Johnson & Johnson

TICKER: JNJ

SECTOR: Healthcare

INDUSTRY: Drug Manufacturers – General

DATE: 08th October 2021

TARGET PRICE: $188.88

RECOMMENDATION: BUY

ITIC

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1. BASIC INFORMATION

Johnson & Johnson (NYSE: JNJ) is an American pharmaceutical company founded in 1886. It produces pharmaceutical and medical equipment, hygiene products, cosmetics and provides related services to consumers and health professionals. Considered as the grandfather of workplace health promotion, the company has operations in more than 60 countries. It owns more than 275 subsidiaries such as Band-Aid, Aveeno, Reach, Splenda, Tylenol, Zyrtec and other many well-known consumer brands. With more than 130,000 employees across the world, J&J is considered as the world's largest and most broadly-based healthcare company. Besides, the company total annual revenue exceeding $70 billion.

As a global health leader, Johnson & Johnson is closely monitoring the COVID-19 (coronavirus) pandemic and taking steps to help prevent the spread of the virus. In 2020, the company started to work on its own vaccine in partnership with the US government and launched in 2021 the Janssen vaccine. The vaccine is characterized by a single shot, as opposed to the double shot approach of many of its key rivals, as well as its comparatively easier storage. However, the company is currently studying the option of a booster shot, which could improve by 94% the protection against COVID-19.

2. INVESTMENT SUMMARY

As with most of the pharma industry, J&J's financials were hit by COVID-19 uncertainty in 2020, the impacts of which may be felt for years to come. Indeed, the share reached its lowest price on March 16, 2020, with a price of $119.89 per share. However, over the past two years, J&J share price growth has increased dramatically. Indeed, it went from $128.6 on September 22, 2019, to $164.86 on the same date, a crescendo increase of 28.20%.

Let's focus on the company's performance. With 2.63 billion shares outstanding, the market capitalization of the company is about 433.99 billion in 2021.

The company's revenues are estimated at $ 82,584,000 in 2021, an increase of 0.64% comparing to 2019 when the revenues were $ 82,059,000. However, if revenues increased, net income is decreasing: it went from $ 15,119,000 in 2019 to $ 14,714,000 in 2021, a decrease of 2.68%. This is explained by the increase in the cost of revenue (+3.16%).

From a balance sheet perspective, the company recorded an increase in assets from $ 157,728,000 to $ 174,894,000, an increase of 10.88% between 2019 and 2021. Conversely, the company is also experiencing an increase in liabilities from $ 98,257,000 to $ 111,616,000, an increase of 13.60% during the same period.

Now let's go deep into details with the key metrics. The company has an EV/EBITDA ratio of 14.33. Its P/E is 24.75, its P/S ratio is 4.86 and P/B is 6.23. Moreover, the average beta over the last five years is less than 1 (0.7 exactly). Those great statistics are confirmed by the analysis of company ratios: in 2021, J&J has a ROE of 26.81% and a ROS of 25.98%, as well as a ROA of 8.65%. The company is performing well and has liquidity as evidenced by liquidity ratios: the current ratio is 1.21, the quick ratio is 0.99 and the cash ratio is 0.59, an increase of 9.26% compared to 2019.

The recommendation is to buy the company shares. As one of the leading players in the pharmaceutical and medical market, as well as one of the world's largest companies, it is the choice of safety because it is not likely to collapse overnight. In addition, as a one of the biggest actors in Covid-19 fight, J&J stocks may need to grow in value in the future as analysts have seen so far.

3. BUSINESS DESCRIPTION

In 1886 in New Brunswick, New Jersey in the United States, three brothers – Robert Wood Johnson, James Wood Johnson, and Edward Mead Johnson - founded Johnson & Johnson. The starting idea was to create a line of ready-to-use surgical dressings but eight years later, J&J's heritage baby business began, by the launch of maternity kits and Baby Powder. In 1961, J&J acquired Belgium's Janssen Pharmaceutical N.V. Today, Janssen is one of the world's leading research-based

pharma companies and markets prescription medicines in the areas of gastroenterology, women's health, mental health, neurology, HIV/AIDS, and COVID-19.

Wellness is part of the company credo and has served as a guiding principle. Its program, Live for Life, was started in 1978. The goals of the program are focused on the 3Ps: Protection (occupational health and safety), Prevention (keeping the well, well; managing illness and injuries) and Performance (leading in business). Johnson & Johnson incorporates health metrics into its overall company sustainability goals, and regularly measures global progress toward achieving a culture of health (**see Management Governance part).**

The multi-billion market cap company has three key segments:

- *Pharmaceuticals*, which makes up to 50% of Johnson & Johnson's total revenues (or $45.57 billion in sales). This includes key biologic medications such as treatment of immune-mediated inflammatory diseases, cancer, psoriatic arthritis, and schizophrenia.
- *Medical devices and diagnostics*, which represents up to 40% of the total revenues (or $22.96 billion in sales). This includes orthopedics (joint reconstruction, trauma, spine, sports medicine, and power tools), surgery (surgical systems and instruments), interventional solutions (heart rhythm disorders and neurovascular care support for health care professionals) and vision solutions.
- *Consumer products*, which represents up to 10% of the total revenues (or $14.05 billion in sales). This includes skin health, self-care, and essential health.

Finally, the company is also working on improving the Janssen single-dose vaccine by launching a booster dose (see previous part).

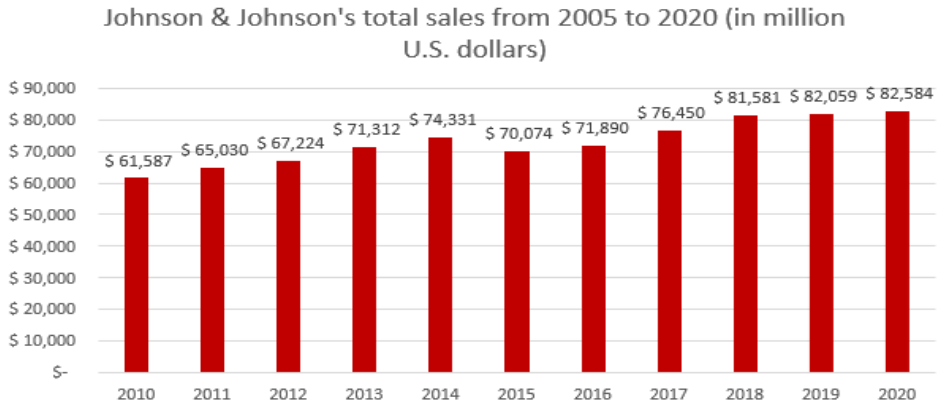

Figure 1 – Total revenues, in millions of US dollars, between 2010 and 2020. (SOURCE: Statista)

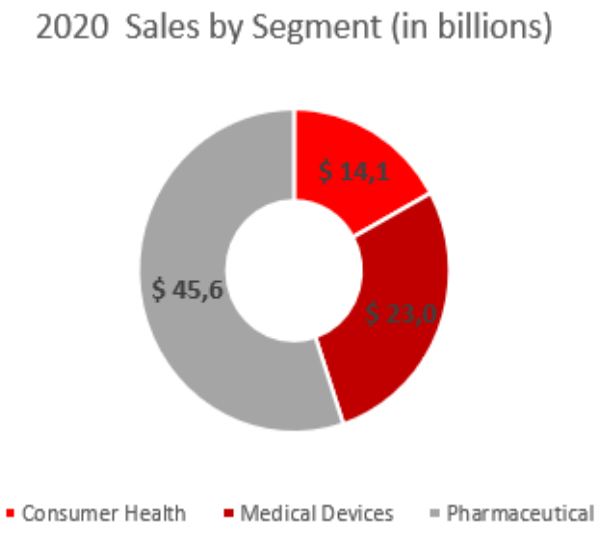

Figure 2 – Total revenues by segment, in millions of US dollars, in 2020. (SOURCE: Johnson & Johnson)

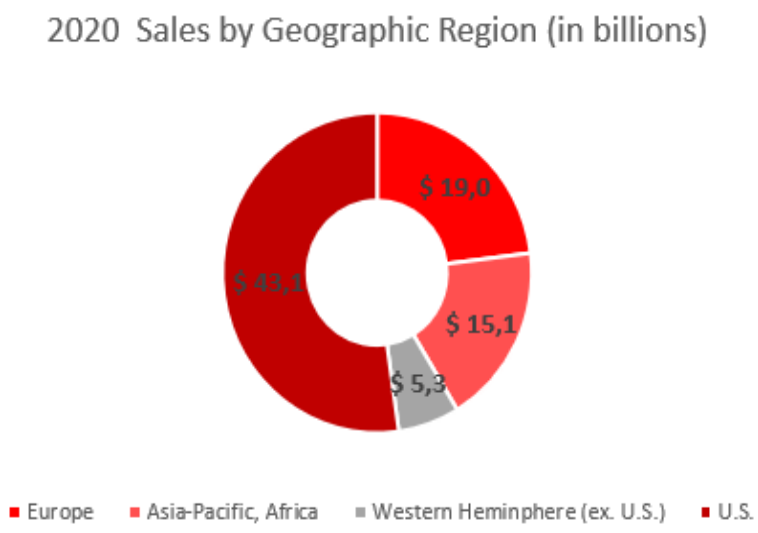

Figure 3 – Total revenues by geographic area, in millions of US dollars, in 2020. (SOURCE: Johnson & Johnson)

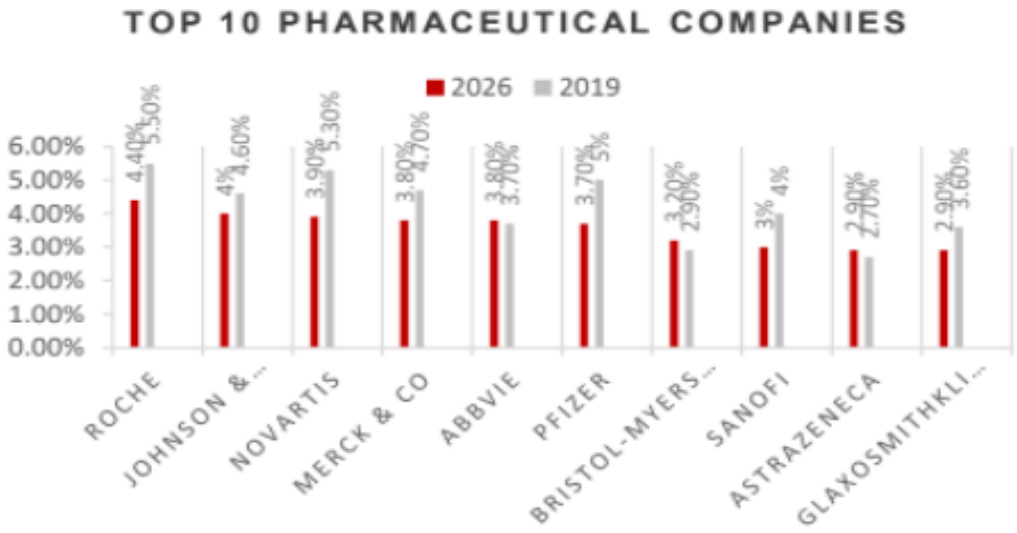

Figure 4 – Top 10 worldwide companies based on prescription drug market share in 2019 and 2026 in percentage. (SOURCE: Statista)

4. MANAGEMENT & GOVERNANCE

4.1. Management & Governance

Name	Position
Alex Gorsky	Chairman & Chief Executive Officer
Joseph J. Wolk	Chief Financial Officer & Executive Vice President
James D. Swanson	Global Chief Information Officer & Executive VP
Paulus Stoffels	Chief Scientific Officer
Mathai Mammen	Head-Science & Development
Frederic H. Moll	Chief Development Officer
Kathleen M. Widmer	Group Chairman-Consumer North America
Ashley A. McEvoy	Executive VP & Worldwide Chairman-Medical Services
Neil Ackerman	Head-Innovation, Global Supply & Transformation
Scott White	Company Group Chairman
Sarah L. Colamarino	Vice President-Corporate Equity
Joaquin Duato	Vice Chairman-Executive Committee
Jennifer Taubert	EVP & Worldwide Chairman-Pharmaceuticals
Mtthew Stuckley	Senior Finance Director
Peter Shen	Global Head-Research & Development
William E. Cohn	Vice President-Medical Services
Robert J. Decker	Chief Accounting Officer & Controller
Peter M. Fasolo	Chief Human Resources Officer & Executive VP
Matthew Orlando	Secretary
Michael H. Ullman	Executive Vice President & General counsel
Chris DelOrefice	N/A

Michael E. Sneed	Chief Communication Officer & Executive VP
Lisa Romanko	Senior Director-Investor Relations
Hubert Joly	Independent Director
Mark A. Weinberger	Independent Director
Nadja Y. West	Independent Director
Anne M. Mulcahy	Lead Independent Director
Ronaldo A. Williams	Independent Director
Charles O. Prince	Independent Director
Ian E. L. Davis	Independent Non-Executive Director
A. Eugene Washington	Independent Director
Mark B. McClellan	Independent Director
D. Scott Davis	Independent Director
Mary C. Beckerle	Independent Director
Jennifer A. Doudna	Independent Director
Maryllin A. Hewson	Independent Director

4.2. Institutional Ownership

Name	Shares Held	% Shares Out
The Vanguard Group, Inc.	220,690,857	8.38%
BlackRock Fund Advisors	123,197,401	4.68%
SSgA Funds Management, Inc.	55,884,022	2.12%
Geode Capital Management LLC	42,214,232	1.60%
State Farm Investment Management Corp.	34,574,792	1.31%
Wellington Management Co. LLP	32,934,778	1.25%

While the Top Institutional Holder, Vanguard Group, only holds 8.79% of the shares, 69.41% of the shares are held by institutions. This shows a high dilution of the company's shares, with currently 4,218 institutions holding shares.

As for shares held by insiders, the number is just 0.08%, with the CEO, Alex Gorsky, at the top of the list with almost 500 thousand shares. In the last 6 months, no insider trade has been made. The last insider trade was back in February 12, 2021.

5. RISK FACTORS

Worldwide Supply and Demand Chain

As a multinational company, J&J faces significant competition in all operating segments - Consumer, Pharmaceuticals, and Medical Devices – and in all geographic markets.

On one hand, the current fast-changing environment increases the competitive pressures to be aware of the best approaches to conquer the markets. As a consequence, every company in the market must track the developments of new products made by their competitors and must sufficiently invest in research and development to figure out a way to be one-step ahead of their competitors.

On the other hand, there are the manufacturing chain threats that could negatively affect the company's sales, reputation and consequently, its earnings. Indeed, the J&J manufacturing chain is spread all over the world and relies on third parties. Thereby, this huge external and internal manufacturing dependence leads to a reinforced concern regarding unanticipated interruptions and delays that can result in product shortages and declines in sales.

In addition, there is an extra worry about the counterfeit versions of J&J products. The crisis brought about by the covid-19 pandemic increased the development of these counterfeit markets since there is less money available for most families and therefore, the search for counterfeit products is higher. Thus, it can affect the clients' trust on J&J products, which leads to a reduction in the company's sales, to product recalls, and it can increase the threat of litigation.

Financial and Economic Market Conditions

In the same way that is important to manage effectively the levels of production and sales, the same applies to the tracking of the economic market conditions, which has a big importance on the financial health of a multinational company.

Since almost half of the company's sales in 2020 happened outside of the U.S., the financial instruments to mitigate the fluctuations in currency exchange rates have a critical role in the company's earnings. In fact, being that the forex market is one of the most unpredictable and volatile markets, changes in a foreign currency relative to the U.S. dollar could have a significant impact in the company's revenues if it is not accurately hedged.

Furthermore, there is a huge effort to maintain a company's profitability when the company experiences high inflation economies, which is the case of J&J with Argentina and Venezuela. Although all the efforts made in terms of productivity improvements, cost saving program and periodic price rises, this sustained inflation could harmfully affect the company's revenues.

Climate Change Concern

With the current climate change concern, companies are forced to maintain and reduce their carbon emissions levels.

Natural disasters and extreme weather conditions are the more visible consequences, and they may disturb the whole operational chain of the company, affecting from the raw materials to the final products, increasing the operational costs.

However, there are also the financial problems, i.e., most investors - public and private - are warning about this theme "tackling global warming must continue to be a priority for public companies" (Financial Times, Big investors warn companies against backtracking on climate change). The increasing concern about this matter has developed a lot of laws and procedures that companies must adopt if they want to continue and survive in the market.

6. INDUSTRY OVERVIEW & COMPETITIVE POSITIONING

6.1. Industry Overview

A common characteristic to any company is the submission to many political factors. But, when it comes to a Pharmaceutical Company, everything gets a bit more complicated. The possibility of growing inside of a country is highly affected by how the government operates – If it's more or less regulated, how stable is the country's government and even the possibility of a military invasion could affect how J&J performs.

Regarding economical survivability and profit, there are two main groups of factors that come into play in a company like J&J. These are the Economic factors and the Social factors.

Beginning with the Economic factors, we can start by pointing out that a good economy will be positive for J&J, but it is not necessary. Selling mainly products with a low elasticity of demand, it is proven that J&J products will always sell regardless of how the country's economy is going. Nonetheless, there are some factors, like interest rates, labor rates, inflation, etc., that will always affect J&J performance, like any other company.

Finally, as J&J creates more and more wellness and lifestyle brands, like Johnson's (Shampoo) and Listerine (Mouthwash), it relies more and more on social factors, such as the health consciousness movement, which are growing in importance quickly. However, as social factors become more important, J&J becomes more prone to being affected by scandals. This means that J&J should be more transparent and careful, to avoid the risk of being boycotted.

Technological advancements are key to everything in our life, as tech is getting more and more relevant every day. This obviously means that the Pharma Industry would be affected too, meaning that J&J needs to always invest in R&D.

Finally, we must remember that J&J should always protect the environment, by following each country's law as the bare minimum, to avoid getting in legal problems and losing profits over fines.

6.2. Competitive Positioning

J&J's competition is rather small. Since its revenue is mainly from the USA (52%), the most impactful market is obviously the North American market. This market is characteristically an Oligopoly, due to the possibility of patenting drugs and the price of entering the industry, as R&D is necessary and very expensive. This means that, unless the new entrant is backed by a lot of capital, it will not survive when competing with companies like J&J, Pfizer, Merck, etc. With that said, the only thing that J&J needs to do to survive the competition and new entrants is to secure more capital to invest in R&D, thus having the possibility to create new patents.

All of this will end up also affecting the number of substitute products, which will be greatly reduced, especially since some are even impossible to exist, as patents are set in place. Many times, the expensiveness of the R&D of a new drug is not worth it, when the market is already dominated by a company which holds the patent for the original and already popular drug. However, in some cases, like the Covid19 Vaccine, it is worth it to R&D a new, different drug, as the demand is large enough to have space for many companies to compete and the market for this specific drug was still in an early stage, thus creating a race for who has the vaccine ready first and who is able to produce and distribute more.

In this type of industry, the company holds a lot of power, either over the suppliers and the customers. Since suppliers only sell raw materials, there is little power to negotiate and bargain a better deal for the side of the supplier, as the company can always get a new supplier. As for the customers, there is little bargaining power as the company sells something that the customer needs, either to be healthier or in some cases, to survive. For this reason, products sold by Pharma companies usually have a very low elasticity of demand.

7. FINANCIAL ANALYSIS

7.1. Revenues

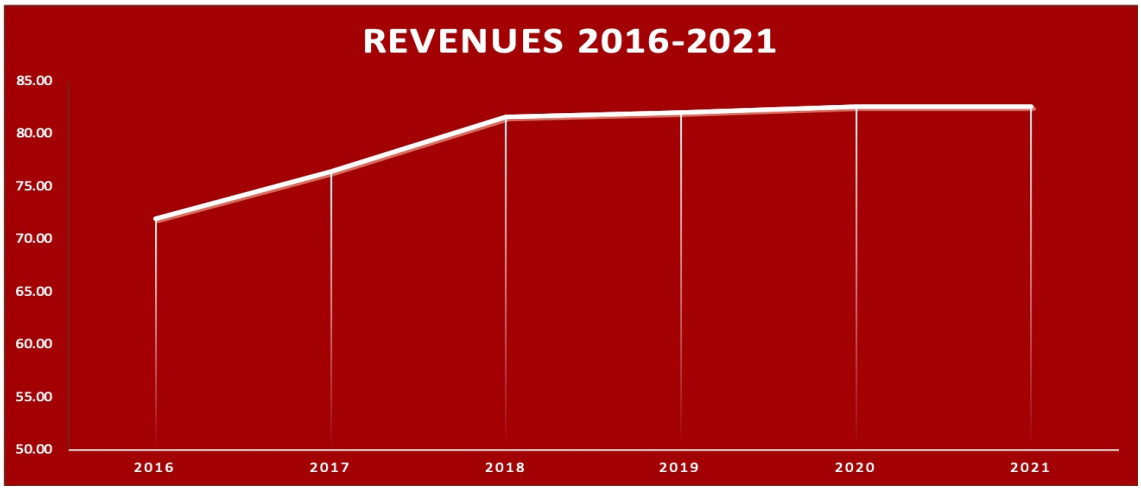

Figure 5: Total revenues, in millions of USD, between 2016 and 2021 (Source: NASDAQ)

As shown in the graph, the company's total revenues have been rising steadily up until now. Rising more than 14% from 2016. From 2018 till now, revenues have been pretty steady however, it could possibly be on track to continue increasing, seemingly more than other years (if we assume a constant growth this year), which can be explained by their vaccine "Janssen Ad26.CoV2.S".

7.2. Net Income

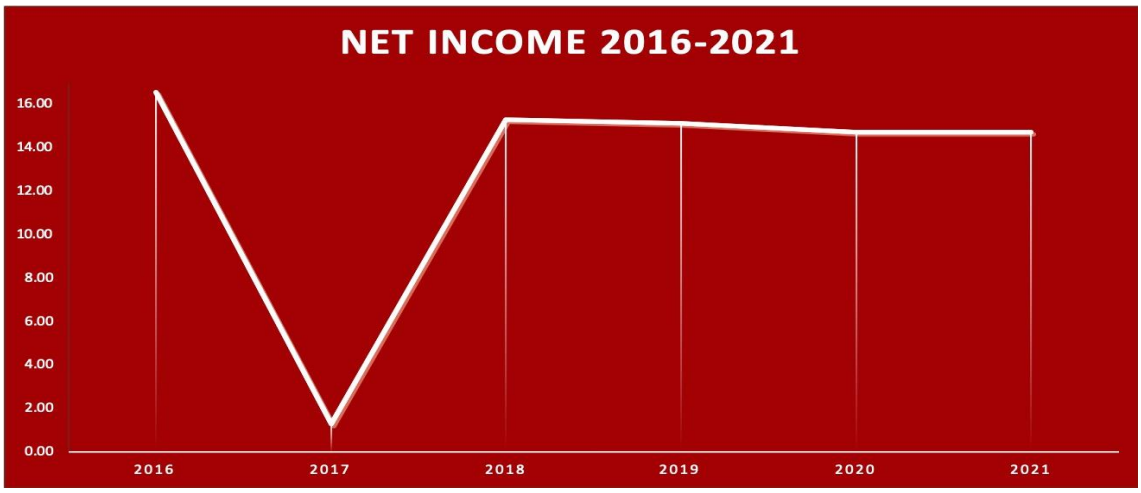

Figure 6: Total net income, in millions of USD, between 2016 and 2021 (Source: NASDAQ)

Net income represents the sales made minus the cost of goods sold, selling and both operating and general expenses. It's an indicator of profitability and it's helpful for shareholders to check by how much revenue exceeds the expanses of a company.

Through this figure we can assess that, like the revenues graph, their net income also had its fluctuations, although more noticeable ones. Unlike the revenues, their net income didn't grow steadily in the beginning, falling to 1.30M USD in 2017. It then increased in 2018 and has remained steady, not fluctuating much up until now, similar to Total revenues where it is steady from 2018 till now.

7.3. Net Profit Margin

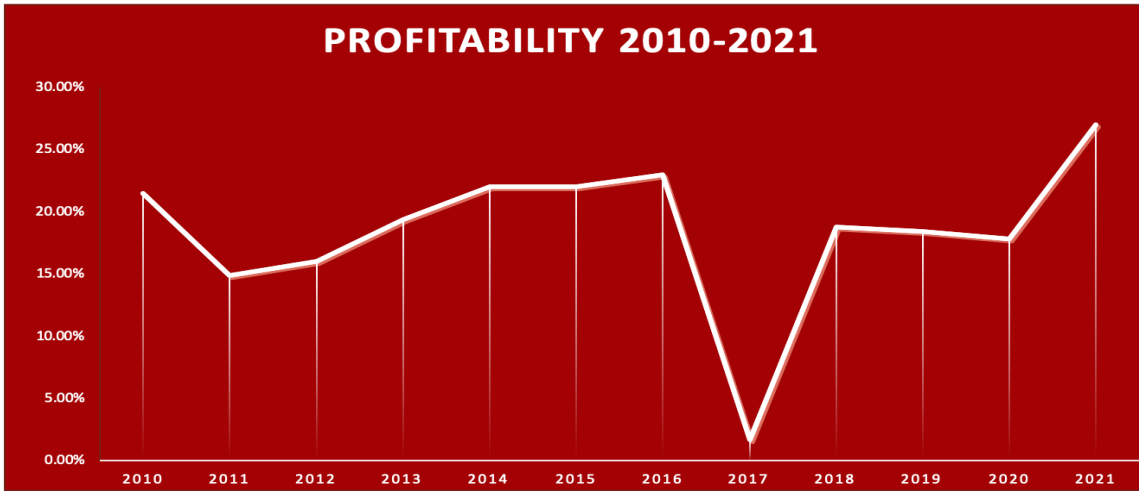

Figure 7: Johnson & Johnson's profitability, between 2010 and 2021, in percentage (Source: Macrotrends)

A company's net profit margin, or simply net margin, is very efficient in measuring their ability to make profit. It represents the percentage of the revenues that are net income. The higher the percentage, the better the company is at making profit.

As shown above, Johnson & Johnson has had an average net margin of 17.77% from 2010 to 2020. This means that through one dollar of revenue, the company generates 17.77 cents of profit. Their net margin grew from 2011 until 2016 and after that they had a very rough year, generating only 1.7 cents of profit with one dollar of revenue. Despite the steep climb from 2017 to 2018, it decreased again until 2020. However, this year has been very profitable so far, with the company reaching a value of 27% for this indicator by the end of the first semester.

7.4. Debt to Assets

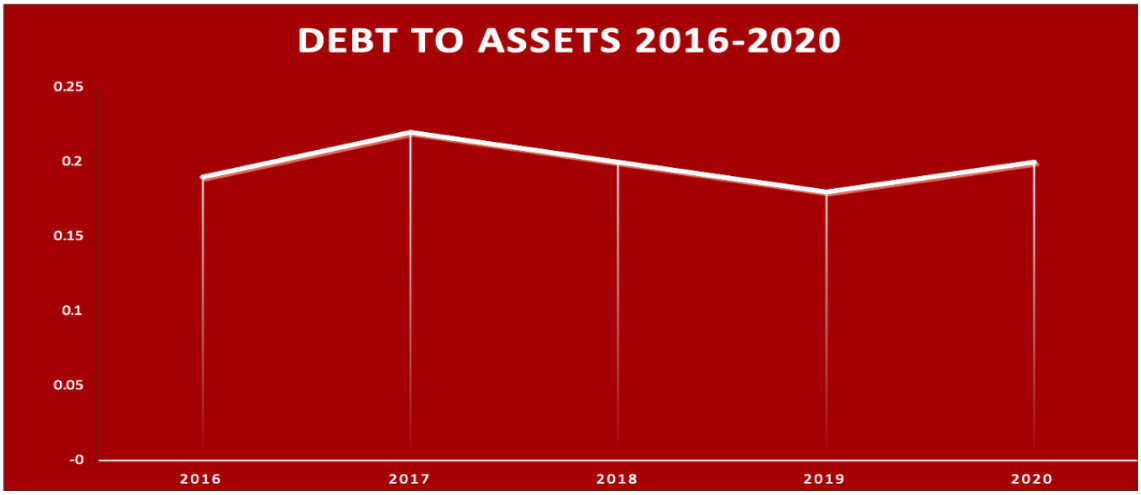

Figure 8: Johnson & Johnson's debt to assets between 2016 and 2020 (Source: Stock Analysis on Net)

Debt to assets is a leverage ratio that is used to determine the total amount of debt proportionate to the volume of assets that a business holds. The higher the ratio, the more debt the company has relative to its assets thus making it riskier to invest in it.

Over the years, Johnson & Johnson's debt to assets ratio hasn't really changed, having maintained very constant at the 0.2 line, so there wasn't any relevant increase or decrease in this matter. This means that last year, 20% of the company's assets were financed by creditors and 80% were financed by owners' equity.

7.5. Interest coverage

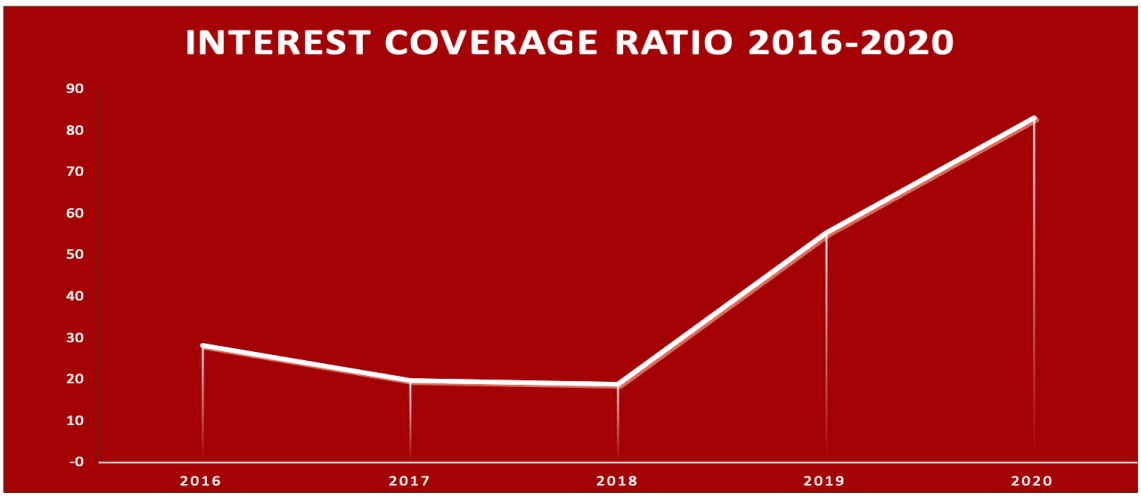

Figure 9: Johnson & Johnson's interest coverage ratio between 2016 and 2020 (Source: Stock Analysis on Net)

This is another useful ratio as it shows us how easily a business can pay interest on its outstanding debt. The lower the ratio, the more the company is weighed down by debt expenses and the less money it has available to spend elsewhere. After a decrease in interest coverage from 2016 until 2018, it skyrocketed to 83.07 in 2020. We can easily assess that Johnson & Johnson can meet its interest expenses. Last year, the firm's operating income was 83 times higher than its interest expenses.

7.6. Current ratio

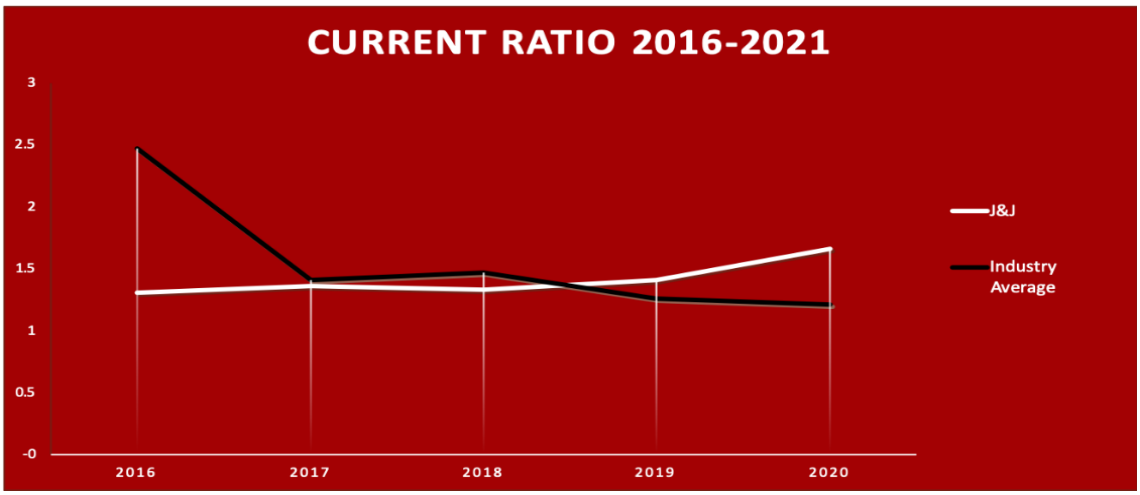

Figure 10: Johnson & Johnson's current ratio vs industry average between 2016 and 2020 (Source: Macrotrends and ReadyRatios)

This ratio checks a business's capability to pay short-term obligations, disclosing shareholders how an enterprise is able to boost its current assets in order to appease its current debt and other liabilities.

Looking at 2020 values, we can observe that Johnson & Johnson's current ratio was lower than its respective industry's average which could represent a higher risk of default or distress. The bigger change was between 2016 and 2017, where it dropped 1.6 points, the same period of time when the company registered its lowest profitability in the last 11 years.

7.7. Quick ratio

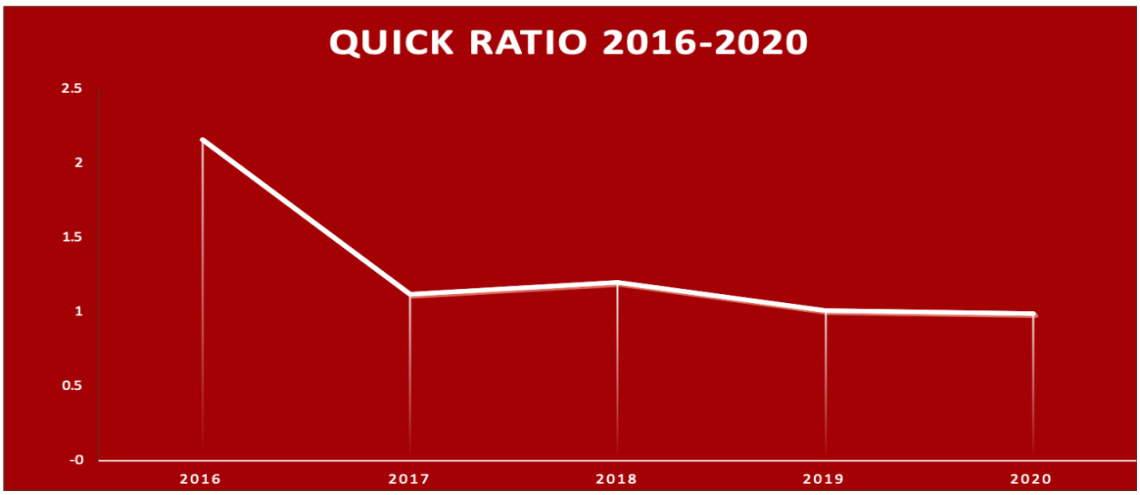

Figure 11: Johnson & Johnson's quick ratio between 2016 and 2020 (Source: Macrotrends)

This indicator is used to assess a company's short-term liquidity position and it determines its capability to satisfy its short-term liabilities with its most liquid assets.

As we can conclude from the graph above, Johnson & Johnson has become more and more likely to struggle with paying debts which is something we also concluded with the previous ratio (current ratio).

7.8. P/E ratio

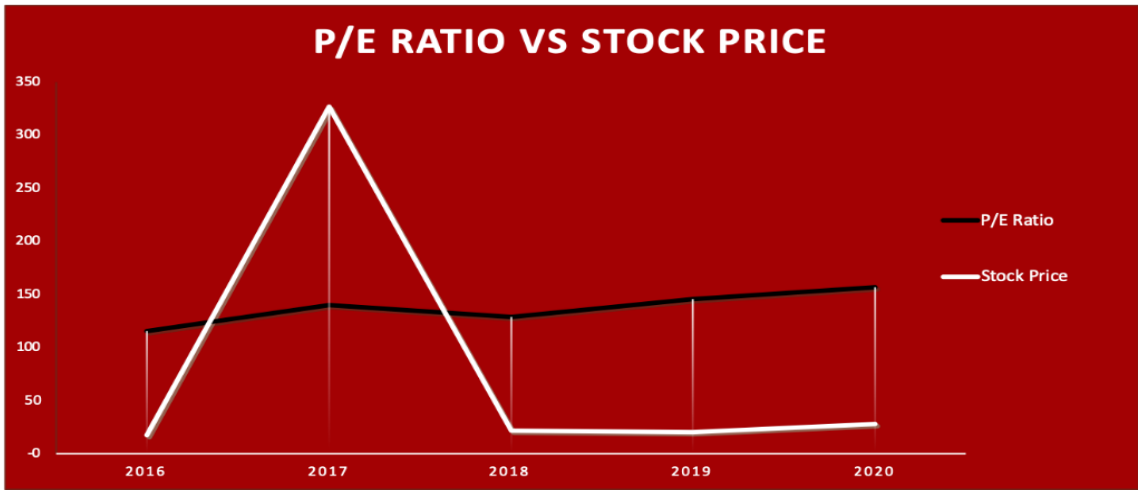

Figure 12: Johnson & Johnson's P/E ratio and stock price between 2016 and 2020 (Source: Macrotrends)

This indicator is used to value a business which measures its current stock price relative to its earnings per share. It's used by investors to assess the relative value of an enterprise's stock. A high P/E ratio may indicate that a company's stock is overvalued.

In 2017, Johnson & Johnson's P/E ratio rose by 1776% to a very high value when compared to other years, which meant that its stock was overvalued. In fact, if we look at their profitability and stock price in 2017, we can assess that despite a steep decline in profitability, Johnson & Johnson's stock price didn't fall, in fact, it rose.

7.9. P/B ratio

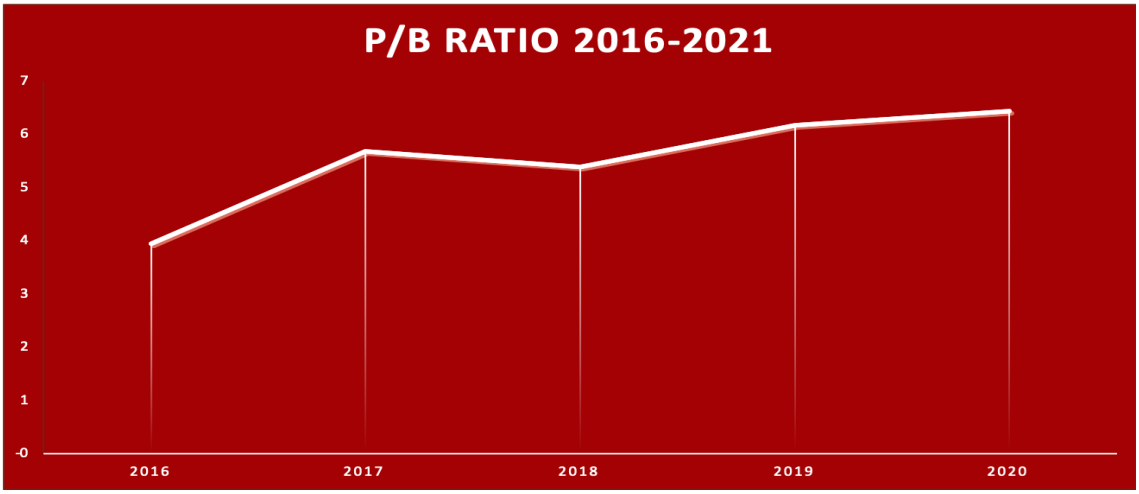

Figure 13: Johnson & Johnson's P/B ratio between 2016 and 2020 (Source: Macrotrends)

This ratio is used when analysts want to compare a company's market cap to its book value. A higher-than-one P/B ratio hints that the share price is trading at a premium to the company's book value.

In this case, for example, in 2020, Johnson & Johnson's stock was trading at 6.43 times its book value, suggesting that its stock price might have been overvalued relative to its assets.

7.10. EBITDA

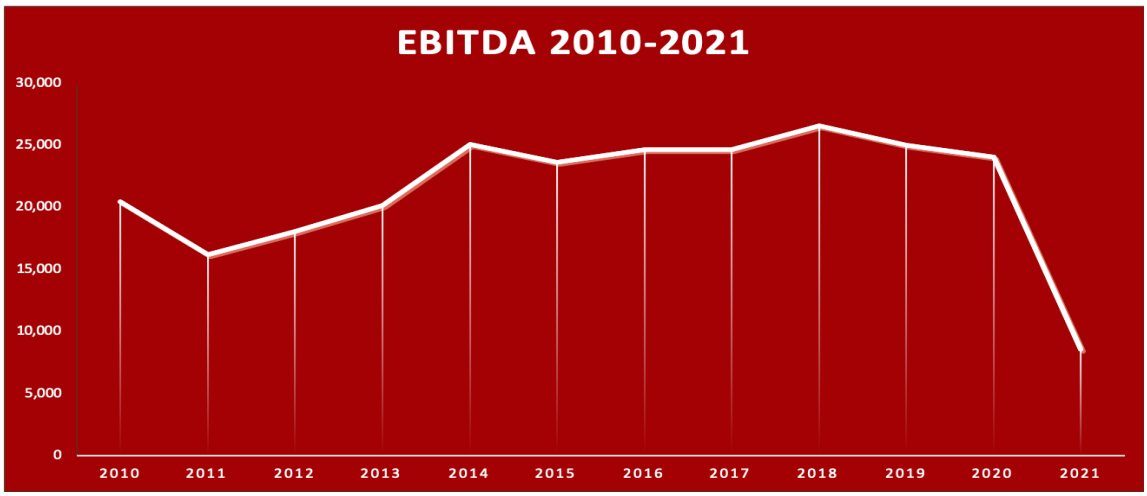

Figure 13: Johnson & Johnson's EBITDA, in millions of USD, between 2010 and 2021 (Source: Macrotrends)

Earnings before interest, taxes, depreciation, and amortization, or simply EBITDA, is an evaluation of a business's overall financial performance and in some cases comes as an alternative to net income.

After a decrease in 2011, their EBITDA started rising until 25.058 where it remained rather steady with just some small fluctuations above and below the 25 thousand line, until 2020.

8. VALUATION

8.1 Overview

As for the 27th of September, JNJ market capitalization was close to $431B. When compared to some of its competitors, Pfizer with $242.6B and Merck & Co. with $188.49B, there is a significant difference between them in terms of market cap, as seen on the table below.

JNJ has returned around 5% from the start of 2021, with its competitors returning 23,7% and -5,99%, respectively.

Based on historical data and on a broader perspective, the price per share in September 2019 was around $129 compared to the current price of around $163. This represents a 26% increase in its value, and a return of approximately 12.5% per year.

In terms of shares outstanding, JNJ has 2.63B of them, and plans to buyback more according to one of their reports.

Company	Type	Valuation	Difference to Johnson & Johnson
Johnson & Johnson	Public	$431.01B	-
Pfizer	Public	$242.6B	-43.71%
Merck & Co.	Public	$188.49B	-56.27%

8.2 Stock performance and multiples comparison

The popularity around the stocks of companies that produce the vaccines to combat the virus possibly made Johnson and Johnson's stock hit recently a new high on August 1st, of $179.92 per share. But, as it's seen in the graph below, since the middle of August JNJ's stock has been on a downtrend, following the same move as S&P500. In fact, that move matches when the company announced Chief Executive Alex Gorsky would step down. As of September 24th, the last reference day of analysis, JNJ's stock was trading around $164 per share, marking a -9% move from that high.

While studies around the effectiveness of JNJ's vaccine are still coming out, the volatility around the stock will continue. As shown, even though the company said that trial data showed that a two-dose version of the company's vaccine provides 94% protection against symptomatic infection, the stock is still in a downtrend.

As we extend the time horizon, we see that in the last year, the lowest price reached was on October 30th 2020, when was trading at $137 per share. Meanwhile, until September 24th 2021, the stock recovered 20% from that lowest value. However, JNJ's stock has significantly under-performed the market. In the last five years, the stock returned 38.34% to investors, while S&P500 105.82%.

For the near future, investors deposit all hopes in Johnson and Johnson next earnings report, which is expected to be on October 19th. The company is expected to report Earnings per Share of $2.38, up 8.18% from the previous year quarter. Analysts are also expecting earnings and revenues to climb plus 10% year-over-year.

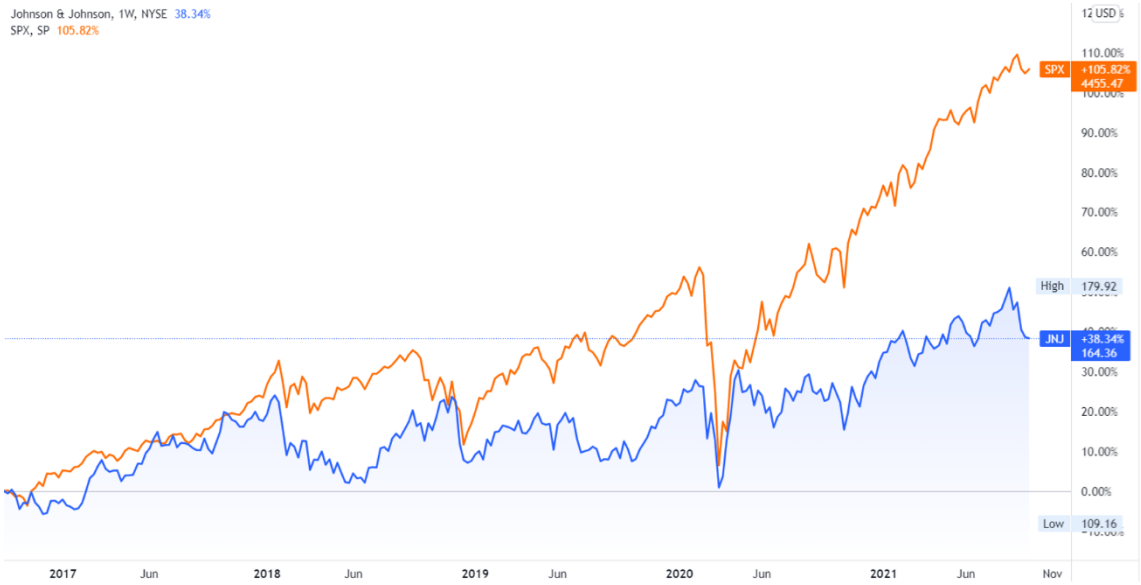

Figure 15: Percentage returns of J&J and the benchmark S&P 500 (SOURCE: TradingView)

As we compare with the industry competitors multiples, we see that Johnson and Johnson is the biggest company by market capitalization. In fact, the market capitalization of JNJ's is more than double Pfizer's.

But, as we see each column, we notice that in almost every ratio, JNJ is outperformed by the competitor Eli Lilly and Company. Just JNJ's PEG ratio, which is 14.54, is higher than Eli Lilly and Company (1.90).

However, JNJ's metrics are consistent. All values seem to be around the median industry values, with the exceptions operating above the industry average being EV/Revenues, EV/EBIT, PEG, Price to Sales, Price to book value and EPS.

With EV/EBIT being 21 times, this tell us that JNJ has a large depreciation and amortization expense, as you can see, there is quite a big difference between EBIT and EBITDA multiples. This is a non-cash expense so, in a sense, it might not impact cash flow or valuation, but the flip side is that it most likely indicates a large amount of capital expenditure that are required for this business.

Looking at P/E ratio, we see that JNJ does not have the highest P/E (24.72) of the industry, which may cause investors to think it's cheap. A note also for EPS, which is high (6.65) compared to peers. Earnings per share measures a company's ability to produce net profits for each common share.

Name	Market cap (Billion of $)	Enterprise Value (EV) (Billion of $)	EV/Revenues (TTM)	EV/EBIT (TTM)	EV/EBITDA (TTM)	P/E (TTM)	EPS (TTM)	PEG	Price to Sales (TTM)	Price to book value	1-y Return (as of September 24th)
Johnson & Johnson	432.67	440.85	4.94	21.64	15.82	24.72	6.65	14.54	4.92	6.22	11.73%
Bristol Myers Squibb	133.83	166.11	3.74	-60.91	20.77	N/A	-2.25	N/A	3.07	3.64	0.87%
Bayer	53.87	88.45	1.77	-12.25	10.42	N/A	-0.87	N/A	1.08	1.47	-14.23%
Pfizer	246.35	262.39	5.08	19.74	14.37	18.86	2.33	23.99	4.82	3.51	27.47%
Merck & Co.	186.33	204.28	4.21	27.51	18.78	33.61	2.20	4.89	3.85	5.6	-6.72%
Eli Lilly and Company	221.62	234.86	8.79	32.04	26.76	35.30	6.66	1.90	7.91	34.39	56.43%
Median	203.98	219.57	4.58	20.69	17.30	29.17	2.27	9.72	4.34	4.62	6.30%
Min	53.87	88.45	1.77	-60.91	10.42	18.86	-2.25	1.90	1.08	1.47	-14.23%
Max	432.67	440.85	8.79	32.04	26.76	35.3	6.66	23.99	7.91	34.39	56.43%

Values according to Gurufocus; Macrotrends

TTM as of June 2021

Values in billions of USD, except for percentages

8.3 DCF Model

As usual, it will be used the Discounted Cash Flow model. The basic idea around this model is: we try to determinate what the company value is today based on how much money will the company be able to generate in the future. For that, it's forecasted the cash flows of the company for the next five years. Also, we discount back that cash flows to today's value. The rate at which we discount back the cash flows is the WACC, meaning the Weighted Average Cost of Capital.

But because a company will probably still be running after that period, a terminal value is also calculated. To do that, we use a perpetuity growth (g) rate to achieve the Intrinsic Value of the business in perpetuity. In the end, we come up with a share price. As you can see, this whole model involves making big assumptions.

- ***WACC***

$$WACC = Re * \frac{E}{(E+D)} + Rd * \frac{D}{(E+D)} * (1-T)$$

$$Re = Rf + \beta * (Rm - Rf)$$

Kd=Interest Expenses/Book to Value Debt

As for a first analysis, it is needed to understand both the cost of equity (Re) and debt (Rd). For the cost of equity, it was needed to have some assumptions. Firstly, for the risk-free rate assumed, it was considered the 10-Y Treasury U.S. Bills, with a rate of 1.53%. For the market return it was considered to be 9.20%, as it is according to the Goldman Sachs U.S. Stock Market Average Return. As for the last part, the company's beta was assumed to be **0.7**. With all these values, the computed cost of equity turned to be approximately 6.90%.

For the cost of debt, the process is simpler than for the cost of equity that was previously described. For this, it was the average of the interest rates of the fixed banknote that correspond to the company's debt. The cost situates itself at around 2.85%.

For the tax rate, it was used as an assumption that it was the average tax rate that Johnson & Johnson has been paying for the last years, which is 11.8%.

The equity value was computed using the current share price multiplied by the total shares outstanding. The value of debt was taken directly from the company's balance sheet, considering the book-value of debt in this computation.

With all these values, and using the formula above, it is possible to calculate the WACC. Computing all of this, the company's WACC is 6.87%. It is more influenced by the cost of equity, since it has a larger portion in the company's capital structure.

- **Free Cash Flow and Terminal Value**

Regarding FCFF in the future, as already mentioned, it was used the FCFF for the next five years, considering how much would the company grow each year at the average historic growth rate of the FCFF of JNJ. We predict that Johnson and Johnson will have a FCFF by 2025 of $28,143 million. Next, the terminal value was calculated

using JNJ's growth rate of FCF for the next five years. The result we got was around $533,617 million.

Finally, the enterprise value (of $483,804 million) was calculated by adding the present value of the FCFF and the terminal value. And, for the equity value, we subtracted the enterprise value to debt value of 2020 ($3,265 million), reaching the estimated equity value of $373,554.34 million.

The last step is to reach a share price target and, for that, we divided equity value by the number of outstanding shares. A share price of $182.71 was hit, which represents an upside potential of 11%.

	2021	2022	2023	2024	2025
FCFF	21 577	23 058	24 642	26 334	28 143
Terminal Value					53 3617
PV (FCFF)	20 190	20 191	20 191	20 191	20 191
PV (Terminal Value)					38 2851

8.4. Sensitivity Analysis

The sensitivity analysis is an extremely useful tool in the financial world. With this tool, it is possible to determine how the movements of two variables can alter the specific variable that was previously calculated using those two as assumptions. In a real-life example, it is almost sure that the two assumed variables can slightly deviate from the calculated values. The sensitivity analysis serves an amazing purpose at helping investors make a more rational decision. With this tool, investors can analyze how the final value may react to almost certain deviations, and from there assess if it matches their risk tolerance and investing confidence.

For the analysis of Johnson and Johnson, the calculated WACC was 6.87% and the perpetuity growth rate used was 1.23%. Taking in account these two values for the variables, this sensitivity analysis showed how deviations from these values can consequently affect the company's calculated Enterprise Value, its predicted stock Value and the respective upside or downside.

As for a brief explanation on how these two variables work, the more the WACC increases, the more expensive it turns out for the company to finance themselves (acquiring capital), decreasing the companies worth and their stock price, making it a smaller return/bigger loss. If the WACC decreases, the opposite happens. As for the perpetuity growth rate, the higher it is, the more the company is expected to grow in the future, making the enterprise value higher, such as their stock and potential upside. The inverse happens when the perpetuity growth rate decreases.

		Target Price (USD)				
		WACC				
		5.50%	6.00%	6.87%	7.00%	7.50%
Growth Rate (g)	0.50%	213.65	193.46	165.92	162.44	150.26
	1.00%	233.10	209.00	176.89	172.89	159.02
	1,23%	243.57	217.24	182.58	178.31	163.51
	2.00%	288.65	251.73	205.58	200.07	181.30
	2.50%	330.32	282.25	224.85	218.19	195.78

		Upside Potential				
		WACC				
		5.50%	6.00%	6.87%	7.00%	7.50%
Growth Rate (g)	0.50%	29.99%	17.71%	0.95%	-1.17%	-8.58%
	1.00%	41.82%	27.16%	7.62%	5.19%	-3.25%
	1,23%	48.19%	32.17%	11.09%	8.49%	-0.52%
	2.00%	75.62%	53.16%	25.08%	21.72%	10.31%
	2.50%	100.97%	71.72%	36.81%	32.75%	19.12%

		EV ($Millions)				
		WACC				
		5.50%	6.00%	6.87%	7.00%	7.50%
Growth Rate (g)	0.50%	460 244	412 182	348 861	341 039	313 972
	1.00%	472 782	423 283	358 072	350 017	322 147
	1,23%	478 650	428 477	362 382	354 217	325 970
	2.00%	498 761	446 277	377 147	368 608	339 069
	2.50%	512 213	458 182	387 019	378 230	347 825

8.4. Mean Analyst Recommendation

According to other analysts and the market, the recommendation is BUY, with an average price target of $188.88. Our recommendation is also a buy, aligning itself with the market sentiment. The price target calculated was $182.71, which is higher than the current stock price. Johnson & Johnson is expected to continue growing in the future, and the current share price may not be reflecting that growth properly yet.

The following table indicates the other analysts' recommendations for this stock.

Recommendation	July 2021	August 2021	September 2021
Strong Buy	6	6	4
Buy	**9**	**8**	**8**
Hold	5	6	**8**
Underperform	0	0	2
Sell	0	0	1

Source: Yahoo Finance

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