

Comparative Analysis of Investment Potential of Leading Pharmaceutical Companies

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Abstract: This research paper aims to address the research question of identifying the most promising investment target among four leading pharmaceutical companies: Merck (MRK), Pfizer (PFE), Johnson & Johnson (JNJ), and Novartis AG (NVS). The study seeks to provide investors with valuable insights into the financial performance and investment potential of these industry giants, guiding them towards informed decision-making. In the academic field, this research contributes to the understanding of how financial metrics can be utilized to evaluate investment opportunities in the pharmaceutical sector, offering practical implications for investors and researchers alike. The methods employed in this study involved a comprehensive analysis of key financial indicators, including earnings per share (EPS), price-to-earnings (P/E) ratio, and profitability ratios such as gross profit margin and gross profit-to-assets (GP/A) ratio. By examining these metrics, the research aimed to assess the relative strengths and weaknesses of each company and determine the most attractive investment option among the four pharmaceutical giants. The results of the analysis revealed Pfizer (PFE) as the recommended investment target based on its lower P/E ratio, favorable PEG ratio, strong EPS growth rate, and improving net profit margin. This finding suggests that Pfizer presents a compelling investment opportunity in the pharmaceutical sector, offering potential for growth and financial stability. The implications of this research extend to investors seeking to navigate the complexities of the pharmaceutical industry, providing them with actionable insights to make informed investment decision.

Keywords: Pharmaceutical industry, financial performance, investment potential, Pfizer, research analysis

1. Introduction

1.1. Research Background and Significance

The pharmaceutical industry is characterized by its dynamic evolution and intense competition, with key players striving for market leadership and breakthrough innovations. Against the backdrop of the industry's current development status and its pivotal role in societal well-being, this research paper embarks on a crucial analysis of the financial performance and investment potential of four leading pharmaceutical companies: Merck (MRK), Pfizer (PFE), Johnson & Johnson (JNJ), and Novartis AG (NVS). By shedding light on these industry giants, the study aims to provide a comprehensive

evaluation that not only informs investment decisions but also contributes to understanding the industry's social impact. This research holds significance in guiding investors towards prudent choices in a sector that plays a vital role in healthcare advancements and societal welfare.

1.2. Literature Review

The existing literature provides a comprehensive foundation for evaluating the financial performance and investment potential of pharmaceutical companies, offering valuable insights and methodologies for this study to build upon. Several key papers have contributed significantly to understanding the dynamics of the pharmaceutical industry and the factors influencing investment decisions.

"Contrarian Investment, Extrapolation, and Risk" by Josef Lakonishok, Andrei Shleifer, and Robert W. Vishny is essential for understanding the foundations of value investing. The authors provide evidence that value strategies outperform the market because they exploit the suboptimal behavior of investors who extrapolate past earnings growth too far into the future [1]. "Value and Momentum Everywhere" by Clifford Asness, Tobias Moskowitz, and Lasse Heje Pedersen explores the interaction between value and momentum strategies across various asset classes and markets. It provides evidence that both value and momentum are effective across global equities, bonds, commodities, and currencies. The authors discuss the potential benefits of combining these strategies to enhance returns and reduce risk [2]. Frazzini, Kabiller and Pedersen analyzed Warren Buffett's investment strategy and performance, attributing his success to a combination of leveraging low-risk, high-quality stocks and being a patient investor. The authors argue that Buffett's alpha can be largely explained by exposures to value, low-risk, and quality factors [3]. "Explaining the Demise of Value Investing" by Baruch Lev and Anup Srivastava addresses the recent underperformance of value investing, attributing it to structural changes in the economy and financial reporting practices. The authors argue that the historical financial metrics used to assess value are becoming less relevant in the new economy dominated by intangible assets [4]. Aitken et al. in their study on the global use of medicine provide a broader context for understanding pharmaceutical market trends and future projections [5]. By incorporating industry insights and forecasts, their research contributes to a comprehensive understanding of the pharmaceutical sector's growth potential, offering a nuanced perspective on investment opportunities.

To address some of the limitations of previous research, this study aims to integrate a multidimensional analysis of financial metrics, profitability indicators, and market dynamics to enhance the evaluation of investment opportunities in the pharmaceutical industry. By incorporating a holistic approach that considers both quantitative and qualitative factors, this research seeks to provide a comprehensive framework for assessing investment potential, bridging existing knowledge gaps, and offering actionable insights for investors in the pharmaceutical sector.

1.3. Research Contents

This study unfolds through a meticulous examination of the financial performance and investment potential of four prominent pharmaceutical companies: Merck (MRK), Pfizer (PFE), Johnson & Johnson (JNJ), and Novartis AG (NVS). The research methodology encompasses a comprehensive analysis of key financial metrics. Through a systematic approach of data collection, analysis, and interpretation, this research endeavors to offer valuable insights for investors seeking to navigate the complexities of the pharmaceutical industry and make informed investment decisions.

2. Introduction of the Four Companies

2.1. Merck

Merck is a multinational pharmaceutical company headquartered in Kenilworth, New Jersey, United States. It is one of the largest pharmaceutical companies in the world, with a focus on developing and manufacturing innovative medicines, vaccines, and animal health products. Some of Merck's well-known products include the HPV vaccine Gardasil, the diabetes drug Januvia, and the cancer immunotherapy Keytruda. Merck has a strong presence in various therapeutic areas, including oncology, infectious diseases, neuroscience, and cardiovascular diseases.

2.2. Pfizer

Pfizer is a multinational pharmaceutical and biotechnology company headquartered in New York City, United States. It is one of the largest pharmaceutical companies in the world, with a focus on developing and manufacturing innovative medicines and vaccines. Some of Pfizer's well-known products include the COVID-19 vaccine (developed in partnership with BioNTech), the pneumonia vaccine Prevnar, and the erectile dysfunction drug Viagra. Pfizer has a diverse portfolio of products across various therapeutic areas, including oncology, immunology, internal medicine, and rare diseases.

2.3. Johnson & Johnson

Johnson & Johnson is a multinational corporation that develops medical devices, pharmaceutical, and consumer packaged goods. It is headquartered in New Brunswick, New Jersey, United States, and is one of the most broadly based healthcare companies in the world. Some of Johnson & Johnson's well-known consumer brands include Band-Aid, Tylenol, Neutrogena, and Johnson's baby products. In the pharmaceutical sector, Johnson & Johnson is known for its HIV/AIDS drugs, immunology products, and the COVID-19 vaccine. The company also has a strong presence in the medical device market, with products ranging from surgical instruments to orthopedic implants.

2.4. Novartis AG

Novartis is a Swiss multinational pharmaceutical company headquartered in Basel, Switzerland. It is one of the largest pharmaceutical companies in the world, with a focus on developing and manufacturing innovative medicines, generic pharmaceuticals, and biosimilars. Novartis has a diverse portfolio of products across various therapeutic areas, including oncology, cardiovascular, neuroscience, immunology, and ophthalmology. Some of Novartis' well-known brands include the cancer drug Gleevec, the heart failure medication Entresto, and the multiple sclerosis drug Gilenya. The company is also known for its investments in research and development, with a strong focus on developing cutting-edge therapies and technologies.

2.5. Competition Among the Four Companies

Merck, Pfizer, Johnson & Johnson, and Novartis, as leading pharmaceutical companies, engage in fierce competition across various aspects of their business to gain market share and maintain a competitive edge in the healthcare industry. These companies compete with each other in several key areas.

2.5.1. Research and Development (R&D)

One of the primary ways in which these companies compete is through their research and development efforts. They invest heavily in discovering and developing new drugs, therapies, and medical technologies to address unmet medical needs and stay ahead of the competition. Each company strives to be at the forefront of innovation and bring breakthrough treatments to the market.

2.5.2. Product Portfolio

Competition also takes place in the diversity and quality of the product portfolio offered by each company. They compete to have a robust pipeline of drugs across various therapeutic areas, ensuring a competitive advantage in addressing a wide range of health conditions and patient populations.

2.5.3. Market Presence

These companies compete for market presence and global reach by expanding their operations into new markets and regions. They establish strategic partnerships, collaborations, and acquisitions to strengthen their market position and increase their footprint in key markets around the world.

2.5.4. Marketing and Sales Strategies

Competing companies employ aggressive marketing and sales strategies to promote their products, differentiate themselves from competitors, and capture market share. They engage in direct-to-consumer advertising, physician education programs, and promotional activities to drive product uptake and brand awareness.

2.5.5. Regulatory Compliance and Approvals

Competition also extends to regulatory compliance and approvals for new drugs and medical products. Companies vie for expedited approvals from regulatory authorities to bring their products to market faster and gain a competitive advantage over rivals.

2.5.6. Pricing and Market Access

Pricing strategies and market access play a significant role in competition among these companies. They compete to offer competitive pricing for their products while ensuring access to patients and reimbursement from payers, such as insurance companies and government healthcare programs.

3. Comparative Analysis

Financial metrics such as earnings per share (EPS), price-to-earnings (P/E) ratio, and price-to-earnings growth (PEG) ratio in evaluating the investment potential of pharmaceutical stocks [6,7]. Additionally, profitability ratios like gross profit margin and gross profit-to-assets (GP/A) ratio can provide insights into a company's operational efficiency and pricing power[8-10]. This study will examine the above financial data in order to come up with the most desirable investment target as shown in table 1.

Table 1: Financials of the four companies

Ticket symbol	MRK	PFE	JNJ	NVS
share price	\$125.74	\$25.26	\$146.82	\$99.06
TTM EPS	11.06	1.83	10.43	6.9

Table 1: (continued).

NTM EPS	12.16	2.25	10.66	7.35
EPS growth rate	9.95%	22.95%	2.21%	6.52%
revenue growth rate	14.33%	2.55%	-5.07%	1.55%
TTM P/E	11.37	13.80	14.08	14.36
NTM P/E	10.34	11.23	13.77	13.48
PEG	1.14	0.60	6.38	2.20
GP/A	41.24%	14.81%	34.98%	34.21%
Annual gross margin	12/31/2023	12/31/2022	12/31/2021	12/31/2020
MRK	73.17%	70.63%	72.02%	67.20%
PFE	57.34%	65.77%	62.08%	79.63%
JNJ	68.82%	69.25%	70.28%	65.58%
NVS	73.27%	73.35%	73.31%	69.70%
Annual net profit margin	12/31/2023	12/31/2022	12/31/2021	12/31/2020
MRK	0.61%	24.49%	26.79%	17.02%
PFE	3.69%	31.30%	27.10%	22.08%
JNJ	41.28%	22.43%	26.52%	17.82%
NVS	31.83%	16.00%	54.62%	16.17%

Among the four pharmaceutical companies, MRK has the highest EPS (11.06), while PFE's EPS growth rate is the highest (22.95%), demonstrating its strong growth potential. MRK is the most expensive stock, with a much higher share price (\$125.74) compared to PFE (\$25.56). However, MRK has the lowest TTM and NTM P/E ratios, suggesting it may be the most undervalued.

PFE has the second-lowest P/E ratios, and its PEG ratio (0.60) is relatively lower than JNJ (6.38) and NVS (2.20), indicating that the stock may be reasonably priced relative to its growth potential. MRK's GP/A ratio is 26.43 percentage points higher than PFE, indicating better operational efficiency.

When it comes to analysis of profitability and annual gross margin, MRK (73.17%) and NVS (73.27%) demonstrate consistent annual gross margin trends. In the meantime, PFE's gross margin, although lower at 57.34%, has remained relatively stable over the years. PFE's net profit margin of 3.69% is lower than its peers but shows an improving trend compared to previous years.

Gross profit of PFE declined from peak COVID-19 years, while MRK's increased. Both companies witnessed a significant decline in net profit in 2023, even though their net profits were rising steadily during 2020-2022. PFE's net profit margin of 3.69% is lower than its peers but shows an improving trend compared to previous years.

The quarterly financial performances of the 4 companies are also worth analyzing.

Merck's quarterly financial performance reflects a consistent revenue growth trend, with minor fluctuations in net income. The company has maintained a high gross profit margin, indicating efficient cost management. MRK's EPS have been relatively stable and higher compared to its peers, showcasing strong profitability. The company's performance suggests a solid financial foundation and operational efficiency.

Pfizer's quarterly financial performance highlights a significant increase in revenue in the second quarter, followed by fluctuations in subsequent quarters. The company demonstrated a notable rise in net income, especially in the second quarter, indicating improved profitability. PFE's gross profit margin remained healthy, reflecting effective revenue generation strategies. With a positive EPS trend and a low P/E ratio, Pfizer presents itself as a promising investment choice with strong growth potential and financial stability.

Johnson & Johnson's quarterly financial performance showed varying revenue figures and net income across the quarters. The company maintained a competitive gross profit margin, signaling operational efficiency and effective cost control. JNJ's EPS exhibited fluctuations, reflecting changes in profitability.

Novartis' quarterly financial performance displayed a steady but relatively lower revenue trend compared to its peers. The company experienced fluctuations in net income, with varying gross profit margins over the quarters.

To select the most preferred company, JNJ has a negative revenue growth rate and a relatively high PEG ratio, while NVS has relatively high P/E and PEG ratios, suggesting they are less preferred investment options. Among the other two, MRK has a higher revenue growth rate, GP/A ratio, and consistent annual gross margin trends. The two stocks' P/E ratios are close, and PFE's PEG ratio is slightly lower than MRK's. However, MRK is much more expensive compared to PFE.

4. Suggestion

Based on the comprehensive financial analysis and profitability metrics, Pfizer (PFE) emerges as the recommended investment target among the four pharmaceutical companies. PFE's lower P/E ratio, favorable PEG ratio, strong EPS growth rate, and improving net profit margin make it an attractive investment opportunity in the pharmaceutical sector.

Investing in Pfizer involves risks that investors should carefully assess. The company's heavy reliance on a few key products for a substantial portion of its revenue poses a concentration risk. Pfizer also faces regulatory and legal risks, including potential changes in healthcare legislation and patent disputes, which can lead to fines, reputational damage, and compliance costs. The persistent threat of counterfeit products targeting Pfizer's medicines and vaccines also poses a risk to patient safety, revenue, and brand reputation. These risk factors underscore the complexities and uncertainties associated with investing in the pharmaceutical industry.

Despite these risks, Pfizer's financial performance and growth potential make it a compelling investment option in the pharmaceutical sector. Investors should carefully consider the company's fundamentals, industry dynamics, and risk profile before making an investment decision.

5. Conclusion

In conclusion, the central argument of this study revolves around the identification of the most favorable investment target among the leading pharmaceutical companies analyzed, namely Merck (MRK), Pfizer (PFE), Johnson & Johnson (JNJ), and Novartis AG (NVS). Through a comprehensive evaluation of financial performance metrics and profitability indicators, Pfizer emerges as the recommended investment choice due to its lower P/E ratio, favorable PEG ratio, strong EPS growth rate, and improving net profit margin. This conclusion is underpinned by a thorough analysis of the data presented, highlighting Pfizer's potential for growth and financial stability in the pharmaceutical sector.

However, it is essential to acknowledge the limitations of this research. One notable limitation is the focus solely on quantitative financial metrics, which may not capture all aspects of a company's performance and investment potential. Future research could benefit from incorporating qualitative factors such as market dynamics, regulatory environments, and strategic partnerships to provide a more holistic view of investment opportunities in the pharmaceutical industry. Additionally, the study's reliance on historical financial data may limit its ability to predict future performance accurately, emphasizing the need for ongoing monitoring and analysis to adapt to changing market conditions.

Looking ahead, this research lays the groundwork for future studies to delve deeper into the interplay between financial metrics and investment decisions in the pharmaceutical sector. By exploring additional factors influencing investment outcomes, such as market trends, technological advancements, and regulatory changes, researchers can enhance the predictive accuracy of investment evaluations and offer more nuanced insights for investors. Ultimately, this study contributes to the ongoing discourse on pharmaceutical company analysis and investment strategies, paving the way for further exploration and refinement in this critical area of financial research.

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