = Unlevered Beta of the firm, β_L = Levered Beta for equity in the firm, t = Corporate tax and $\frac{D}{E}$ = Debt-to-Equity ratio.

Considering that the debt also bears a market risk and not only equity, we can then estimate the debt beta to calculate the unlevered beta:

$$\beta_u = \frac{\beta_L + \beta_D * \frac{D}{E} * (1 - t)}{1 + (1 - t) * \frac{D}{E}} \tag{7}$$

Where $\beta_D = \text{Beta of debt}$, which is calculated as below:

$$\beta_D = \text{Beta of debt} = \frac{(R_d - R_f)}{(R_m - R_f)} \quad (8)$$

If market values are not available to calculate the firm's leverage, we can then use the target leverage specified by the firm's management or the debt ratios typical for the industry. Using the unlevered beta and the leverage from before, we estimate the levered beta for each business of the firm:

$$\beta_L = \beta_u + (1 - t) * \frac{D}{E} * (\beta_u - \beta_D) \quad (9)$$

1.2.1.2.3. Cost of debt

The cost of debt represents the current expense for a firm to borrow funds, influenced by the risk-free rate, the firm's default risk, and tax advantages. As the risk-free rate and default risk rise, so does the cost of debt. However, interest is tax-deductible, reducing the after-tax cost compared to the pretax cost, with greater tax benefits at higher tax rates. This section addresses how to estimate a firm's default risk and convert it into a default spread to calculate the cost of debt (Damodaran, 2012).

To estimate the cost of debt, we can use the yield to maturity of the company's long-term, widely traded bonds. While this yield serves as a proxy for the expected return, it technically represents the promised rate of return, assuming all payments are made on time. This creates a theoretical inconsistency since expected cash flows should not be discounted by a promised yield. For firms with numerous liquid bonds, the market price, coupon, and maturity of these bonds can be used to compute the yield, effectively serving as the cost of debt (Damodaran, 2012; Koller et al., 2010).

Many firms that are not rated still secure loans from banks and other financial institutions, and by reviewing these recent borrowings, you can gain insights into the default spreads charged to the firm and use this information to estimate the cost of debt. Alternatively, you can create a synthetic rating by assessing the firm's financial ratios and comparing them to those of rated firms with similar characteristics. This involves assigning a rating based on the firm's financial metrics to estimate the cost of debt. For instance, you could use interest coverage ratios of firms with comparable market caps and sectors to determine the appropriate rating class (Damodaran, 2012).

1.2.1.3. Growth

When valuing a firm, it is easy to overlook the most critical aspects: the return on invested capital (ROIC) and the company's growth potential. Concentrating on these factors allows you to properly contextualize your forecasts, ensuring they align with the company's capabilities and the competitive dynamics of the industry (Koller et al., 2010).

Increasing growth is not always beneficial, as higher growth requires more reinvestment, reducing cash flows. In equity models, the crucial factor is whether the return on equity from new investments exceeds the cost of equity. If it does, growth will enhance value. However, if the return is less than the cost, growth can destroy value. A firm that earns a return on capital equal to its cost of capital will not create value with increased growth, while a firm earning more (or less) than its cost of capital will see value rise (or fall) with growth (Damodaran, 2008).

According to Damodaran (2012), there are three basic methods to estimate growth. The first is to look at the historical growth rate of a firm's past earnings. Estimating historical growth rates can be complex due to measurement issues. Different methods, such as arithmetic and geometric averages, yield varying results. The geometric mean, where compounding is considered implicitly, is more accurate, especially when growth is inconsistent year-to-year. The second approach is to rely on growth estimates provided by analysts who cover the firm. While many companies are well-tracked by analysts, their long-term growth projections are often unreliable. Depending on these estimates can lead to flawed and inconsistent valuation results. The third method for estimating growth is to base it on the firm's fundamental activities, such as reinvestments in new projects and their effectiveness. This approach involves evaluating how investments like acquisitions and marketing expansions contribute to the firm's growth rate.

We also must remember that growth and reinvestment are interconnected: firms aiming for high growth must reinvest to achieve it. The quality of growth varies, and the best indicator of this quality is the returns on investments. Firms with higher returns on equity and capital not only grow faster but also add more value through that growth.

1.3. Relative Valuation

If with the discounted cash flow model, the objective was to find the intrinsic value of the asset based on their specific information, the relative valuation model or the multiples is a model that uses market prices information of similar assets to deliver a value for that asset (Damodaran, 2012). Furthermore, the author defends that "(…) relative valuation relies much more on the market being right" (Damodaran, 2012, p. 34). For instance, the market can make mistakes when it prices stock individually, but it is right when pricing stocks on average.

This model is the most used in every market in general. It can be used to value nontraded assets based on the idea that the assets that have similar characteristics should have the same price. However, finding comparables or choosing the right multiple for the valuation requires attention to each of the firm's characteristics (Koller et al., 2010).

There are analysts that compare the multiples across comparable firms, comparing the value of firms with similar characteristics, or, when that is not possible, controlling for the differences between

them. Other analysts resort to the discount cash flow model to estimate multiples based on the firm's growth rates in earnings and cash flows and its risk. The difference is that it allows analysts to evaluate the relationship and see the impacts of their differences (Damodaran, 2012).

Moreover, (Fernandez, 2002) places relative multiple in three groups, depending on each context. The first one is related to the firm's history, which relates to the firm's historic multiples. The second one is linked with the market, the firm's comparables. And finally, the last one is with respect to the industry. This latter is the most appropriate though, if the industry is overvalued, all the companies are overvalued and so will the ones being evaluated.

In addition, despite the author clarifying that the most used multiples tend to be more volatile than the firm's equity value and with a high dispersion, he also considers it to be a great and relevant valuation method to be used as a second valuation with the goal of comparing the results.

Peer groups

When using multiples to value a firm, we compare its valuation with that of similar firms or with its own past valuations. Since each company has unique factors influencing its future value, not all companies are directly comparable. Understanding the systematic differences is key to accurately applying valuation multiples. Identifying truly comparable firms can be difficult, and often we must settle for firms that differ in some respects. In these cases, it is important to adjust for differences in growth, risk, and cash flow either directly or indirectly. This adjustment can be as simple as using industry averages or as complex as employing multivariate regression models to account for the relevant variables (Damodaran, 2012; Koller et al., 2010).

It is essential to comprehend the products they offer, how they generate revenue and profits, and their growth strategies. This knowledge places a company's multiple in the correct context with other companies (Koller et al., 2010). To conduct a thorough and accurate valuation, it is important to identify and exclude outliers by comparing their multiples to the peer group average.

For companies with diverse business units, using separate peer groups for each unit ensures more accurate valuations by applying relevant multiples based on similar companies. This method acknowledges the unique growth rates, risk profiles, and profitability of each segment, leading to a clearer picture of the company's overall value.

2. Company Overview

2.1. Profile and History

The company was created by two cousins Charles Pfizer and Charles Erhart in 1849 in Brooklyn, New York, named initially as Charles Pfizer & Company. But it was only in 1900 that the company files an official certificate of incorporation in the state of New York and becomes a public firm on June 22, 1942, issuing 240,000 of new common stock.

Pfizer, in 1919 becomes the pioneer in the production of citric acid from sugar through mold fermentation which leads to the company being recognized as a leader in fermentation technology in 1939. Using its fermentation technology, Pfizer starts pursuing mass production of penicillin to treat Allied soldiers in World War II.

Pfizer in line with its operational and international expansion carried out some acquisitions that allowed Pfizer to be operational in England, Japan, Mexico, Italy, and Turkey. Following this expansion, in 2000, Pfizer acquires Warner-Lambert, an American pharmaceutical company, for $90bn. And in 2003 acquires Pharmacia, an Italian pharmacist, for $60bn, becoming, with these two acquisitions, the world's most valuable and fastest-growing major pharmaceutical company. After that, in 2009, Pfizer acquires Wyeth in a cash-and-stock transaction valued at approximately $68bn, becoming a company with a broad range of products and therapies.

Last year marked Pfizer's most active period for acquisitions. It began by acquiring Arena Pharmaceuticals, specializing in therapies for immuno-inflammatory diseases at $6.7 billion, followed by ReViral. The trend continued with the $11.6 billion acquisition of Biohaven Pharmaceutical, known for innovative migraine therapy. The series of acquisitions concluded with Global Blood Therapeutics, a company dedicated to sickle disease.

Besides the three primary operational business segments mentioned in more detail in the following section, Pfizer remains dedicated to its shareholders by making substantial investments in both internal research and development projects and strategic business development transactions. Its priorities related to R&D include delivering uniquely differentiated medicines and vaccines, focusing on leveraging opportunities to bring the most critical new therapies to patients in need, enhance its capabilities to secure long-term leadership in R&D and develop innovative partnership models with creativity, flexibility, and urgency to swiftly deliver groundbreaking treatments to patients in need.

While a significant portion of Pfizer's R&D is conducted internally, it also seeks to incorporate promising and innovative technologies from external sources, and it does so through collaborations, alliances, licensing agreements, acquisitions, and investments with universities, biotech companies, and other firms. These partnerships allow it to share expertise, risk, and costs, enhancing our product pipeline with both internally developed and externally sourced innovations. The discovery and development process for drugs and biological products is extensive and can exceed ten years, spanning from initial research through to potential regulatory approval. As of July 30, 2024, this is the following number of projects in various stages of R&D:

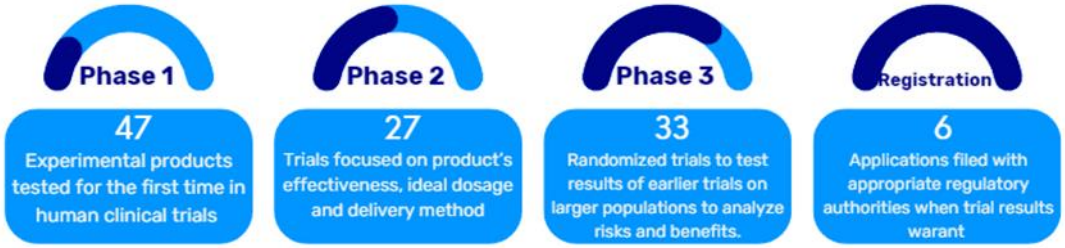


Figure 1 – New drug development pipeline
Source: (Pfizer, 2024)

To drive progress, Pfizer forms collaborations, alliances, and licensing agreements with universities, biotech companies, and other firms. Additionally, the company engages in acquisitions and investments. These partnerships are crucial for enhancing the development, R&D, sales, and distribution of Pfizer's products.

Pfizer shared the development costs for the Comirnaty program equally with BioNTech. The company also partnered with Bristol-Myers Squibb (BMS) for Eliquis, funding 50-60% of development costs and sharing profits and losses equally, with the exception for certain countries. Xtandi, an androgen receptor inhibitor, is developed and commercialized in collaboration with Astellas, with profits and costs shared equally in the U.S. market. Bavencio is a joint effort with Merck KGaA, with development and commercialization costs split equally and shared profits from net sales. Additionally, Pfizer collaborates with Myovant on Orgovyx and Myfembree, sharing profits and expenses equally in the U.S. and Canada.

Additionally, following the acquisition of Seagen, Pfizer has also collaboration and co-promotion arrangements for certain biopharmaceutical products, including Adcetris and Tivdak.

In 2023, Pfizer generated $31.4 billion in revenues from its operations outside the U.S., which accounted for 54% of its total revenues. The company saw revenues exceed $500 million in 14 countries outside the U.S. in 2023, compared to 24 in 2022 and 21 in 2021. The decrease in the number of countries with revenues over $500 million from 2022 to 2023 was largely due to reduced revenues from Comirnaty and Paxlovid. Among the countries outside the U.S., Japan was the largest contributor to Pfizer's total revenues in 2023.

2.2. Shareholder structure

The company’s share capital as of December 31, 2023, amounted to a total of 5,643 million outstanding shares, each with a value of $28.78, leading to a market capitalization of $162,560 million.

Most of the company’s shares are publicly traded on the New York Stock Exchange (NYSE), with free floating representing 99,95%. Pfizer's ownership structure is typical of a large, publicly traded company, with institutional investors holding most shares, but with diverse ownership among other categories as well.

The largest shareholders include the Vanguard Group, with a total share of 8.93%, which is one of the largest asset management firms globally. Financial services and asset management firm Street Global Advisors is also one of the top shareholders with 5.09%. Another major global investment management corporation, BlackRock Institutional Trust Company, detains a total share of 4.87%.

Pfizer's Board of Directors (BOD) authorized a $10 billion share repurchase program in December 2018. This program allows the company to buy back its shares over time, providing flexibility in managing its capital structure. As of December 31, 2023, Pfizer had approximately $3.3 billion left in its share repurchase authorization.

2.3. Business segments

In 2023, Pfizer experienced a significant decline in revenue, primarily due to the reduced demand for its COVID-19 products, which had been a major revenue driver. According to Statista, covid vaccine Comirnaty was the leading pharmaceutical product globally in terms of revenue generation. By the end of the year, Pfizer's revenue had fallen to $67.3 billion.

Pfizer operates in three primary business segments: primary care, specialty care, and oncology. With $30.589 million in revenue in 2023, with a weight of 52% in total profit, primary care focuses on internal medicine, specifically in developing pharmaceuticals for cardiovascular diseases, diabetes, obesity, migraine, and women's health. The vaccine segment, crucial for preventing diseases like pneumococcal and meningococcal infections, gained prominence as it played a key role in the development of the COVID-19 vaccine during the rapid arrival of the pandemic.

In response to the urgent need for widespread vaccination during the COVID-19 crisis, Pfizer collaborated with BioNTech in 2020 to introduce a groundbreaking COVID-19 vaccine, utilizing messenger RNA (mRNA) technology. Government contracts for Comirnaty and Paxlovid represented a substantial portion of revenues in 2022, with a combined $56.739 million in revenues. However, primarily due to the widespread vaccination campaigns in previous years that reduced the immediate need for additional COVID-19 vaccines and treatments. Pfizer's COVID-19 vaccine (Comirnaty) and antiviral treatment (Paxlovid) were major revenue contributors in 2022. However, in 2023, both

products experienced a significant drop in sales, collectively resulting in nearly a 50% decrease in revenue, as we can see through the graph below.

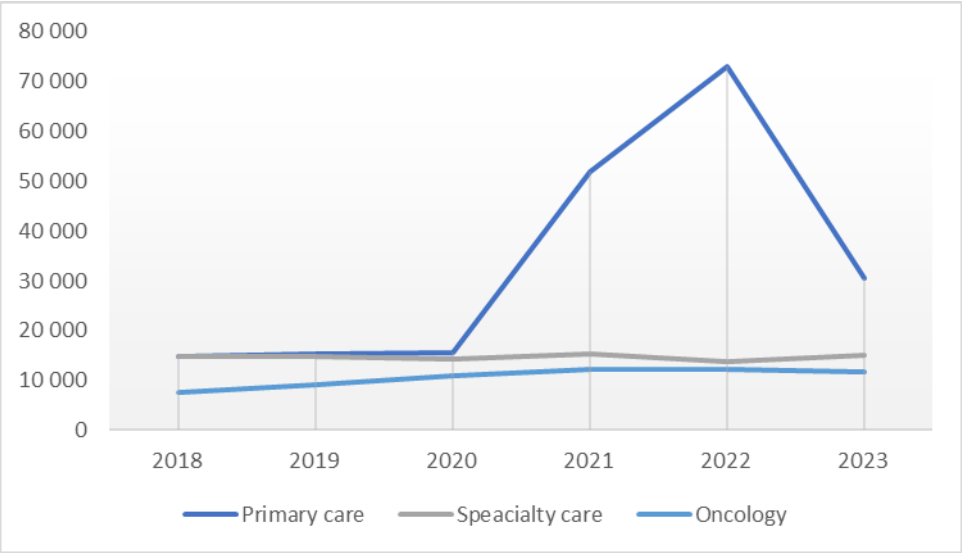


Figure 2 - Pfizer sales breakdown (values in million USD)
Source: Pfizer' financial reports

In terms of revenues for 2023, the specialty care segment, enveloping the former Inflammation and Immunology, Rare Diseases, and Hospital product portfolio, stands as the second most substantial contributor. This segment recorded revenues of $14.970 million in the preceding year, representing 26% of total revenues. While inflammation is a vital response to potential threats and organ damage, autoimmune diseases, Pfizer aims to revolutionize the management of inflammatory diseases by developing new classes of therapies that target key proteins and pathways in the body.

With over three decades of expertise in rare diseases, the rare diseases division is dedicated to tackling unmet medical needs in four primary therapeutic areas: rare hematology, rare endocrine/metabolic, rare neurology, and rare cardiology. The firm is at the forefront of pioneering a new era of groundbreaking treatments, employing various modalities such as small molecules, large molecule/monoclonal antibodies (mAbs), gene therapies, and innovative devices.

A notable highlight of the year was Pfizer's acquisition of Seagen Inc., a move aimed at strengthening its position in oncology and enhancing its pipeline of cancer treatments. This acquisition, one of the largest in the company's history, is expected to drive long-term growth and innovation in cancer therapy. With the help of this acquisition, the company received nine new molecular entity approvals from the Food and Drugs Administration (FDA) in 2023, promising a positive impact on future performance. Within the oncology segment, there are various brands of biologics, small molecules, immunotherapies, and biosimilars, covering a diverse spectrum of cancers that all together represented a revenue of $11.627 million in revenue this previous year.

2.4. Financial analysis

Despite maintaining stable costs in sales and other operating expenses, the operating income of Pfizer was heavily impacted by its lower revenue. The stability in operating expenses includes consistent spending on research and development, marketing, and administrative costs, which did not see significant cuts despite the revenue drop.

This decline saw their combined revenue fall substantially compared to the previous year, contributing to an overall revenue drop to $58.5 billion, a 42% operational decline from the previous year. Excluding COVID-19 products, Pfizer reported a 7% operational revenue growth for the year, showcasing strong performance from its other medicines and vaccines.

EBITDA was also impacted by this downfall in revenue. In 2022, EBITDA margin of Pfizer was 40%, compared to the one recorded in 2023 which is 7%. This was a downfall already predicted, as mentioned earlier, but by continuing to bet on R&D, Pfizer is increasing the chance of regaining some of this investment.

When it comes to the ability of the firm to pay debt, Pfizer does not have the ability to cover its liabilities, at least in the short term. Furthermore, it has seen its liquidity ratios decrease over the last few years, ending up all below 1.00 in 2023. This decrease was more severe in the year 2021 with the acquisition of BioNTech, which doubled the liabilities of the firm. This increase was mostly shown in other current liabilities due to the amounts payable to BioNTech for the gross profit split for Comirnaty, which in 2021 was of $9.7 billion, $5.2 billion in 2022 and decreasing in 2023 to $2 billion.

When evaluating a firm, we also must look at its debt-to-equity ratio, which tells us the degree to which the firm is financing its operation with debt rather than its own resources. Pfizer maintained its debt-to-equity ratio steady over these last 4 years, even with the increase in debt to finance the acquisition of Seagen which was offset by the incorporation of new patents in intangible assets.

2.5. Stock performance

The company offered shares of its common stock to the public for the first time on June 22, 1942, marking its transition from a privately held company to one with publicly traded shares on the stock market.

In the graph below is the closing share price of Pfizer and its corresponding change relative to the performance of the NYSE Index over time from March 2015 to December 2023.

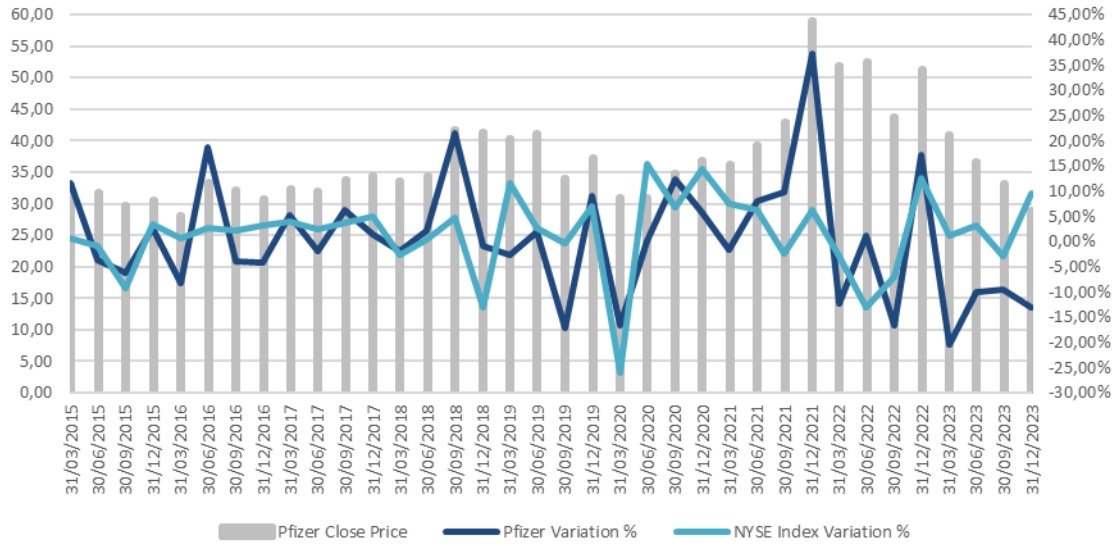


Figure 3 - Stock performance
Source: Reuters

During this period, there were significant increases in the company's stock price around 2018 outperforming the NYSE Index. This growth might have been driven by its revenue growth, mainly due to oncology drugs portfolio, but also the company's restructuring process, reorganization into three distinct business areas and started to focus more on its core assets and growth areas, such as oncology, inflammation, immunology, and vaccines. Another notable peak was in early 2022 in the light of the firm's achievements during the COVID-19 pandemic.

Throughout 2023, the companies within the NYSE Index experienced notable improvements in price performance. However, Pfizer struggled to regain the strength it had before the pandemic, falling short of its previous performance levels

3. Macroeconomic overview

3.1. Macroeconomic outlook

Economic growth typically leads to increased healthcare spending, improving access to services and facilities, and boosting pharmaceutical research. In opposition, economic downturns can constrain healthcare budgets, leading to austerity measures that limit access to services and slow down pharmaceutical innovation.

This last year, still shaken from the pandemic consequences, showed a slow recovery in growth. The global economy, according to OECD, grew by approximately 3.1% in 2023, still slower than the pre-pandemic average. It is expected to grow by 3.2% in 2024 and followed by another slight increase, growing by 3.3% in 2025.

Inflation remained a global concern, though it eased from 2022 peaks. However, the pace of disinflation is slowing, reflecting persistent inflation in services, despite stronger disinflation in goods prices. In advanced economies, the forecast for 2024 and 2025 suggests a slower disinflation process due to stubbornly high service prices and rising commodity costs. Nevertheless, cooling labor markets and expected energy price declines should bring inflation back to target by late 2025.

In emerging markets, inflation is expected to remain higher and decline more slowly than in advanced economies, though it is nearing pre-pandemic levels in many countries due to falling energy prices.

Central banks, particularly the U.S. Federal Reserve and the European Central Bank, maintained rigid monetary policies with high interest rates to restrain inflation. While these measures affected the housing and credit markets, global economic activity remained relatively resilient. Nonetheless, near-term risks have increased, including potential inflation spikes from persistent service sector pressures and renewed trade or geopolitical tensions.

Besides the persisted conflict between Russia and Ukraine and the periodic escalations between Israel and Palestine, with ongoing disputes over territory, security, and political rights, the rivalry between the U.S. and China continued to be a central issue. Tensions over trade, technology, and security remained high. The U.S. imposed further restrictions on Chinese technology companies.

Geopolitical tensions have amplified economic uncertainty, causing perturbations in global markets, trade flows, and investment patterns. Firms are confronting policy variability and potential trade disruptions. Under unstable geopolitical circumstances, policies may alter in an unpredictable manner. An increase in trade tensions will aggravate inflationary risks as it would mean a rise in the cost of imported goods along the supply chain. Any setbacks in the disinflation process can derail the

path to reach price stability, especially when short-term inflation expectations rise due to disappointing inflation numbers.

US economy outlook

The U.S. economy grew by around 2% in 2023, marking a slowdown compared to previous years due to the impact of rising interest rates and persistent inflation. The Federal Reserve's tight monetary policy, aimed at controlling inflation, played a key role in this deceleration.

Looking ahead, growth in the U.S. is expected to further decelerate, with projections revised downward to 2.6% in 2024, slightly lower than earlier estimates due to a weaker-than-anticipated start to the year. By 2025, growth is forecasted to slow to 1.9% as the labor market cools, consumer spending eases, and fiscal policy gradually tightens.

3.2. Industry outlook

The pharmaceutical sector is a branch of the healthcare industry that specializes in the research, development, manufacturing, and marketing of drugs and medications. It is a foundation of healthcare, promoting medical innovation through extensive R&D, which includes laboratory research, clinical trials, and the use of biotechnology such as biologics and biosimilars. This sector is critical for developing pharmaceuticals to prevent, treat, and manage a variety of medical problems, and it makes a considerable contribution to the worldwide economy.

The COVID-19 pandemic impacted significantly the pharmaceutical industry, disrupting revenue from physician-administered products due to social distancing and lockdowns. Restrictions also affected manufacturing, distribution, and access to supplies, leading to increased losses. On the other end, the pandemic also accelerated pharmaceutical innovation through enhanced collaboration, greater research funding, and faster regulatory approvals, underscoring the sector's vital role in public health and economic stability.

Following the growth imposed by COVID-19 pandemic, the life sciences sector - which englobes pharmaceutical, biotech and MedTech sectors - reached the end of 2023 with an estimated global total of $ 2.83T, according to Deloitte (2023).

In 2023, profit margins within the healthcare sector continued to face significant challenges. Ongoing inflation was a prime cause that led to the rising cost of goods, services, and supplies needed to operate health systems increasing financial pressure. Another factor was the persistent labor shortages of healthcare workers, which likely led to increased labor costs and operational inefficiencies.

The growth rate from 2022 to 2023 was estimated to be under 5%, according to Patel & Singhal (2024), still lagging behind levels seen before the pandemic. This sector still faces a lot of difficulties, which have increased largely due to regulatory restrictions.

Legislation

The pharmaceutical sector is highly regulated worldwide. In the United States, regulators are pushing for increased transparency and affordability in the pharmacy sector, with significant changes to the Medicare Part D program under the Inflation Reduction Act (IRA) of 2022 (Evaluate, a Norstella Company, 2024). This redesign places a $2,000 limit on what beneficiaries have to pay out-of-pocket and increases the portion that insurance plans have to cover during the catastrophic phase of coverage from 15% to 60%. This change pushes plans to better manage the costs of expensive medications. Additionally, the Centers for Medicare and Medicaid Services (CMS) had planned to require that Medicare pharmacy rebates be shared with consumers at the point of sale, while also expanding price transparency rules to include prescription drugs, which also creates tension on the pharmacy benefit managers (PBMs).

This act includes provisions for price negotiations on older drugs, which have received considerable attention because they directly impact pharmaceutical companies' revenues. However, another critical aspect of the IRA is the limitation it places on drug price increases, preventing them from rising faster than inflation.

In recent years, net prices — the actual amount drugmakers receive after all negotiations and rebates — have either remained flat or slightly declined. This trend, highlighted by pricing expert Fein (2023) , indicates that despite rising list prices, the real income for pharmaceutical companies may not be increasing as much due to these market dynamics and the pressure from legislative measures like the IRA. This environment presents a complex challenge for the pharmaceutical industry as it navigates price controls and market expectations.

IRA will influence how companies make decisions and allocate resources in R&D and commercial strategies, potentially affecting global drug access. Given that the U.S. accounts for nearly 43% of the global pharma market and is home to some of the largest companies, the IRA's effects will likely be extensive. Despite that, the drug negotiation program under the IRA is expected to save Medicare up to $100 billion over the next decade (Deloitte, 2024).

Assessing the exact impact of the IRA on pharmaceutical companies' choices regarding treatment modalities is challenging. The IRA introduces several factors that could influence these decisions, but the extent of its impact remains unclear.

Mergers & Acquisitions and patents

The pharmaceutical industry is highly competitive, contending with not only other branded drugs but also generic and biosimilar products that emerge once patents expire. To mitigate revenue losses from patent expirations, Big Pharma companies often engage in mergers and acquisitions (M&A) with smaller biotech firms.

These biotech firms, often facing financial challenges due to the high costs of R&D and clinical trials, benefit from the financial support provided by these deals. In return, Big Pharma secures new, innovative drugs to replenish their pipelines. Meanwhile, venture capitalists, who typically fund early-stage biotech companies, are becoming more selective due to difficulties in raising new funds, which further accentuate the importance of M&A in this industry.

M&A has managed to recover after a quiet year in this area, with over $ 80 billion worth transactions in 2023. Several CEOs of major pharmaceutical companies have indicated that they are avoiding large-scale mergers and acquisitions due to their reputation for being disruptive and often failing to deliver the expected value. However, they are still actively pursuing smaller, but still significant, acquisitions of commercial or late-stage assets. According to (Bernauer et al., 2024), the value of transactions grew 23% this last year in comparison to 2022, surpassing the pre-pandemic values, and out of the 745 transactions in 2023, 91 percent were valued at under $1 billion, and 54 percent were under $100 million.

The Federal Trade Commission (FTC) is intensifying its scrutiny of pharmaceutical mergers, focusing not just on product overlaps but also on potential future pricing strategies that could harm competition. The Co-Head of Healthcare M&A at Morgan Stanley (2024) says that though this reinforcement is set to encourage innovation, it might have the opposite effect by reducing biotech companies' capability to participate in M&A by slowing down the process.

Research & Development

Pharmaceutical companies allocate substantial resources to Research & Development (R&D) to discover and develop new drugs, improve existing treatments, and ensure compliance with regulatory standards. R&D spending in this sector often accounts for a significant portion of a company's revenue.

The top 20 pharmaceutical companies by 2020 R&D expenditures included in the scope of Deloitte's study (2024) increased their R&D expenditures from $139.2 billion in the previous year to $145.5 billion in 2023, reflecting a 4.5 percent growth. However, this growth still lags the rates observed in the past decade.

This slower growth in the pharmaceutical sector is attributed to rising development costs and longer cycle times for new drug approvals. Additionally, R&D executives are increasingly concerned about stricter regulations, such as the IRA, which demand higher-quality evidence in clinical trials. These regulatory challenges add complexity to trial designs, impacting both the cost and productivity of R&D efforts.

Due to these various uncertainties, R&D spending in the pharmaceutical sector has shifted primarily toward oncology and rare diseases. But, as these areas become saturated, there's now growing investment in cardio-metabolic, central nervous system (CNS), and inflammatory diseases. By

2023, 39% of the late-stage development programs within the scope of Deloitte's study (2024) were concentrated on oncology.

Another field that is gaining a lot of importance regarding innovation in the pharmaceutical sector is Artificial Intelligence (AI). AI could boost drug discovery and development by simulating molecular interactions, mixing out drug leads, or recruiting trial patients. AI-powered products could grow to $60-110 billion in the pharmaceutical industry (Viswa et al., 2024). But, before pharma companies can fully capitalize on the opportunities that generative AI offers, they must first take a step back to clearly understand its capabilities and limitations.

In conclusion, the macroeconomic overview of the pharmaceutical sector until 2023 reflects a sector in flux, responding to the immediate challenges posed by the increasing regulatory and legislative changes while navigating a landscape of technological innovation, supply chain optimization, and ongoing policy dynamics.

3.3. Regulatory compliance

The pharmaceutical sector falls under the regulatory oversight of the FDA, an agency with the primary mission of protecting public health. The FDA achieves this by ensuring the safety, effectiveness, and security of both human and veterinary drugs, biological products, and medical devices. Additionally, it plays a pivotal role in assuring the safety of the U.S. food supply, cosmetics, and products emitting radiation. Moreover, the FDA contributes to expediting innovations that enhance the efficacy, safety, and affordability of medical products by providing the public with accurate, science-based information necessary for their beneficial use.

The FDA oversees both pre-marketing and post-marketing aspects of biopharmaceutical products, encompassing a range of regulations. These regulations cover critical areas such as the safety and effectiveness of drugs and vaccines, the management of clinical trials, advertising and promotional activities, quality control, manufacturing standards, labeling, distribution, post-marketing safety monitoring, and record-keeping. Additionally, certain of our products and operations are subject to regulation by other U.S. federal agencies, including the DEA.

Furthermore, a drug or biologic can be subjected to post-marketing commitments, involving studies or clinical trials that the product sponsor commits to conduct, as well as post-marketing requirements, which are studies or trials mandated as a condition of approval. Additionally, we have obligations to report adverse events and adhere to cGMP (FDA's comprehensive regulations governing pharmaceutical manufacturing quality), the Drug Supply Chain Security Act (which outlines requirements for product tracing, identifiers, and verification in the pharmaceutical distribution supply chain), and advertising and promotional regulations.

Equity Valuation: Pfizer, Inc.

In 2023, the U.S. Food and Drug Administration approved 55 novel drugs, nearly 50% more than the 38 approved in 2022. This surge brings approvals back in line with historical trends, a development that analysts and investors believe could boost investment in biotech companies

4. Valuation of Pfizer

As mentioned previously, this section starts by valuing Pfizer using the DCF approach. We will calculate the company's intrinsic value by projecting its future cash flows and discounting them using the WACC approach. At the end of this analysis, we will perform a sensitive analysis to evaluate how changes in the WACC and growth rate will impact the company's valuation. Furthermore, a sensitive analysis of the revenue will also be carried out to assess the impacts of changes in the revenues.

Lastly, we will execute a relative valuation, which values a company comparing its financial metrics, such as price-to-earnings or price-to-sales ratios, to its peers. For that reason, it is a great valuation model to perform at the end of the valuation to compare the results with the industry peers.

4.1. Assumptions

Assumptions in financial models, such as projected revenue growth, discount rates, and cost of capital, are critical inputs that drive the estimated value of an asset or company directly impacting the accuracy and reliability of the valuation. Throughout this valuation several assumptions will be taken into consideration and explained along the way.

For this analysis, a timeframe extending back to 2020 was taken into consideration to perform this analysis and measures were considered for the period of great prosperity for Pfizer during Covid-19 pandemic as well as the following periods of recovery.

4.2. Discounted Cash Flow approach

4.2.1 Forecasts

4.2.1.1. Revenues

In late 2021, Pfizer restructured its commercial operations, transitioning to a global framework made up of two operating segments. Building on this shift, the company made further organizational adjustments in the fourth quarter of 2022 to better capitalize on its expertise in key areas and identify potential new product launches or indications for the future. The revised commercial structure in Biopharma is intended to enhance support and improve performance across the three main customer groups: Primary Care, Specialty Care, and Oncology.

With that in mind, revenue projections were created individually for each group, as each business segment has unique market conditions, customer bases, and risks. Forecasting separately allows for more accurate insights into performance and growth potential, while helping to manage segment-specific risks, such as regulatory or competitive factors, that impact revenue.

In general, Pfizer revenues are forecasted to grow at 5,19% CAGR 2024-28, which is a conservative growth compared with the company's projections. Below is listed the forecast for each business segment that will be detailed further below for each of them.

Revenue growth rate	2024-2025	2025-2026	2026-2028	Perpetuity
Primary care	-10,0%	0,0%	5,0%	2,5%
Specialty care	4,0%	4,0%	4,0%	2,5%
Oncology	16,0%	16,0%	15,0%	2,5%
Business Innovation	2,0%	2,0%	2,0%	2,5%

Table 1 - Revenue growth forecast (values in million USD)
Source: Author's own elaboration

Primary care

During the COVID-19 pandemic, this segment experienced substantial growth, but that momentum has waned. This is largely due to Comirnaty and Paxlovid transitioning to commercial market sales in the latter half of 2023, as well as the non-cash revenue reversal for Paxlovid in the fourth quarter of 2023. As the treatment landscape for COVID-19 evolves, it is anticipated that Comirnaty and Paxlovid revenues will decline in the coming years. However, this segment remains resilient, as the blockbuster Eliquis alliance, which continues to show a high percentage of total revenue, still presents strong results even with the loss of exclusivity in some of the markets. With these factors in mind, the segment is projected to grow at a close to 1% CAGR 2024-28, including a forecasted drop of 10% in 2024.

	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	41 651	81 288	100 330	58 496	28 161		57 923	60 730	65 128	69 974	75 324
Primary care	15 578	52 030	73 023	30 589	12 163		27 530	27 530	28 907	30 352	31 870
YoY		234%	40%	-58%	-20%	40%	-10%	0%	5%	5%	5%

Table 2 - Primary Care Revenue forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

Specialty care

Rao (2023) notes that specialty pharmacy is one of the most rapidly expanding areas within the broader pharmacy sector. This growth is driven by rising demand and pricing for specialty drugs, as well as an increasingly robust treatment pipeline that is bringing more therapies to market. This is why Pfizer continues to focus on its most successful products while also exploring innovative strategies to maintain its competitive edge in the market.

The blockbuster Vyndaqel showed visible growth in this last year which also led to a significant growth in total revenues. The same can be said for Xeljanz, that represented 4% of total revenues in 2023 (see Appendix O). Given that representation and the optimistic growth shown in the market, this business segment was forecasted at a 4% CAGR 2024-28 for the specialty care segment.

	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**		**57 923**	**60 730**	**65 128**	**69 974**	**75 324**
Specialty care	14 280	15 194	13 833	14 970	7 926		15 569	16 192	16 839	17 513	18 213
YoY		6%	-9%	8%	6%	2%	4%	4%	4%	4%	4%

Table 3 - Specialty Care revenue forecats (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

Oncology

Oncology remains the biggest category of pipeline products in the market. With the acquisition of Seagen, Pfizer expands its oncology portfolio significantly, adding four key medicines: ADCETRIS, PADCEV, TIVDAK, and TUKYSA. This acquisition enhances Pfizer's standing in the oncology market, bringing the total number of approved oncology treatments, including biosimilars, to over 25. Additionally, Pfizer's oncology revenues are boosted by Ibrance, its leading cancer drug, which accounts for over 40% of its total oncology sales (see Appendix O). Looking ahead, Pfizer aims to have at least eight blockbuster oncology drugs by 2030, setting its focus on the growing oncology market.

In 2024, Pfizer restructured its operations to integrate Seagen and enhance its focus, efficiency, and execution. The reorganization introduced three new business segments: Pfizer U.S. Commercial, which includes U.S. Primary and Specialty Care; Pfizer International Commercial, which manages all commercial and medical activities in international markets; and Pfizer Oncology, a division created to consolidate both Pfizer's and Seagen's oncology-related operations, reinforcing Pfizer's commitment to the oncology market and its expectations for the new acquisition.

Furthermore, Dr. Albert Bourla, Pfizer's CEO, states that the Seagen acquisition is "a critical step toward our goal to achieve world-class Oncology leadership" (Pfizer, 2024a). This statement enhances the strong effect that the new acquisition will have to the structure of the company and why it has to be accounted for significance.

For those reasons, this segment was forecasted with a 15.4% CAGR 2024-28 that reflects Pfizer's expectations as well. Putting this segment as the second most contributor in total revenues by 2026.

	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**		**57 923**	**60 730**	**65 128**	**69 974**	**75 324**
Oncology	10 867	12 333	12 132	11 627	7 505		13 487	15 645	17 992	20 691	23 795
YoY		13%	-2%	-4%	29%	11%	16%	16%	15%	15%	15%

Table 4 - Oncology revenue forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

Business innovation

This operating segment comprises PC1 and Pfizer Ignite. PC1 is a contract development and manufacturing organization (CDMO) and a key supplier of specialty active pharmaceutical ingredients,

including certain Comirnaty-related manufacturing activities for BioNTech. Pfizer Ignite offers strategic guidance and comprehensive R&D services to biotech companies aligned with Pfizer's R&D focus areas.

Given the operations that it comprises, it was forecasted a 2% CAGR 2024-28 for this segment, which is believed to be a reasonable and conservative estimate, as the Comirnaty-related activities is already facing decreases in the revenues.

	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**		**57 923**	**60 730**	**65 128**	**69 974**	**75 324**
Business innovation	926	1 731	1 342	1 310	567		1 336	1 363	1 390	1 418	1 446
YoY		87%	-22%	-2%	-13%	-1%	2%	2%	2%	2%	2%

Table 5 - Business Innovation revenues forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

4.2.1.2. Cost of sales

Pfizer's cost of sales includes royalty payments stemming from agreements where Pfizer is the principal in the transaction. In such cases, Pfizer holds the marketing rights for the product. Based on the terms of the agreement, Pfizer must account for the payments made to the collaboration partner, which cover their share of the net profit, as well as any royalties owed to that partner. These latter expenses are recorded as part of the overall cost of sales.

During these last few years, heavily impacted by the pandemic, Pfizer's financials and cost structure experienced significant fluctuations. The surge in demand for COVID-19-related products led to a rise in the cost of sales, with an average of 28% of revenues for the last four years (see Table 6), as the company ramped up production to meet the higher demand. However, Pfizer overestimated how long this demand would continue, which resulted in an excess of inventory. This misalignment between expected and actual demand contributed to the irregular cost increases. Nonetheless, in this last year, Pfizer's cost of sales declined, mainly driven by reduced sales of Comirnaty and Paxlovid. These two products had previously made significant contributions to revenue and associated costs. Despite this drop in sales, Pfizer still faced non-cash charges for inventory write-offs related to these products, reflecting adjustments to their unsold inventory.

	2019	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	**41 172**	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**		**57 923**	**60 730**	**65 128**	**69 974**	**75 324**
Operating expenses	**22 831**	**28 281**	**54 365**	**59 826**	**44 374**	**18 900**		**36 997**	**38 709**	**41 392**	**44 348**	**47 612**
Cost of Goods Sold	6 495	6 976	29 195	32 642	16 232	4 952		10 426	10 931	11 723	12 595	13 558
% of Revenue	16%	17%	36%	33%	28%	18%	24%	18%	18%	18%	18%	18%

Table 6 - Cost of Goods sold forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

Given all this irregularity, it was impractical to base future cost forecasts on the historical averages. Instead, it was estimated the cost of sales at 20% of total revenues, which aligns more closely with pre-

pandemic trends (see Table 7) and is consistent with the 2024 values already released. This approach provides a more stable and reasonable forecast moving forward.

	2015	2016	2017	2018
Revenues	**48 851**	**52 824**	**52 546**	**53 647**
Cost of Goods Sold	8 219	10 621	9 717	9 834
% of Revenue	17%	20%	18%	18%

Table 7 - Historical values of Cost of Goods Sold (values in million USD)
Source: Pfizer's 10k forms

4.2.1.3. Operating expenses

Research and development expenses

Research and development (R&D) expenses saw a sharp increase in 2021, which extended into 2022. This was largely driven by significant investments in various therapeutic areas, including COVID-19 and oncology treatments, as well as costs associated with acquisitions and collaboration or licensing agreements. However, due to the high revenues during these years, the proportion of R&D expenses relative to total revenue actually declined. This trend was not the same for 2023, there was a reduction in R&D costs, largely attributed to a drop in compensation-related expenses.

	2019	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	**41 172**	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**		**57 923**	**60 730**	**65 128**	**69 974**	**75 324**
Operating expenses	**22 831**	**28 281**	**54 365**	**59 826**	**44 374**	**18 900**		**36 997**	**38 709**	**41 392**	**44 348**	**47 612**
Research and Development Expenses	7 731	9 340	11 579	11 426	10 578	5 156		10 426	10 931	11 723	12 595	13 558
YoY		21%	24%	-1%	-7%	-3%	7%	-1%	5%	7%	7%	8%
% of Revenue	19%	22%	14%	11%	18%	18%	17%	18%	18%	18%	18%	18%

Table 8 - R&D expenses forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k form

Considering that, the average proportion of revenues couldn't be considered a reliable indicator for future projections. Instead, it was forecasted for the year 2024, in line with the first semester of the year 2024 and the previous, 20% of total revenues for the forecast period.

Selling general and administrative expenses

Like R&D, Selling, Informational and Administrative (SI&A) expenses followed a similar pattern. SI&A costs related to Comirnaty and Paxlovid saw an increase, driven by higher provisions for healthcare reform and expanded marketing and promotional efforts tied to rising revenues.

	2019	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	**41 172**	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**		**57 923**	**60 730**	**65 128**	**69 974**	**75 324**
Operating expenses	**22 831**	**28 281**	**54 365**	**59 826**	**44 374**	**18 900**		**36 997**	**38 709**	**41 392**	**44 348**	**47 612**
Acquired in-process research and development expenses	-	-	-	953	194	6	-	-	-	-	-	-
Selling, Informational and Administrative Expenses	12 485	11 402	12 109	13 049	14 446	7 122		14 481	15 183	16 282	17 493	18 831
% of Revenue	30%	27%	15%	13%	25%	25%	23%	25%	25%	25%	25%	25%

Table 9 - Acquired in progress expenses and SI&A (values in million USD)
Source: Author's own elaboration and Pfizer's 10k form

To account for this imbalance, SI&A costs were projected at 25% of total revenues—a relatively conservative figure, but more aligned with the company's overall cost structure. As for the Acquired in-process research and development expenses were forecasted as zero for all forecasted periods.

	2015	2016	2017	2018
Revenues	**48 851**	**52 824**	**52 546**	**53 647**
Selling, Informational and Administrative Expenses	14 809	14 844	14 804	12 612
% of Revenue	30%	28%	28%	24%

Table 10 - Historical values of SI&A (values in million USD)
Source: Pfizer's 10k forms

Other (income)/deductions

The Other (income)/deductions costs combine among other adjustments the contingent considerations following an acquisition, functional currency assets and liabilities to their U.S. dollar equivalents related to the company's international operations as well as the effects for operations in highly inflationary economies, and royalty payments received from collaboration partners. To note that interest costs have been excluded for analysis reasons, which will be discussed later.

	2019	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Revenues	**41 172**	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**		**57 923**	**60 730**	**65 128**	**69 974**	**75 324**
Operating expenses	**22 831**	**28 281**	**54 365**	**59 826**	**44 374**	**18 900**		**36 997**	**38 709**	**41 392**	**44 348**	**47 612**
Restructuring charges and certain acquisition-related costs	1 010	563	1 482	1 756	2 924	1 664		1 664	1 664	1 664	1 664	1 664
Other (Income)/Deductions, Net	(4 890)	1 059	(1 754)	(797)	8 761	232		579	607	651	700	753
% of Revenue	-12%	3%	-2%	-1%	15%	1%	1%	1%	1%	1%	1%	1%

Table 11 - Restructuring Charges and Other (income)/deductions forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k form

That said, "Other (income)/deductions" is a ledger that serves more as an adjustments account and given that nature is hard to predict its amount for the future (see Table 11). To normalize this and assuming a more cautious amount, the forecast for "Other (income)/deductions" was set at 1% of total revenues.

When it comes to Restructuring charges and certain acquisition-related costs, these were forecasted as zero for the forecasted period.

Depreciation and Amortization

Pfizer discloses depreciation in the financial statements as part of the cost of goods sold. Therefore, depreciation was calculated by subtracting the amount disclosed in the cash flow statement to the amount of amortization present in the income statement. As for the forecast, we assumed an historical average from 2020 to 2023 as a percentage of revenues of 3%.

	2019	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Depreciation and Amortization	**6 010**	**4 777**	**5 191**	**5 064**	**6 290**	**3 467**		**6 601**	**6 359**	**6 350**	**5 892**	**5 681**
Depreciation	1 548	1 429	1 491	1 455	1 557	2 159		1 522	1 596	1 711	1 838	1 979
% of Revenue	4%	3%	2%	1%	3%	8%	3%	3%	3%	3%	3%	3%
Amortization	4 462	3 348	3 700	3 609	4 733	1 308		5 079	4 763	4 639	4 054	3 702

Table 12 - D&A forecast (values in million USD)

Source: Author's own elaboration and Pfizer's 10k forms

Regarding amortization, this cost is calculated based on the weighted-average life for each of Pfizer's total finite-lived intangible assets and developed technology rights, which is approximately 11 years in accordance with the company's financial statements. Also disclosed in the financial report are the forecast amounts for amortization costs, which were considered for the valuation analysis.

Effective tax rate

The Tax Cuts and Jobs Act (TCJA) of 2017 was signed into law by President Donald Trump on December 22, 2017. It was enacted to promote economic growth by significantly overhauling the U.S. tax system. It lowered the corporate tax rate from 35% to 21%, benefiting businesses and encouraging reinvestment. Additionally, it introduced a territorial tax system for multinational corporations and included provisions to allow immediate expense of certain capital investments, which incentivized further capital expenditures.

This new law changed how companies handle R&D expenses by requiring them to capitalize and amortize these costs over time, rather than deducting them immediately. This change increased the Foreign-Derived Intangible Income (FDII) deduction, as more income from exports linked to R&D could be tied to these expenses, potentially reducing the overall tax liability on foreign income.

Furthermore, Pfizer benefits from lower corporate tax rates in certain countries where a significant portion of its income is generated. This allows the company to reduce its overall tax burden, as profits earned in these lower-tax jurisdictions are taxed at more favorable rates. As a result, even though Pfizer's global operations are profitable, its effective tax rate is lower due to these favorable tax structures in specific regions like Puerto Rico and Singapore, as stated in Pfizer's financial reports.

As a result of these tax benefits, Pfizer's effective tax rate never exceeded 10% over the last four years as seen in the table below, which is why I believe 10% is a reasonable effective tax rate to consider for the forecasted period.

	2019	2020	2021	2022	2023	2024 June	Average	2024F	2025F	2026F	2027F	2028F
Corporate Tax Rate	**940**	**370**	**1 852**	**3 328**	**(1 115)**	**159**						
% of EBT	8%	5%	8%	10%	-105%	5%	-12%	10%	10%	10%	10%	10%

Table 13 - Effective corporate tax (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

Capital Expenditures

Due to the large amount of debt that the company has incurred, it can have serious consequences. It could limit financial and operational flexibility, as resources may need to be allocated to meeting debt obligations. A substantial portion of cash flow will be diverted to servicing interest payments, reducing the funds available for important areas like capital investments, business expansion, or other strategic

goals. If Pfizer incurs more debt or if interest rates rise, these challenges could become even more pronounced.

For the year 2024, as disclosed in the company's financial report, the total amount of capital expenditure would be close to $3.7 billion which was the amount assumed for the forecast. As for the rest of the forecasted period, it was assumed the historical 2019-2023 average but excluding the years 2021 and 2022. As shown in the table below, these two years have had a decrease in the weight of the capital expenditures in relation to revenues given the increasing revenues related with Covid-19 products, as mentioned before.

CapEx	2019	2020	2021	2022	2023	2024F	2025F	2026F	2027F	2028F
Revenues	**41 172**	**41 651**	**81 288**	**100 330**	**58 496**	**57 922**	**60 730**	**65 128**	**69 974**	**75 324**
Capital expenditures	2 594	2 791	2 711	3 236	3 907	3 700	3 984	4 272	4 590	4 941
YoY		8%	-3%	19%	21%	-5%	8%	7%	7%	8%
% of Revenue	6%	7%	3%	3%	7%	6%	7%	7%	7%	7%

Table 14 - CapEx forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

Considering those two aspects, the forecasted capital expenditure conjectured to 6.56% of total revenues, which leads to an increase close to 7% a year.

Working Capital

To calculate net working capital, it was necessary to forecast the company's current assets and subtract the current liabilities to determine the net amount. Below, on Table 15, are detailed the forecasted and historical amounts for each of the ledgers used to calculate net working capital.

Net working capital	2019	2020	2021	2022	2023	2024 June	2024F	2025F	2026F	2027F	2028F
Revenues	**41 172**	**41 651**	**81 288**	**100 330**	**58 496**		**57 922**	**60 730**	**65 128**	**69 974**	**75 324**
Current Assets	**14 961**	**17 760**	**22 482**	**20 349**	**24 220**	**23 892**	**23 243**	**24 369**	**26 134**	**28 079**	**30 225**
Operational cash	1 121	1 784	1 944	416	2 853	1 052	1 724	1 807	1 938	2 082	2 241
Total receivable	6 772	7 930	11 479	10 952	11 177	11 393	11 221	11 765	12 617	13 556	14 592
Inventory	7 068	8 046	9 059	8 981	10 190	11 447	10 298	10 797	11 579	12 441	13 392
% of Revenue	36,34%	42,64%	27,66%	20,28%	41,40%		40,13%	40,13%	40,13%	40,13%	40,13%
Other Current Assets	**9 317**	**6 870**	**8 086**	**8 594**	**9 277**	**7 885**	**10 616**	**11 130**	**11 936**	**12 824**	**13 805**
Current tax assets	2 736	3 264	4 266	3 577	3 978	3 694	3 891	4 079	4 375	4 700	5 060
Discontinued Operations - Current Asset	4 224	167	-	-	-	-	-	-	-	-	-
Other Current Assets	2 357	3 439	3 820	5 017	5 299	4 191	5 194	5 446	5 840	6 275	6 755
% of Revenue	22,63%	16,49%	9,95%	8,57%	15,86%		10,35%	10,38%	10,41%	10,43%	10,46%
Current Liabilities	**6 546**	**7 688**	**9 359**	**10 836**	**10 013**	**7 672**	**9 938**	**10 420**	**11 175**	**12 006**	**12 924**
Accounts payable	3 887	4 309	5 578	6 809	6 710	5 106	6 179	6 478	6 947	7 464	8 035
Accrued Expenses	2 659	3 379	3 781	4 027	3 303	2 566	3 760	3 942	4 227	4 542	4 889
% of Revenue	15,90%	18,46%	11,51%	10,80%	17,12%		17,16%	17,16%	17,16%	17,16%	17,16%
Other current liabilities	**14 563**	**15 529**	**31 071**	**28 357**	**27 431**	**22 105**	**23 082**	**24 201**	**25 954**	**27 885**	**30 017**
Dividends Payable	2 104	2 162	2 249	2 303	2 372	-	2 418	2 535	2 719	2 921	3 144
Customer advances	-	957	3 067	2 520	2 700	2 502	1 605	1 683	1 804	1 939	2 087
Income Taxes Payable	980	1 049	1 266	1 587	2 349	3 192	1 464	1 535	1 646	1 769	1 904
Other Current Liabilities	9 066	11 361	24 489	21 947	20 010	16 411	17 595	18 448	19 784	21 256	22 881
Current liabilities of discontinued operations	2 413	-	-	-	-	-	-	-	-	-	-
% of Revenue	35,37%	37,28%	38,22%	28,26%	46,89%		39,85%	39,85%	39,85%	39,85%	39,85%
Working Capital	**3 169**	**1 413**	**(9 862)**	**(10 250)**	**(3 947)**	**2 000**	**838**	**879**	**942**	**1 012**	**1 090**
Δ Working Capital		**(1 756)**	**(11 275)**	**(388)**	**6 303**	**5 947**	**(1 162)**	**41**	**64**	**70**	**77**

Table 15 - Net Working Capital forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

To estimate current assets, historical averages from 2019 to 2023, relative to revenues, were used as a basis. The same was done with the company's liabilities. All these costs are assumed to behave in line with the revenues of the firm and its growth.

As for other current assets and other current liabilities, the discontinued operations was taken into account for the total of other current assets and other current liabilities respectively, as these ledgers suffered accounting adjustments since 2020 and were incorporated in these second ones.

4.2.2 Free Cash Flow to the firm

To determine the intrinsic value of the firm, FCFF is a key metric. So, after assessing all its components, below is displayed the FCFF that the company is assumed to generate based on all the assumptions.

	2020	2021	2022	2023	2024F	2025F	2026F	2027F	2028F
EBIT	7 534	23 486	36 237	(929)	13 746	15 055	16 734	19 033	21 278
Taxes	370	1 852	3 328	(1 115)	(1 375)	(1 505)	(1 673)	(1 903)	(2 128)
NOPLAT	7 904	25 338	39 565	(2 044)	12 371	13 549	15 061	17 130	19 150
Depreciation and Amortization	1 429	1 491	1 455	1 557	6 601	6 359	6 350	5 892	5 681
Operating cash flow	9 333	26 829	41 020	(487)	18 972	19 908	21 411	23 022	24 831
CAPEX	(2 791)	(2 711)	(3 236)	(3 907)	(3 700)	(3 984)	(4 272)	(4 590)	(4 941)
Δ WC	1 756	11 275	388	(6 303)	1 162	(41)	(64)	(70)	(77)
FCFF	**8 298**	**35 393**	**38 172**	**(10 697)**	**16 434**	**15 883**	**17 075**	**18 362**	**19 812**

Table 16 - FCFF forecast (values in million USD)
Source: Author's own elaboration and Pfizer's 10k forms

Looking at the table, it is noticeable the great increase in 2021 and 2022 and a grave decrease in 2023, due to the rise and then fall of Covid-19 product demand. It is expected that FCFF will have a slight increase each year to more stabilized values that will also account for the benefits of the Seagen acquisition.

4.2.3 Growth rate

To estimate the terminal value of the firm, it is essential to make an assumption on the perpetuity growth rate, the rate at which the cash flows will grow indefinitely beyond the detailed projections.

Looking at the global inflation projections from the IMF, it's expected that global inflation will steadily decline from 6.8% in 2023 to 5.9% in 2024 and further down to 4.5% in 2025. This decrease in inflation is likely to contribute to a slight slowdown in the global average growth rate (GAGR), from 4.3% in both 2024 and 2025 and diminish to around 3.1% over the next four years.

Given these aspects and following the forecasts, I believe a growth rate of 2.5% is a cautious estimate. Nevertheless, it still reflects the ongoing effects of high inflation that are still being experienced worldwide.

4.2.4 Discount rate

4.2.4.1. Cost of debt

In 2023, Pfizer secured $31 billion in debt to finance the Seagen acquisition. This resulted in a reduction of its cost of debt to 3.07% for the year. However, given the overall increase in debt levels and predominant interest rates for both commercial paper and bonds, the rate calculated using a five-year historical average offers a more reasonable view of its cost of debt. Based on Pfizer's total debt and interest expenses from financial disclosures, the five-year average cost of debt was calculated at 3.31%, as seen in Table 17 below.

Borrowings	2019	2020	2021	2022	2023	Average
Current	16 195	2 703	2 241	2 945	10 350	6 887
Non-current	35 955	37 133	36 195	32 884	61 538	40 741
Interest expenses	1 573	1 449	1 291	1 238	2 209	1 552
Pre-tax Cost of Debt	3,02%	3,64%	3,36%	3,46%	3,07%	3,31%

Table 17 - Historical Cost of Debt (values in million USD)
Source: Author's own elaboration and Pfizer's 10k form

Further details on Pfizer's current and non-current debt can be found in Appendix D through Appendix H. This appendix provides a comprehensive overview of the company's debt structure, highlighting the distinction between short-term obligations due within a year and long-term liabilities, offering deeper insights into the financing arrangement post-Seagen acquisition.

The after-tax cost of debt in the WACC calculation provides a more accurate measure of the cost of capital that reflects the tax savings a company enjoys from its interest payments. The formula for WACC accounts for this tax benefit by including the after-tax cost of debt:

$$After - ta\ cost\ of\ debt = Rd * (1 - Tax\ rate) = 3.31\% * (1 - 10\%) = 2.98\%$$

4.2.4.2. Capital Structure

Assessing a company's capital structure is essential for valuation, as it provides insight into the company's risk profile and financial leverage.

The market equity value was calculated based on the number of shares outstanding multiplied by the price of the equity at the end of each year. For the total debt, market values were not possible to calculate due to lack of information, the book value was used to determine the debt-to-equity ratio.

Capital structure	2019	2020	2021	2022	2023	Average	D/E
Shares outstanding	5 534	5 567	5 620	5 616	5 646	5 597	
Share price	37	37	59	51	29	43	
Market equity value	205 536	204 921	331 861	287 764	162 548	238 526	
Total debt (book value)	52 150	39 836	38 436	35 829	71 888	47 628	
D/E Ratio	**0,25**	**0,19**	**0,12**	**0,12**	**0,44**	**0,23**	**0,44**

Table 18 - Capital Structure (values in million USD)
Source: Author's own elaboration and Pfizer's 10k form

At the table above (Table 18) is represented the debt-to-equity ratio through these last five years. The amount of debt issued by Pfizer over the years always remained stable except for 2023. This last year, with Pfizer's new acquisition, the debt-to-equity ratio increased drastically. Pfizer had to resort to debt to finance the purchase of Seagen, the biggest purchase of 2023, which lead to an increase of the ratio to 0.44.

Taking that into account and considering that the weight of the year 2023 had in its capital structure, it was assumed a debt-to-ration of 0.44 for Pfizer remaining stable for the rest of the forecasted period.

4.2.4.3. Cost of equity

Risk free rate

For the risk-free rate, the yield on a 10-year zero-coupon bond was selected, as this is often considered a strong estimate, particularly for U.S.-based companies like Pfizer, which benefit from the country's AAA credit rating. As of December 29th, 2023, the bond yield closed at 3.92%, with the annual average at 3.97%. Given the minimal difference between these values and market expectations for interest rates, the 3.92% yield was assumed as the risk-free rate in the valuation analysis.

Equity risk premium

Pfizer operates globally, distributing to markets across numerous countries and regions, its presence spans over 125 countries. Operating internationally also enables Pfizer to access emerging markets with growing demand for pharmaceuticals, contributing to its revenue growth and product portfolio expansion. However, Pfizer's reliance on emerging markets also exposes the company to increased risks related to the economic conditions of those countries.

To account for this exposure the country risk premium was calculated and added to the market risk premium. To calculate the country risk premium was considered the different regions where Pfizer sells its products, assigning appropriate weights to each region to reflect the company's global exposure more accurately.

On Table 19 are the historical revenues by geographic area disclosed in Pfizer's financial reports. As it is noticeable, U.S. market has a grave weight to the total amount of revenues nonetheless, emerging markets stay pretty much constant with a weight of 20%.

Revenues by geographic area	2019	Weight	2020	Weight	2021	Weight	2022	Weight	2023	Weight	Average Weight	CRP
United States	20 593	50%	21 455	52%	29 746	37%	42 473	42%	27 088	46%	45%	0,00%
Developed Europe	7 729	19%	7 788	19%	18 336	23%	21 982	22%	11 650	20%	20%	0,21%
Developed Rest of the World	4 022	10%	4 036	10%	12 506	15%	15 778	16%	7 762	13%	13%	0,04%
Emerging markets	8 828	21%	8 372	20%	20 700	25%	20 097	20%	11 996	21%	22%	7,06%
Total	**41 172**		**41 651**		**81 288**		**100 330**		**58 496**	**100%**	**100%**	**1,57%**

Table 19 - Revenues by geographic area (values in million USD)
Source: Author's own elaboration and Pfizer's 10k form

The country risk for each country was estimated by Aswath Damodaran available on the NYU Stern Business School website, which was estimated using the default spread for each country. After applying a simple average to compute the country risk premium for each region reflecting Pfizer specific alterations present in Appendix P, the equity risk premium was calculated using the weighted average.

	United States	Developed Europe	Developed Rest of the World	Emerging markets
Market Risk Premium US	4,60%	4,60%	4,60%	4,60%
Country Risk Premium	0,00%	0,21%	0,04%	7,06%
Equity Risk Premium	4,60%	4,81%	4,64%	11,66%
Weight	**45,35%**	**20,37%**	**12,77%**	**21,51%**
Weighted Average ERP				**6,17%**

Table 20 - Equity Risk Premium
Source: Author's own elaboration and Damodaran (2024c)

Given the high country risk premium for the emerging markets that Pfizer is exposed to, the final equity risk premium is 6.17%.

Beta

Following the CAPM model, the last component for the calculation of cost of equity is beta estimation. As was already referred, the best way to compute the levered beta is using the Bottom-up approach.

For the unlevered beta, it was used the estimate done by Damodaran (2024a) on U.S. companies available. To account for the cash effect, that basically is a riskless investment and has a beta close to zero, it was chosen the unlevered beta corrected for cash. Because the core business of Pfizer is the manufacturing of pharma products, the unlevered beta given for pharmaceutical companies is 0.94.

Considering that the risk-free rate estimated is 3.92% and the Pfizer's cost of debt is 3.31%, it was assumed a beta of debt of zero. The beta levered of the company was computed as follows:

$$\beta_L = 0.94 + (1 - 10\%) * 0.44 * (0.94 - 0) = 1.32$$

Cost of equity

All these parameters lead to a cost of equity of 12.06%, computed as below:

$$R_e = 3.92\% + 1.32 * 6.17\% = 12.06\%$$

Though this cost of equity can be considered a little high for a company like Pfizer, given its status and maturity, market conditions such as the volatility related to a post-pandemic economy, which leads to further uncertainty for a pharmaceutical company is a contributing factor. Furthermore, the rise of the company's debt-to-equity ratio also creates an additional weight to its financial structure, leading to an increase of the beta.

4.2.4.4. WACC

By weighing the proportion of debt and equity in the capital structure, WACC is key in evaluating investment decisions by setting an appropriate discount rate to value the company's future cash flows. Based on the already assessed and detailed parameters, a WACC of 9.27% was derived.

Weighted Average Cost of Capital	
Cost of equity	12,06%
E/(D+E)	69,34%
D/(D+E)	30,66%
After tax cost of debt	2,98%
WACC	**9,27%**

Table 21 – WACC
Source: Author's own elaboration

This WACC can be perceived as a little high compared to the industry, considered Damodaran estimates (Damodaran, 2024b). However, even for a stable and large company like Pfizer its recent capital structure has a grave impact on its beta and consequently on the WACC and therefore, we believe that this WACC reflects the risks that Pfizer has to face in a post-pandemic economy and the struggles of the new acquisition, with all that entails.

4.3. Enterprise Value

In a valuation model, enterprise value (EV) is determined by assessing the company's overall worth, considering its equity, debt, and other financial obligations, and discounting future cash flows. By assuming the firm will continue to generate cash flows indefinitely, like mention in the literature review section "Enterprise Value", and using the 2.5% as the stable growth rate, mention in a previous section, to discount these cash flows, it leads to the terminal value of the company. Adding to this value the cash flows forecasted and discounting result with the estimate cost of capital gives an enterprise value of $227'210 million.

	2024F	2025F	2026F	2027F	2028F	Terminal Period
FCFF	16 434	15 883	17 075	18 362	19 812	19 073
WACC	9,27%	9,27%	9,27%	9,27%	9,27%	9,27%
g						2,50%
Present Value	15 039	13 301	13 086	12 878	12 716	180 691
Enterprise Value	**247 711**					

Table 22 - Enterprise Value
Source: Author's own elaboration

4.4. Equity value and share price

To adjust the EV to represent the portion owned by shareholders, it is important to account for assets and liabilities that do not relate directly to the company's core operations. It is necessary to add the

Non-Operating Assets that will add value to the company and subtract the Non-Equity Claims, which are amounts that need to be paid before the equity holders claims.

For the Non-Operating Assets, the amounts of cash, investments and other non-current assets, all detailed in the Appendix I, were added to the EV value. As for the Non-Equity Claims, all debt and other non-current liabilities, also disclaimed in Appendix J, were disregarded from the EV. Given that, the Equity Value for Pfizer is $174'209 million.

Enterprise Value	**247 711**
Non-operating assets	41 382
Non-operational liabilities	25 074
Cash & Cash equivalents	2 853
Debt	71 888
Non-controling interests	274
Equity	194 710
# Shares outsdanding	5 646
Price	**34,49**

Table 23 - Final Target Price
Source: Author's own elaboration

It was assumed that the number of shares outstanding would remain unchanged throughout the forecast period, totaling 5,646 million shares. With this assumption, the target price for Pfizer shares has been calculated, resulting in a final target price of $34.49.

4.5. Investment recommendation

Comparing this result with the company's share price at close on 31st of December of 2023, of $28.79, Pfizer has a buy recommendation, with an upside potential of 19.79%.

Pfizer has restructured its business to adapt to the evolving market landscape, with the acquisition of Seagen. This move reflects the company's strong commitment and flexibility in seizing new opportunities with promising potential.

Additionally, Pfizer has consistently demonstrated its capacity for growth and has shown a strong commitment to shareholder value, as evidenced with a stable shareholder return policy, through long history of dividend payments and their steady increase over time.

4.6. Sensitivity analysis

A sensitivity analysis was performed to evaluate how the Price Target responds to changes in the cost of capital (WACC) and the long-term sustainable growth rate (g).

Both these factors are sensitive to internal and external conditions. WACC depends on both market conditions and on the company's risk profile. Additionally, the growth rate may vary depending on economic conditions and size and company's return on invested capital (ROIC). Thus, using a growth rate range between 1.5% and 3.5%, with percentage increase of 0.20%, and a cost of capital ranging

from 8.27% to 10.27%, also in 0.20% intervals, the target price was recalculated, as detailed in the table below.

WACC \ g	1,50%	1,70%	1,90%	2,10%	2,30%	2,50%	2,70%	2,90%	3,10%	3,30%	3,50%
8,27%	36,10	37,12	38,20	39,35	40,58	41,90	43,31	44,83	46,46	48,22	50,13
8,47%	34,82	35,77	36,78	37,85	38,99	40,21	41,52	42,92	44,42	46,03	47,78
8,67%	33,61	34,50	35,44	36,44	37,51	38,64	39,85	41,14	42,52	44,01	45,61
8,87%	32,47	33,30	34,19	35,12	36,11	37,17	38,29	39,48	40,77	42,14	43,61
9,07%	31,39	32,17	33,00	33,88	34,80	35,78	36,83	37,94	39,13	40,39	41,75
9,27%	30,37	31,11	31,88	32,70	33,57	34,49	35,46	36,49	37,60	38,77	40,03
9,47%	29,40	30,10	30,83	31,59	32,41	33,27	34,17	35,14	36,16	37,26	38,42
9,67%	28,48	29,14	29,82	30,55	31,31	32,11	32,97	33,87	34,82	35,84	36,92
9,87%	27,61	28,23	28,88	29,56	30,27	31,03	31,83	32,67	33,56	34,51	35,52
10,07%	26,78	27,36	27,97	28,62	29,29	30,00	30,75	31,54	32,37	33,26	34,20
10,27%	25,99	26,54	27,12	27,72	28,36	29,03	29,73	30,47	31,26	32,08	32,96

Table 24 - WACC and g sensitivity analysis
Source: Author's own elaboration

Considering the scenarios above, the target price for Pfizer ranges from a minimum of $25.99 to $50.13. Which means that in most scenarios the company appears to be undervalued, with 60% in total pointing to a buy or a strong buy (see Table 24).

As Pfizer encountered this last year's difficulties regarding Covid-19 product demands and had to readjust to the new pharmaceutical market conditions that lead to the biggest acquisition of 2023 and in Pfizer's history, there are some uncertainties regarding the company's revenues.

Given that, the table below shows where the base case is last year's revenue amount and for each were assumed different scenarios considering each business segment's expectations. For Oncology, the revenues forecast scenarios ranged between -20% and 40% growth, with 10% interval and for Primary Care, as it was expected that demand would decrease further this current year, were set scenarios ranged from 10% as the bast case and -40% as the worst, also incrementing 10% between each.

Primary Care \ Oncology	-20%	-10%	0%	10%	20%	30%	40%
10%	34,77	34,94	35,11	35,28	35,45	35,62	35,79
0%	34,32	34,49	34,66	34,83	35,00	35,17	35,34
-10%	33,88	34,05	34,22	34,38	34,55	34,72	34,89
-20%	33,43	33,60	33,77	33,94	34,11	34,28	34,45
-30%	32,98	33,15	33,32	33,49	33,66	33,83	34,00
-40%	32,54	32,71	32,88	33,05	33,22	33,39	33,55

Sell	-5%≤
Reduce	> -5% & ≤ 5%
Hold	> 5% & ≤ 15%
Buy	> 15% & ≤ 30%
Strong Buy	≥ 30%

Table 25 - Investment recommendation system
Table 26 - Revenues sensitivity analysis
Source: Author's own elaboration

Lastly, given the risks arise from the uncertainty of the new acquisition and the volatility on the demand for the Covid-19 products, with a total of 42 scenarios, only given the worst ones would it suggest investors to only hold on to their position on the company. Even so, this would suggest that Pfizer would still be undervalued. Given that, it suggests that the company is not very sensitive to

changes in these two business segments, based on the scenarios proposed, mostly due to its highly diversified portfolio of pharmaceuticals.

4.7. Multiples

By evaluating how a company's valuation measures up against peers or industry benchmarks, it is possible to gain insights into whether a stock is overvalued or undervalued, which is a good method to complement the DCF approach presented earlier.

For a reliable comparison, it is crucial to select a peer group that shares similar characteristics and performance metrics with Pfizer. A selection of 10 major global pharmaceutical companies was chosen for benchmarking purposes (see Table 27). All data was gathered from Reuters for the 2023 period (Last Fiscal Year), with details on the values used in the methodologies provided in Appendix K and Appendix L.

Company Name	Identifier (RIC)
Eli Lilly and Co	LLY.N
Merck & Co Inc	MRK.N
Bristol-Myers Squibb Co	BMY.N
Abbvie Inc	ABBV.N
Amgen Inc	AMGN.OQ
Johnson & Johnson	JNJ.N
Novartis AG	NOVN.S
AstraZeneca PLC	AZN.L
Sanofi	SASY.PA
Roche Diagnostics	ROG.S

Table 27 - Pfizer's peers

Enterprise value multiples	EV/Revenue	P/S
	2023	2023
Peers median	5,58	4,50
Pfizer - Revenue	58 496	58 496
Pfizer - EBITDA		
Pfizer - EV	326 134	263 098
Non-operating assets	41 382	41 382
Non-operational liabilities	25 074	25 074
Cash & Cash equivalents	2 853	2 853
Debt	71 888	71 888
Equity Value	273 407	210 371
Shares outstanding	5 646	5 646
Price	**48,42**	**37,26**

Table 28 - EV/Revenue and P/S Multiples

Sources: Author's own elaboration and Reuters

2023 was an unusual year for Pfizer due to variations of sales and costs associated with the decrease in demand for Covid-19 products, which significantly impacted its financials, resulting in a lower EBITDA and a negative EBIT (see Appendix A). Due to that fact, using metrics tied to these figures is not meaningful for assessing the company, as the results would not accurately reflect its true performance or potential. Instead, we used the Enterprise Value to Revenues (EV/Revenues) method and the Price to Sales (P/S).

To have a reliable sample and to exclude the outliers directly, we calculated the median for each method. For the EV/Revenues it resulted in a multiple of 5.58x and for P/S of 4.5x (see Table 28). With these multiples calculated, the target prices were computed, which led to $48.42 for EV/Revenues and a price of $37.26 for P/S, as disclosed in Table 28.

Because the two methods reflect different aspects of the company's financial health, the results that each one yield are very different. In the case of EV/Revenue, where the whole company's financial

structure is considered, it yields a higher result. However, when accounting only for the peer's market price, it gives a lower value. In the end, these results may indicate that Pfizer's debt levels have a high influence on its enterprise value and lead to a higher EV/Revenue target price. Furthermore, in both methods the company is shown to be undervalued by the market compared to the price as of 31st of December of $28.79, an upside of 68% for EV/Revenues and of 29% for P/S.

Additionally, we used the forecasted values for 2024 to calculate the target price and compare it to the price of the equity as of 30th of September of 2024, which closed at $28.94. The data from the Last Twelve Months (LTM) was retrieved from Reuters as well (see Appendix M and Appendix N) and the same methodology was used for this time frame.

Enterprise value multiples	EV/Revenue 2024F	EV/EBITDA 2024F	EV/EBIT 2024F	P/S 2024F
Peers median	5,34	12,92	17,83	4,91
Pfizer - Revenue	57 922			57 922
Pfizer - EBITDA		20 346		
Pfizer - EBIT			13 746	
Pfizer - EV	309 494	262 943	245 018	284 614
Non-operating assets	41 382	41382	41 382	41 382
Non-operational liabilities	25 074	25074	25 074	25 074
Cash & Cash equivalents	2 853	2853	2 853	2 853
Debt	71 888	71888	71 888	71 888
Equity Value	256 767	210 216	192 291	231 887
Shares outstanding	5 646	5646	5 646	5 646
Price	**45,48**	**37,23**	**34,06**	**41,07**

Table 29 - Enterprise value multiples as of 2024
Source: Author's own elaboration and Reuters

For the P/S method, the peer's median has suffered an increase, which means there were increases in the price of the shares within the group of peers, yielding a higher target price for Pfizer of $41.07. As for the other three enterprise value methods, the results suffer a decrease when using EBITDA and EBIT metrics, yielding a target price of $37.23 and $34.06 respectively, compared to a target price of $45.48 for the EV/Revenues method. This suggests that Pfizer has lower profit margins due to high operating costs or recent challenges, making revenue-based multiples seem more favorable than earnings-based multiples such as EV/EBITDA or EV/EBIT.

In short, as well as for 2023, for this time frame all methods indicate that the company appears to be undervalued by the market when compared to the close price. The one that offers a higher upside target price turns out to be the EV/Revenues as well, with 58% upside, and the one that has a lower upside is the EV/EBIT, with 18%.

Conclusion

In conclusion, the valuation of Pfizer is supported by an in-depth analysis of several factors that influence current and future performances, leading to a target share price of $34.49. Pfizer's ability to adapt to evolving market conditions, a process underlined by the acquisition of Seagen, points out its commitment to growth, particularly in the oncology sector, while expanding into emerging therapeutic areas. This strategic move positions Pfizer to capitalize on future opportunities but also introduces challenges, such as increased debt and significant R&D expenses, which were carefully considered in the valuation model.

The instability from reduced COVID-19 product demand created short-term revenue disruptions, which were incorporated into the analysis. However, despite these challenges, Pfizer's history of solid performance, its continuing dividend growth, and a shift toward long-term growth opportunities demonstrate its resilience in the pharmaceutical industry.

The valuation incorporated both DCF and relative valuation models, with industry-specific adjustments to account for Pfizer's unique financial and operational position. The resulting target price for the DCF approach demonstrates that the company is an attractive investment opportunity. Despite the impact of increased leverage due to Seagen's acquisition, which resulted in an increase in the WACC, Pfizer has now the opportunity to strengthen its oncology portfolio leading to diversified revenue streams and stable operations that support a solid perspective for sustained growth.

The EV/Revenue method yielded a target price of $48.42, while the P/S ratio generated a price of $37.26. These higher values highlight the difference in perspectives based on revenue multiples, reflecting Pfizer's strong capacity to generate revenue despite profitability pressures.

On the other hand, when comparing the multiples approach for the present year, methods based on earnings metrics, like EV/EBITDA and EV/EBIT, provided lower target prices of $37.23 and $34.06, respectively, compared to the $45.48 and $41.07 results for EV/Revenue and P/S, respectively. This reflects the pressure on Pfizer's earnings from its higher costs and the decline in COVID-19-related revenues.

A detailed sensitivity analysis was conducted to evaluate how variations in the WACC and long-term growth rate would affect the valuation. Across 121 scenarios analyzed, 73 scenarios indicated a buy or strong buy rating, reinforcing that in a lot of different situations, Pfizer's stock is continuous to be appealing. WACC ranged between 8.27% and 10.27%, while the long-term growth rate ranged from 1.5% to 3.5%, reflecting different potential market conditions. This robust analysis highlights the company's potential even under different economic assumptions.

Additionally, a revenue sensitivity analysis was performed, focusing on key business segments. In oncology, the worst-case scenario anticipated a 20% revenue decline, while the best case had projections of a 40% gain. For Pfizer's primary care segment, revenues were estimated to decline up

to 40% and increase up to 10%. In five of the worst-case scenarios, the valuation results suggested a hold recommendation on the equity. Despite these downside risks, the overall results contribute to Pfizer’s resilience and potential upside.

In summary, the target price suggests a moderate upside potential for Pfizer's stock, especially considering its strong market position, the possibility of its future growth through its oncology portfolio, and ongoing efforts to manage operational costs and debt.

Equity Valuation: Pfizer, Inc.

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Reports

Pfizer, Inc. Form 10-K from 2015 until 2023

Pfizer, Inc. Form 10-Q June 2024

Other sources

Reuters terminal

Appendix

	2019	2020	2021	2022	2023	2024 June
Revenues	**41 172**	**41 651**	**81 288**	**100 330**	**58 496**	**28 161**
Primary care	15 294	15 578	52 030	73 023	30 589	12 163
Specialty care	14 782	14 280	15 194	13 833	14 970	7 926
Oncology	9 014	10 867	12 333	12 132	11 627	7 505
Business innovation	810	926	1 731	1 342	1 310	567
Consumer Healthcare Business	1 272	-	-	-	-	-
Operating expenses	**22 831**	**29 340**	**52 611**	**59 029**	**53 135**	**19 837**
Cost of Goods Sold	6 495	6 976	29 195	32 642	16 232	4 952
Gross Profit	**34 677**	**34 675**	**52 093**	**67 688**	**42 264**	**23 209**
Research and Development Expenses	7 731	9 340	11 579	11 426	10 578	5 156
Acquired in-process research and development expenses	-	-	-	953	194	6
Selling, General and Administrative Expenses	12 485	11 402	12 109	13 049	14 446	7 122
Restructuring charges and certain acquisition-related costs	1 010	563	1 482	1 756	2 924	1 664
Other (income)/deductions—net	(4 890)	1 059	(1 754)	(797)	8 761	937
EBITDA	**18 341**	**12 311**	**28 677**	**41 301**	**5 361**	**8 324**
Depreciation and Amortization	**6 010**	**4 777**	**5 191**	**5 064**	**6 290**	**3 467**
Depreciation	1 548	1 429	1 491	1 455	1 557	852
Amortization	4 462	3 348	3 700	3 609	4 733	2 615
EBIT	**12 331**	**7 534**	**23 486**	**36 237**	**(929)**	**4 857**
Interest expenses	(1 573)	(1 449)	(1 291)	(1 238)	(2 209)	(1 568)
Interest income	225	73	36	251	1 624	259
Other non-operating (income) deductions	502	878	2 080	(521)	2 572	(230)
EBT	**11 485**	**7 036**	**24 311**	**34 729**	**1 058**	**3 318**
Income Tax Expense	940	370	1 852	3 328	(1 115)	159
Net income from continued operations	**10 545**	**6 666**	**22 459**	**31 401**	**2 173**	**3 159**
Net income from discontinued operations	5 757	2 529	(434)	6	(15)	12
Net Income before Allocation to Noncontrolling Interests	**16 302**	**9 195**	**22 025**	**31 407**	**2 158**	**3 171**
Net Income Attributable to Noncontrolling Interests	(29)	(36)	(45)	(35)	(39)	(15)
Net Income Attributable to Pfizer Inc.	**16 273**	**9 159**	**21 980**	**31 372**	**2 119**	**3 156**

Appendix A - Income Statement from 2019 until June 2024
Source: Pfizer's 10k forms

	2019	2020	2021	2022	2023	2024 June
Cash and cash equivalents	1 121	1 784	1 944	416	2 853	719
Short-term investments	8 525	10 437	29 125	22 316	9 837	11 209
Trade accounts receivable, less allowance for doubtful accounts	6 772	7 930	11 479	10 952	11 177	10 989
Inventories	7 068	8 046	9 059	8 981	10 190	10 892
Current tax assets	-	-	-	3 577	3 978	4 233
Other current assets	9 317	6 870	8 086	5 017	5 299	4 373
Total Curent Assets	**32 803**	**35 067**	**59 693**	**51 259**	**43 334**	**42 415**
Equity-method investments	17 133	16 856	16 472	11 033	11 637	8 123
Long-term investments	3 014	3 406	5 054	4 036	3 731	3 490
Property, plant and equipment	12 555	13 590	14 883	16 276	18 940	15 879
Identifiable intangible assets	33 936	28 471	25 146	43 370	64 900	62 829
Goodwill	48 202	49 577	49 208	51 375	67 783	69 297
Noncurrent deferred tax assets and other noncurrent tax assets	1 911	2 383	3 341	6 693	3 706	4 942
Other noncurrent assets	18 040	4 879	7 679	13 163	12 471	14 120
Total Assets	**167 594**	**154 229**	**181 476**	**197 205**	**226 502**	**221 095**
Short-term borrowings, including current portion of long-term del	16 195	2 703	2 241	2 945	10 350	8 232
Trade accounts payable	3 887	4 309	5 578	6 809	6 710	5 591
Dividends payable	2 104	2 162	2 249	2 303	2 372	-
Income taxes payable	980	1 049	1 266	1 587	2 349	3 192
Accrued compensation and related items	2 391	3 179	3 331	3 406	2 776	1 665
Deferred revenues	-	957	3 067	2 520	2 700	2 502
Other current liabilities	9 334	11 561	24 939	22 568	20 537	19 315
Current liabilities of discontinued operations	2 413	-	-	-	-	-
Total Current Liabilities	**37 304**	**25 920**	**42 671**	**42 138**	**47 794**	**40 497**
Long-term debt	35 955	37 133	36 195	32 884	61 538	61 307
Pension and postretirement benefit obligations	6 217	5 411	3 724	2 250	2 167	2 076
Noncurrent deferred tax liabilities	5 652	4 063	349	1 023	640	931
Other taxes payable	12 125	11 560	11 332	9 814	8 535	7 187
Other noncurrent liabilities	6 894	6 669	9 743	13 180	16 539	16 539
Total Liabilities	**104 147**	**90 756**	**104 014**	**101 289**	**137 213**	**128 537**
Preferred stock, no par value, at stated value	17	-	-	-	-	-
Common stock	468	470	473	476	478	480
Additional paid-in capital	87 428	88 674	90 591	91 802	92 631	92 997
Treasury stock	(110 801)	(110 988)	(111 361)	(113 969)	(114 487)	(114 755)
Retained earnings	97 670	90 392	103 394	125 656	118 353	121 318
Accumulated other comprehensive loss	(11 638)	(5 310)	(5 897)	(8 305)	(7 961)	(7 758)
Total Pfizer Inc. shareholders' equity	**63 144**	**63 238**	**77 200**	**95 660**	**89 014**	**92 282**
Equity attributable to noncontrolling interests	303	235	262	256	274	276
Total equity	**63 447**	**63 473**	**77 462**	**95 916**	**89 288**	**92 558**

Appendix B - Balance Sheet from 2029 until June 2024
Source: Pfizer's 10k forms

	2019	2020	2021	2022	2023
Operating Activities					
Net income before allocation to noncontrolling interests	16 302	9 652	22 025	31 407	2 158
Discontinued operations—net of tax	-	2 631	(434)	6	(15)
Net income from continuing operations before allocation to noncontrolling interests	-	7 021	22 459	31 401	2 172
Adjustments to reconcile net income before allocation to noncontrolling interests to net cash provided by/(used in) operating activities:					
Depreciation and amortization	6 010	4 777	5 191	5 064	6 290
Asset write-offs and impairments	2 953	2 049	276	550	3 408
TCJA impact	(323)	-	-	-	-
Gain on completion of Consumer Healthcare JV transaction, net of cash conveyed	(8 233)	(6)	-	-	-
Deferred taxes	614	(1 468)	(4 293)	(3 764)	(3 442)
Share-based compensation expense	718	756	1 182	872	525
Benefit plan contributions in excess of expense/income	(336)	(1 790)	(3 123)	(1 158)	(787)
Inventory write-offs and related charges associated with COVID-19 products					6 199
Other adjustments, net	(1 086)	(478)	1 573	758	(3 492)
Other changes in assets and liabilities, net of acquisitions and divestitures:					
Trade accounts receivable	(742)	(1 249)	(3 811)	261	347
Inventories	(1 050)	(736)	(1 125)	592	(1 169)
Other assets	795	(146)	(1 057)	(4 506)	(663)
Trade accounts payable	(564)	353	1 242	1 191	(300)
Other liabilities	267	2 741	18 721	(1 449)	595
Other tax accounts, net	(2 737)	(1 238)	(1 166)	(545)	(982)
Net cash provided by/(used in) operating activities from continuing operations	12 588	10 586	32 922	29 267	8 700
Net cash provided by/(used in) operating activities from discontinued operations	-	3 817	(343)	-	-
Net cash provided by/(used in) operating activities	12 588	14 403	32 580	29 267	8 700
Investing Activities					
Purchases of property, plant and equipment	(2 176)	(2 252)	(2 711)	(3 236)	(3 907)
Purchases of short-term investments	(6 835)	(13 805)	(38 457)	(36 384)	(30 974)
Proceeds from redemptions/sales of short-term investments	9 183	11 805	27 447	44 821	39 264
Net (purchases of)/proceeds from redemptions/sales of short-term investments with original maturities of three months or less	6 925	920	(8 088)	(483)	5 174
Purchases of long-term investments	(201)	(597)	(1 068)	(1 913)	(204)
Proceeds from redemptions/sales of long-term investments	232	723	649	641	1 979
Acquisitions of businesses, net of cash acquired	(10 861)	-	-	(22 997)	(43 430)
Acquisitions of intangible assets	(418)	(539)	-	-	-
Dividend received from the Consumer Healthcare JV				3 960	
Other investing activities, net	205	274	(305)	(192)	(179)
Net cash provided by/(used in) investing activities from continuing operations	-	(4 188)	(22 534)	(15 783)	(32 278)
Net cash provided by/(used in) investing activities from discontinued operations	-	(82)	(12)	-	-
Net cash provided by/(used in) investing activities	(3 946)	(4 271)	(22 546)	(15 783)	(32 278)
Financing Activities					
Proceeds from short-term borrowings	16 455	12 352	-	3 891	4 525
Payments on short-term borrowings	(8 378)	(22 197)	-	(3 887)	(3)
Net (payments on)/proceeds from short-term borrowings with original maturities of three months or less	2 551	(4 129)	(96)	(222)	3 161
Proceeds from issuances of long-term debt	4 942	(4 129)	997	-	30 831
Payments on long-term debt	(6 806)	5 222	(2 004)	(2 000)	(2 569)
Purchases of common stock	(8 865)			-	-
Cash dividends paid	(8 043)	(8 440)	(8 729)	(8 983)	(9 247)
Proceeds from exercise of stock options	394	425	-	-	-
Other financing activities, net	(736)	(869)	16	(335)	(631)
Net cash provided by/(used in) financing activities from continuing operations	(8 486)	(21 640)	(9 816)	(14 834)	26 066
Net cash provided by/(used in) financing activities from discontinued operations	-	11 991	-	-	-
Net cash provided by/(used in) financing activities	(8 486)	(9 649)	(9 816)	(14 834)	26 066
Effect of exchange-rate changes on cash and cash equivalents and restricted cash and cash equivalents	(32)	(8)	(56)	(165)	(40)
Net increase/(decrease) in cash and cash equivalents and restricted cash and cash equivalents	124	475	159	(1 515)	2 448
Cash and cash equivalents and restricted cash and cash equivalents, at beginning of perioc	1 225	1 350	1 825	1 983	468
Cash and cash equivalents and restricted cash and cash equivalents, at end of period	1 349	1 825	1 983	468	2 917
Supplemental Cash Flow Information					
Cash paid/(received) during the period for:					
Income taxes	3 664	3 153	7 427	7 867	3 147
Interest paid	1 587	1 641	1 467	1 442	2 215
Interest rate hedges	(42)	(20)	(2)	54	134
Non-cash transaction: Right-of-use assets obtained in exchange for lease liabilities	-	-	1 943	752	614
32% equity-method investment in the Consumer Healthcare JV received in exchange for contributing Pfizer's Consumer Healthcare business	15 711	-	-	-	-

Appendix C - Statement of Cash Flows from 2019 until 2023
Source: Pfizer's 10k forms

millions

Borrowing	2019 <1 year	1 to 5 years	>5 years	Total
Bonds issued	1 415	9 919	26 031	37 365
Commercial paper	13 915	-	-	13 915
Loans	865	-	5	870
Total	16 195	9 919	26 036	52 150

Appendix D - Borrowing 2019
Source: Pfizer's 10k forms

millions

Borrowing	2020 <1 year	1 to 5 years	>5 years	Total
Bonds issued	2 002	7 278	29 851	39 131
Commercial paper	556	-	-	556
Loans	145	-	4	149
Total	2 703	7 278	29 855	39 836

Appendix E - Borrowing 2020
Source: Pfizer's 10k forms

millions

Borrowing	2021 <1 year	1 to 5 years	>5 years	Total
Bonds issued	-	8 550	27 641	36 191
Commercial paper	1 636	-	-	1 636
Loans	605	-	4	609
Total	2 241	8 550	27 645	38 436

Appendix F - Borrowing 2021
Source: Pfizer's 10k forms

millions

Borrowing	2022 <1 year	1 to 5 years	>5 years	Total
Bonds issued	2 560	8 660	24 204	35 424
Commercial paper	-	-	-	-
Loans	385	-	20	405
Total	2 945	8 660	24 224	35 829

Appendix G - Borrowing 2022
Source: Pfizer's 10k forms

millions

Borrowing	2023 <1 year	1 to 5 years	>5 years	Total
Bonds issued	2 254	18 189	43 349	63 792
Commercial paper	7 965	-	-	7 965
Loans	131	-	-	131
Total	10 350	18 189	43 349	71 888

Appendix H - Borrowing 2023
Source: Pfizer's 10k forms

Non-operating assets	
Short-term investments	9837
Equity-method investments	11637
Long-term investments	3731
Noncurrent deferred tax assets and other noncurrent tax assets	3706
Other noncurrent assets	12471
Total	**41 382**

Non-operating liabilities	
Other taxes payable	8535
Other noncurrent liabilities	16539
Total	**25 074**

Appendix I - Non operating assets
Appendix J - Non operating liabilities
Source: Pfizer's 10k form 2023

millions		Market data					
Company Name	Identifier (RIC)	Market Cap (USD, M)	Total Debt (LFY)	Cash & Equiv (LFY)	Enterprise Value (LFY)	Share Price	Shares outstanding
Eli Lilly and Co	LLY.N	861 257	25 317	2 928	883 646	583	949
Merck & Co Inc	MRK.N	299 843	35 109	7 093	327 859	109	2 532
Bristol-Myers Squibb Co	BMY.N	100 336	39 827	12 280	127 883	51	2 021
Abbvie Inc	ABBV.N	341 699	59 422	12 816	388 305	155	1 766
Amgen Inc	AMGN.OQ	178 823	64 613	10 944	232 492	288	535
Johnson & Johnson	JNJ.N	402 178	29 332	22 927	408 583	157	2 407
Novartis AG	NOVN.S	253 454	26 431	14 073	265 812	101	2 044
AstraZeneca PLC	AZN.L	241 883	28 645	5 962	264 566	135	1 550
Sanofi	SASY.PA	142 443	20 314	9 737	153 020	99	1 251
Roche Diagnostics	ROG.S	255 275	40 297	12 195	283 378	291	797
Median							

Appendix K - Market data LFY
Source: Reuters

millions		Financial data						
Company Name	Identifier (RIC)	Revenue (LFY)	EBITDA (LFY)	EBIT (LFY)	EV/Revenue	EV/EBITDA	EV/EBIT	P/S
Eli Lilly and Co	LLY.N	34 124	11 853	10 325,40	25,90	74,55	85,58	16,21
Merck & Co Inc	MRK.N	60 115	27 111	23 239,00	5,45	12,09	14,11	4,59
Bristol-Myers Squibb Co	BMY.N	45 006	20 612	10 852,00	2,84	6,20	11,78	2,30
Abbvie Inc	ABBV.N	54 318	25 383	16 685,00	7,15	15,30	23,27	5,04
Amgen Inc	AMGN.OQ	28 190	12 235	8 164,00	8,25	19,00	28,48	5,47
Johnson & Johnson	JNJ.N	85 159	31 653	24 550,00	4,80	12,91	16,64	4,43
Novartis AG	NOVN.S	46 660	17 831	12 696,00	5,70	14,91	20,94	4,42
AstraZeneca PLC	AZN.L	45 811	13 850	8 916,00	5,78	19,10	29,67	4,57
Sanofi	SASY.PA	50 359	14 401	10 370,25	3,04	10,63	14,76	2,46
Roche Diagnostics	ROG.S	68 128	25 537	21 517,76	4,16	11,10	13,17	3,40
Median					**5,58**	**13,91**	**18,79**	**4,50**

Appendix L - Financial data LFY and Multiples
Source: Reuters

millions		Market data					
Company Name	Identifier (RIC)	Market Cap (USD, M)	Total Debt (LTM)	Cash & Equiv (LTM)	Enterprise Value (LTM)	Share Price	Shares outstanding
Eli Lilly and Co	LLY.N	861 257	28 966	3 364	886 858	960	949
Merck & Co Inc	MRK.N	299 843	37 854	11 354	326 343	118	2 532
Bristol-Myers Squibb Co	BMY.N	100 336	52 443	6 653	146 126	50	2 021
Abbvie Inc	ABBV.N	341 699	70 677	13 157	399 219	196	1 766
Amgen Inc	AMGN.OQ	178 823	62 645	9 301	232 167	334	535
Johnson & Johnson	JNJ.N	402 178	41 491	25 475	418 194	166	2 407
Novartis AG	NOVN.S	253 454	29 102	7 970	274 586	120	2 044
AstraZeneca PLC	AZN.L	241 883	33 619	7 076	268 426	174	1 550
Sanofi	SASY.PA	131 368	24 048	6 795	148 621	112	1 251
Roche Diagnostics	ROG.S	220 008	38 375	8 814	249 569	338	797
Median							

Appendix M - Market data LTM
Source: Reuters

millions		Financial data						
Company Name	Identifier (RIC)	Total Revenue	EBITDA (LTM)	EBIT (LTM)	EV/Revenue	EV/EBITDA	EV/EBIT	P/S
Eli Lilly and Co	LLY.N	38 923	15 041	13 427	22,79	58,96	66,05	23,41
Merck & Co Inc	MRK.N	62 479	29 653	25 559	5,22	11,01	12,77	4,80
Bristol-Myers Squibb Co	BMY.N	46 509	21 097	11 070	3,14	6,93	13,20	2,17
Abbvie Inc	ABBV.N	55 000	24 702	16 177	7,26	16,16	24,68	6,30
Amgen Inc	AMGN.OQ	30 934	11 312	6 238	7,51	20,52	37,22	5,77
Johnson & Johnson	JNJ.N	86 576	32 104	25 218	4,83	13,03	16,58	4,61
Novartis AG	NOVN.S	48 860	21 418	14 401	5,62	12,82	19,07	5,03
AstraZeneca PLC	AZN.L	49 133	15 429	10 312	5,46	17,40	26,03	5,50
Sanofi	SASY.PA	47 397	14 011	9 921	3,14	10,61	14,98	2,95
Roche Diagnostics	ROG.S	58 785	22 363	18 995	4,25	11,16	13,14	4,58
Median					**5,34**	**12,92**	**17,83**	**4,91**

Appendix N - Financial data LTM and Multiples
Source: Reuters

Product	Primary indication or class	2019	2020	2021	2022	2023
Primary Care		**15 294**	**15 578**	**52 030**	**73 023**	**30 589**
Comirnaty direct sales and alliance revenues	Active immunization to prevent COVID-19	0	154	36 781	37 806	11 220
% of Primary Care		0%	1%	71%	52%	37%
% of Revenues		0%	0%	45%	38%	19%
Eliquis alliance revenues and direct sales	Nonvalvular atrial fibrillation, deep vein thrombosis, pulmonary embolism	4 220	4 949	5 970	6 480	6 747
% of Primary Care		28%	32%	11%	9%	22%
% of Revenues		10%	12%	7%	6%	12%
Prevnar family	Active immunization to prevent pneumonia, invasive disease and otitis media caused by Streptococcus pneumoniae	5 847	5 850	5 272	6 337	6 440
% of Primary Care		38%	38%	10%	9%	21%
% of Revenues		14%	14%	6%	6%	11%
Paxlovid	COVID-19 in certain high-risk patients	0	0	76	18 933	1 279
% of Primary Care		0%	0%	0%	26%	4%
% of Revenues		0%	0%	0%	19%	2%
Specialty Care		**14 782**	**14 280**	**15 194**	**13 833**	**14 970**
Vyndaqel family	ATTR-CM and polyneuropathy	473	1 288	2 015	2 447	3 321
% of Specialty Care		3%	9%	13%	18%	22%
% of Revenues		1%	3%	2%	2%	6%
Xeljanz	RA, PsA, UC, active polyarticular course juvenile idiopathic arthritis, ankylosing spondylitis	2 242	2 437	1 703	1 796	2 455
% of Specialty Care		15%	17%	11%	13%	16%
% of Revenues		5%	6%	2%	2%	4%
Enbrel	RA, juvenile idiopathic arthritis, PsA, plaque psoriasis, pediatric plaque psoriasis, ankylosing spondylitis and nonradiographic axial spondyloarthritis	1 699	2 437	2 455	1 796	830
% of Specialty Care		11%	17%	16%	13%	6%
% of Revenues		4%	6%	3%	2%	1%
Oncology		**9 014**	**10 867**	**12 333**	**12 132**	**11 627**
Ibrance	HR-positive/HER2-negative metastatic breast cancer	4 961	5 392	5 437	5 120	4 753
% of Oncology		55%	50%	44%	42%	41%
% of Revenues		12%	13%	7%	5%	8%
Xtandi alliance revenues	mCRPC, nmCRPC, mCSPC, nmCSPC	838	1 024	1 185	1 198	1 191
% of Oncology		9%	9%	10%	10%	10%
% of Revenues		2%	2%	1%	1%	2%
Inlyta	Advanced RCC	477	787	1 002	1 003	1 036
% of Oncology		5%	7%	8%	8%	9%
% of Revenues		1%	2%	1%	1%	2%
Business Innovation		**810**	**926**	**1 731**	**1 342**	**1 310**
Pfizer CentreOne	Various	810	926	1 731	1 335	1 265
% of Business Innovation		100%	100%	100%	99%	97%
% of Revenues		2%	2%	2%	1%	2%
Pfizer Ignite	Various	0	0	0	7	44
% of Business Innovation		0%	0%	0%	1%	3%
% of Revenues		0%	0%	0%	0%	0%

Appendix O - Annual Revenue Breakdown of Pfizer's Key Products from 2019 to 2023
Source: Pfizer's 10k forms

Simple average CRP by region	CRP
Developed Europe	**1,05%**
Developed Rest of the World	**0,35%**
Japan	1,03%
Canada	0,00%
South Korea	0,72%
Australia	0,00%
New Zealand	0,00%
Emerging markets	**7,06%**
Asia (excluding Japan and South Korea)	6,12%
Latin America	8,32%
Eastern and Central Europe	4,14%
Middle East	4,89%
Africa	9,37%
Turkey	9,51%

Appendix P - Simple Average CRP by Region
Source: Damodaran (2024)