

A Financial Analysis and Risk Assessment of Healthcare Companies

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Abstract. In the post-pandemic era, the growing global interest in healthcare has driven substantial changes in the healthcare industry. Because of the pandemic's enormous effects on economic development and human life, it is critical to turn the experience into practical lessons learned in order to avoid future crises, and this paper is about analyzing and improving healthcare services with an economic perspective. Through an analysis of the financial performance and risk assessment of three healthcare companies, UnitedHealth Group (UNH), CVS Health Corporation (CVS) and Pfizer (PFE)--this paper investigates the economics of this sector. The financial performance of these companies is assessed by collecting relevant information from multiple online data sources for comparative analysis, including key financial metrics such as current ratio, debt ratio, PE ratio, and ROA, ROE. The findings reveal the financial strengths and weaknesses of these companies and provide valuable insights into understanding the economic development of the healthcare industry. The paper ends with conclusions that analyze investor investment preferences and provide recommendations and future directions for addressing risks in an increasingly changing healthcare environment.

Keywords: Healthcare Industry; Financial Analysis; Risk Assessment.

1. Introduction

In recent years, the attention of the healthcare sector has increased globally. People gradually realized the importance of health, which is also reflected in the economy [1]. Health expenditures are not only growing faster than the global economy accounting but also over 10% of the world gross domestic product (GDP) [2]. The OECD countries' average health spending percentage of GDP climbed from 7.8% in 2005 to 9.8% in 2020 [3]. Since healthcare spending as a share of world GDP continuous rising, it is expected to grow at a high rate in the coming year. The development of healthcare sector is deeply connected with digital technologies. The digital health market is anticipated to reach 38 billion by 2025 [4].

This paper decided to research this sector is because numerous promising manufacturing are combining with the healthcare industry, making it intimately related to financial markets and be attractive to many investors. What's more, healthcare is relevant to people's lives and influence on their life's well-being. Additionally, according to this research, investors can make a wiser decision, healthcare companies can develop sustainable.

This research is focus on these three companies in healthcare sector; UnitedHealth Group (UNH), CVS Health Corporation (CVS) and Pfizer (PFE) their financial performance, risk assessment and investment recommendation. UnitedHealth Group (UNH) is an American worldwide health insurance and services company based in Minnesota. It is the world's eleventh-largest company by revenue and the largest healthcare company by revenue. CVS Health Corporation (CVS) is an American healthcare company that offering many services, such as pharmacy, health insurance and clinics. Pfizer (PFE) is an global pharmaceutical and biotechnology corporation, developing and producing medicines and vaccines.

The healthcare sector plays an important role in driving economic growth. Increased investment in this sector not only stimulates economic development but also fosters technological innovation. Thus, creates more job opportunities and enhances the quality and scale of manufacturing and services, such as the production of medical equipment and the expansion of healthcare facilities like hospitals.

Moreover, it contributes to the strengthening of international commercial networks, particularly in areas such as pharmaceuticals and medical research.

This advancement has the potential to enhance human quality of life by making healthcare more affordable and accessible on a global scale. Furthermore, it can improve preparedness and response to future crises, such as pandemics similar to COVID-19, ensuring more efficient healthcare delivery during such emergencies. As a result, individuals may benefit from healthier lifestyles and increased life span. However, achieving these outcomes requires substantial research efforts in both healthcare systems and financial frameworks.

2. Financial Performance

The analysis is paramount to evaluating the company's running situation, cause it can help stakeholders, such as investors, management and creditors know the operations, profitability, solvency and growth potential. By comprehensively evaluating each company's financial performance, stakeholders can make more correct decisions.

2.1. Liquidity

Table 1. Liquidity ratios of three companies

	UNH	CVS	PFE
current ratio	0.91	0.80	1.00
quick ratio	0.83	0.54	0.64

Liquidity is the ability of company to pay its debts in short term, indicating its financial health [5]. Table 1 shows the three companies' liquidity metrics, including current ratio and quick ratio.

The current ratio is the most commonly used liquidity metrics, which is calculated by current assets dividing current liabilities. The current ratio above 1 means the company has enough current assets to pay the current liabilities, but a lower current ratio means the company may have a liquidity risk. UNH's current ratio is below 1, indicating its current assets can not cover current liquidities. This suggests UNH is under some pressure to repay its debt in short term. CVS's current ratio is also below 1 and even lower than UNH, which means it is more vulnerable of short-term solvency and may be has the reliance on additional financing ways to solve liquidity problems. PFE's current ratio is just equal to 1, reflecting it has a relatively better financial health and short-term solvency.

Quick ratio removes the effect of inventory on current liabilities. Therefore it can precisely reflect a company's ability to pay short-term debts when it is not relying on inventory. UNH's quick ratio is close to 1 but below 1, which means it is not completely illiquid. It implies even excluding the inventories, UNH's current assets can still cover the current liquidities, while it is not adequate. CVS's has a really low quick ratio as 0.54, showing that even not relying on inventories, the rest of current assets are not enough to cover the current liquidities. This is a warning that CVS has a poor liquidity and may face the pressure of short-term debts. PFE's quick ratio is also lower than 1, but it is slightly better comparing to CVS.

In conclusion, PFE is the most liquid. UNH is relatively illiquid. CVS has the lowest current and quick ratio, which means it has the worst short-term solvency and faces liquidity risk. What's more, CVS has the potential to be exposed to higher financial risk, especially its short-term debts may relying on other financing ways. Furthermore, by increasing current assets or reducing current liquidities CVS can improve its liquidity. PFE and UNH have relatively good liquidity, while could enhance their financial health through superior their current assets structure.

2.2. Solvency

Table 2. Solvency ratios of three companies

	UNH	CVS	PFE
debt ratio	0.26	0.33	0.32
interest turnover	6.39	3.33	2.28

Solvency is the metric to examine a company's ability to repay its long-term debt. It reflects whether the company has sufficient assets to repay its long-term debt, not just short-term liquidity problems. Table 2 shows the three companies' solvency metrics, including debt ratio and interest turnover.

One of the main factors influencing return on assets is the debt ratio, which is calculated by dividing total debt by assets [6]. High debt ratio means that the company relies more on their debt financing and is under a higher debt repaying pressure. Conversely, when the company relies more on their own funds or shareholders' equity, will has a lower liability risk. UNH's debt ratio is 0.26, meaning that there is 26% of assets are financed by debt. This is a relatively low debt ratio, indicating UNH relies on shareholders' funds more than on debt in its capital structure, performs greater on solvency and is under a lower pressure to service its debt in the long term. CVS has a high debt ratio relative to UNH and PFE, so it could has more pressure when the economic downturn or the interest rate rising. However, this ratio is still within a moderate scale. PFE's debt ratio is close to CVS, which means its long-term solvency is health.

Interest turnover is the ability of a company's profits to cover interest on its debt. High interest turnover reflects that company has enough profits to pay the debt and is under lower pressure to service its debt. Controversially, low interest turnover indicates the company is struggling to pay interest on its debt and faces increased debt servicing risk. UNH's interest turnover is 6.39, which means its operating income can roughly pay its interest expenses 6.39 times over. This shows that UNH is extremely profitable and able to pay off the interest on its debt with ease. CVS's interest turnover is 3.33, which is lower than UNH but is still able to cover its interest payments by profits. PFE has an interest turnover ratio of 2.28 is lower than UNH and CVS. It is less solvent than UNH and CVS, but it can still pay interest on its debt. A lower interest turnover ratio could indicating PFE is under more pressure to pay off its debt, particularly during the periods of economic downturn or variable earnings, so it has to focus more on managing its debt and interest payment capability. With low debt ratio and high interest turnover, showing that UNH has the strongest debt-servicing capability and is in the best position to repay its debt in the long term.

2.3. Profitability

Table 3. Profitability ratios of three companies

	UNH	CVS	PFE
gross profit margin,	22.84%	43.21%	70.27%
net profit margin	6.01%	0.09%	25.22%
ROA	6.92%	2.87%	0.94%
ROE	15.25%	9.73%	-2.74%

The ability of a company to turn a profit from its operations is called profitability. It reflects the efficiency of a company using its resources to generate profit over a given time period. High profitability means that a company is able to retain strong market competitiveness, raise revenues, and efficiently control costs. Profitability is crucial to investors and management cause it is not only a sign of a company's successful operation but also the foundation of its sustainability. Table 3 shows the three companies' profitability metrics, including gross profit margin, net profit margin, ROA and ROE.

Gross profit margin measures a company’s profitability after direct cost. A company with higher gross profit margin usually has lower production cost and better pricing power. PFE has the greatest gross profit margin, demonstrating it has significant advantages in research and development, production, and pricing. CVS’s gross profit margin is lower than PFE, but still better than many industries. In contrast, UNH’s gross profit margin is much lower than other two companies. This may be because of its business model, which is primarily focused on medical management, health insurance, or it has a more complicated cost structure.

Net profit margin is an important indicator of overall company, showing the percentage of a company's revenue that may be turned into net profit [7]. With the greatest net profit margin, PFE not only has a solid revenue performance but also successfully manages expenditures and other expenses to maintain a high level of profitability. Although UNH's net profit margin is higher than CVS's, it still looks low when compared to Pfizer's, indicating that it has relatively high costs or expenses. CVS has a very low net profit margin of 0.09%, which is nearly zero, showing that it has a high operational costs or increased pressure on its business model.

ROA (Return on Assets) measures how efficiently a company utilizes its assets to make money. A higher ROA indicates that a company generates more profit from the use of its assets. UNH’s ROA is higher than other two companies, indicating that it performs better on the using efficient of assets and is able to generate profits from its assets effectively. CVS has a moderate ROA, which is comparatively inefficient in its asset usage, surpassing Pfizer but still lower than UNH. PFE is less efficient in using its assets. This is because the scale of the company or the need for large investments in research and development, which lowers the return on assets.

ROE (Return on Equity) evaluate the return that a company generates for its shareholders. A higher ROE shows that the company can make an efficiency use of the money invested by shareholders. The outstanding performance of UNH's ROE suggests that the business can efficiently use shareholder’s fund to generate profits. CVS's ROE of also shows a more sturdy shareholder return, which is below UNH but still at a reasonable range. Investors should pay attention to PFE because of its negative ROE, which suggests the company is currently unable to produce positive returns for its shareholders and may have negative returns on its investments due to losses or capital structure concerns.

From the perspective of profitability, PFE might have better short-term gross profit margin and net profit margin, but because of its poor ROA and ROE performance, its investment value may need to be considered in terms of long-term return on capital and financial restructuring. Conversely, UNH is a relatively strong company that produces high returns for its investors and is appropriate for long-term investment. While CVS is weaker to cost-control and profitability constraints, and investors should be cautious of any future profitability challenges.

2.4. Market Expectation

Table 4. Market ratios of three companies

	UNH	CVS	PFE
Market Cap	521.95B	71.43B	163.54B
Beta	0.59	0.53	0.62
	0.23% % of Shares Held by All Insider	0.12% % of Shares Held by All Insider	0.05% % of Shares Held by All Insider
	89.46% % of Shares Held by Institutions	83.05% % of Shares Held by Institutions	67.54% % of Shares Held by Institutions
Wealth of shareholders	89.67% % of Float Held by Institutions	83.14% % of Float Held by Institutions	67.57% % of Float Held by Institutions
	4,382 Number of Institutions Holding Shares	2,387 Number of Institutions Holding Shares	3,621 Number of Institutions Holding Shares

Market expectation is the expectation of investors and market participants about the future performance of a company. The purpose of analyzing market expectations is to help all types of participants assess the market value and future potential of a company in a more methodical way. For investors, it provides a foundation to make a decision. For company management, it reflects the market's confidence and concern about company. For economic analysts, it is an important indicator for judging industry trends.

All three companies are large companies, as Table 4 shown. UNH has the highest market cap, suggesting that UNH is the most stable company and has a relatively low risk. CVS's market cap is significantly lower than UNH and PFE, indicating its relatively small size. PFE is in between.

Through beta, it can be seen the stock volatility compared to the market. Higher Beta means higher volatility. All three companies are more stable than the market overall because their volatility is below 1. Pfizer has the highest Beta, meaning it's more sensitive to market changes than UNH and CVS.

UNH has the highest percentage of internal shareholding, while PFE has the lowest. This suggests that management or employees have less control about the company's equity. UNH has a significantly high percentage of institutional ownership, indicating that institutional investors are highly trust them. Institutional investors have a lower interest level in PFE. The metrics of the percent that held by float Institutions are really close to UNH and CVS, showing that their marketable shares are mainly held by institutions. UNH has the most institutions holding shares, demonstrates the size and variety of its investment base.

UNH's strong performance of market capitalization, institutional ownership ratio and number of institutions holding shares, indicating high market trust and stability. Although CVS has a low beta and a relatively small market cap, it focusing more on stability. UNH attracts the most institutional investors, suggesting that it is considered a solid long-term investment goal. Both internal and institutional ownership of PFE are at a disadvantage, so it need to improve the market confidence of them.

3. Risk Assessment

Table 5. Valuation ratios of three companies

	UNH	CVS	PFE
PE ratio	36.97	10.08	36.35
PB ratio	5.26	0.95	1.86
Dividend Yield	1.49%	4.69%	5.82%
PEG ratio	1.52	2.29	1.3
Index Investor	Yes (S&P500)	Yes (S&P500)	Yes (S&P500)
Momentum 200 day moving average	526.75	59.82	29.07
Momentum 50 day moving average	582.99	64.68	28.2
Intrinsic value	\$585.9>\$562.9	\$153.75>\$56.72	\$25.71<\$25.35
Insider Buying (12 Months)	Buy:108 Sell:53	Buy:33 Sell:16	Buy:6 Sell:20
Stock Buybacks (Quarterly)	1.70B	-3.00M	N/A

Risk assessment is the process of recognizing, analyzing and addressing potential risks, which is aim to assist people or organizations identify possible risk sources, evaluating their impact on assets or goals and developing suitable strategies to reduce risks. Risk assessment can effectively reduce potential losses and help investors avoid disadvantage market changes. Next, risk assessment's decision making based on data, which is more rational than experiences. Also, it can enhances investors risk awareness, helping them maintain stable and growth in a changing environment.

PE ratio is the ratio of a company's market capitalization to its net income, which can determine whether a stock is overpriced or undervalued. A high PE ratio can be a sign that the market has high expectations of future growth or the stock is overpriced. UNH and PFE have higher PE ratios than CVS, indicating they may be overpriced, or investors might have great hopes for their future growth.

PE Ratio (Price to Earnings): UNH and PFE have high P/E ratios of 36.97 and 36.35, respectively, indicating that they may be overvalued or that investors have high expectations for their future growth prospects. CVS has a lower PE ratio, which could mean that the market has lower expectations for its future growth or the stock is undervalued.

The PB ratio is the market capitalization divided by the book value of the company, showing the stock price of a company is related to its net profits. UNH has the highest PE ratio, indicating that the market may view UNH's assets relatively sound because of its high book value. CVS has a low PB ratio, which means its stock price is close to its net income, possibly reflecting its uncertainty future prospects.

Dividend yield is calculated as the ratio of annual dividends to stock price and indicates the return that investors receive from dividends. Higher dividend yield attracts investors who seek a consistent income but this could also indicate that the company has lower growth potential. The higher dividend yields offered by CVS and PFE can appeal income-concerned investors. UNH's lower dividend yield means it focuses more on capital appreciation than dividend payments and may not be suitable for investors looking for a steady income.

The PEG ratio is calculated by dividing the P/E ratio by the company's earnings growth rate, which is used to determine whether a company's stock is properly valued. A lower PEG ratio typically means that a company's stock is more attractive and has a more fair valuation. When growth is taken into account, UNH's moderate PEG ratio is appropriate. CVS has a higher PEG ratio, which means its growth expectations are lower. PFE has the lowest PEG ratio, indicating it has a more reasonable PE ratio and some growth potential.

Those who invest in stock market indices, such as the S&P 500, are known as index investors. The S&P 500, which includes the 500 biggest listed companies by market capitalization, is one of the most representative stock indices in the US stock market. It is frequently seen as a crucial gauge of the state of the American economy and represents the entire performance of the stock market in the country [8]. All three are part of the S&P 500 index, which is suitable for index investors.

The 200-day momentum average is the average closing price of a stock over the past 200 trading days, and it represents the long-term trend in stock prices. A stock price continuously above the 200-day average can indicate strong rising momentum. The 50-day momentum average is a short-term price trend indicating by the average closing price of the last 50 trading days. A breakout of the 50-day momentum average above the 200-day momentum average can be used as a signal of uptrend in the stock. UNH's stock price momentum is strong, indicating a positive price trend of stock. CVS and PFE both have comparatively poor stock momentum, so they may be in a period of oscillations, which means investors should be cautious.

Intrinsic value is the real value of a stock based on a fundamental analysis of the company, which can be compared to the market price to determine whether the stock is overvalued or undervalued. When the intrinsic value exceeds the market price, it means the stock is undervalued and attractive for investment. Both UNH and CVS have intrinsic values that are higher than their current stock prices, suggesting that investors would want to purchase their stocks since they are undervalued. For PFE, there may be some downside risk because its intrinsic value is less than its present stock price.

Insider buying is a company's officers or directors acquire shares of their own firm on the open market. A large amount of insider buying is an indication of optimism about the company's future and could suggest a potential increase in the share price. There are both strong purchase signals from executives of UNH and CVS, showing that the company's top management is optimistic about its future. PFE's executives have fewer buys, which means the company's executives are less confident since the company is facing some uncertainty.

Stock buyback is an act that a company purchases its own stock with cash, usually to boost earnings per share or to give back to shareholders. Stock buybacks can boost the share price and usually mean that the company has healthy cash flow and is confident in its future prospects [9]. Also, the company utilizes the purchase of stock to adjust and maintain balance between debt and equity levels [9]. UNH has a strong stock buyback, indicating that the company has strong cash flow and is

willing to enhance shareholder value through stock repurchases. CVS has a slight negative stock buyback, showing that the company is reducing the number of shares or that the company has less money to spend on buybacks. PFE does not public their stock buyback program.

Therefore, because of its, more institutional ownership, intrinsic value above the current stock price, and stronger stock buyback, UNH might be a safer choice for investors. Despite slower stock market momentum, CVS's strong dividend yield and low PE ratio may appeal to income-seeking investors. PFE may be more vulnerable to negative risk due to its lower institutional ownership, weaker momentum and intrinsic value below the stock price. The combination of AI technology with the healthcare sector will also be a hotspot for future developments that can fully support the management of health services[10].

4. Conclusion

By looking at the financial status of these three companies, the investment preferences of investors can be examined. Because UNH is profitable, has low debt, and has a steady cash flow, it attracts value investors. Because of its great dividend yield, CVS draws income investors. Also, CVS has a low PE ratio, which means the stock is undervalued that appeals to value investors. PFE's strong gross profit margin and net profit margin indicate strong earnings potential. Since Growth investors are often focused on future growth and return potential, they will choose PFE.

In the post-epidemic age, the healthcare sector is dealing with unprecedented challenges and opportunities. In analyzing the financial status and risk management of these three companies, the development problems and potential opportunities within the industry can be revealed. Therefore, the entire industry's optimization can be promoted and the operational efficiency and social benefits can be enhanced. The combination of AI can help doctors make diagnoses, keep medical information up to date, and make health services more efficient. As globalization progresses, the healthcare sector in different countries and regions encounters different economic, social and cultural backgrounds. In the future, cross-country and cross-region comparative assessments can be carried out, to find the best development model and examine the healthcare industry's development pattern under various economies.

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