

Eco 22250 - Corporate Finance

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Final Project

Stock: **Johnson & Johnson**

Executive summary

In our analysis, we selected Johnson & Johnson (JNJ), a company that solidly qualifies as a large-cap stock with a market capitalization of \$353.80 billion, far exceeding the \$10 billion threshold commonly used to categorize large-cap stocks. Johnson & Johnson's financial ratios signal that it is more of a value stock rather than a growth stock. This is indicated by its trailing Price-to-Earnings (P/E) ratio of 19.76 and a Price-to-Sales (P/S) ratio of 4.52, which, while not exceedingly low, do not reach the high levels often associated with growth stocks. Additionally, the PEG (Price/Earnings to Growth) ratio of 0.88 points towards potential undervaluation relative to future earnings growth.

Observing the performance trends of Johnson & Johnson over the past year and year-to-date, the stock has not displayed the upward momentum that characterizes market favorites. Both the 1-year and YTD performance graphs indicate a descending pattern in stock value, suggesting that JNJ might not currently align with the characteristics of a market darling. The observable reduction in share price across these periods may signal investor caution and prompt a reassessment of the company's strategic positioning and future projections.

Investment Decision

The decision to buy or sell a stock depends on multiple factors, including market trends, the company's financial health, and individual investment strategies. As of April 26, 2024, examining the provided 1-year and YTD stock performance charts for JNJ, the stock does not exhibit the bullish signals typically sought by short-term traders. The 1-year chart depicts a peak and a subsequent decline in stock value, with the YTD chart confirming a continued downtrend without signs of immediate reversal.

Considering the value stock characteristics of JNJ and the downward trend observed in its stock price, it may be an opportune moment for long-term investors to consider buying. The company's strong fundamentals, evident in its P/E and P/S ratios, along with a low PEG ratio, could signify a potential rebound and an attractive entry point for those looking to hold the stock for an extended period. However, for those with a shorter investment horizon or for momentum traders, the current bearish trend would suggest a sell strategy until more positive price momentum is observed.

Given the current market dynamics and our focus on value investing with a long-term perspective, we initiate a cautious buy with a vigilant approach to any forthcoming market changes that might affect the stock's performance.

Macro factors

In navigating the complexities of the pharmaceutical industry, companies like Johnson & Johnson must consider several pivotal macro factors that influence long-term strategies and operational dynamics.

Demographic shifts are notably significant, as aging populations coupled with declining birth rates in many countries escalate healthcare costs and demand for medical services, urging a shift towards preventive care and management of chronic conditions. Concurrently, regulatory reforms such as the Inflation Reduction Act introduce measures like Medicare drug price negotiations and price caps on medications like insulin, which are set to reshape pricing models and revenue streams across the industry.

Technological advancements also play a crucial role, with the rise of digital health and innovations such as mRNA therapies and antibody drug conjugates transforming treatment modalities. These technologies not only push the boundaries of medical science but also require substantial investment in research and development to stay competitive. Operational complexities further complicate the landscape, as pharmaceutical firms face increasing pressures from environmental, social, and governance (ESG) expectations, alongside the need for advanced digital infrastructure and capabilities.

Moreover, the industry is seeing a shift in collaboration dynamics, with companies increasingly forming strategic partnerships to leverage collective strengths in technology and market reach, a trend exemplified by collaborations like those between Pfizer and BioNTech. As Johnson & Johnson and its peers adapt to these evolving conditions, their ability to integrate new technologies, manage regulatory challenges, and capitalize on demographic trends will be critical in securing their position in the market and ensuring sustainable growth.

Industry level factors

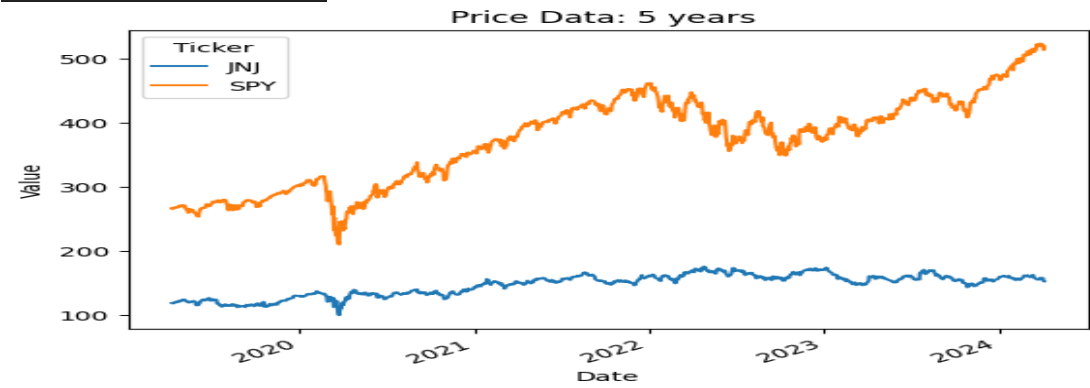
In the pharmaceutical sector, Johnson & Johnson operates in a highly competitive environment with several significant competitors such as Pfizer, Merck, GlaxoSmithKline, Bayer, Abbott, and Bristol Myers Squibb. These companies challenge J&J across various domains including pharmaceuticals, medical devices, and consumer health products, each bringing innovative solutions to the market in therapeutic areas like oncology, immunology, and infectious diseases. The company relies on a complex global network of suppliers that provide the essential materials and components needed for their diverse product range. This network is crucial for maintaining production efficiency and ensuring high standards of quality across all product lines. Johnson & Johnson's broad customer base spans from large healthcare institutions and government entities to individual consumers, which diversifies its revenue streams but also requires adapting to the diverse needs and procurement processes of different market segments. The interplay between these industry-level factors—vigorous competition, a dependable supply chain, and a wide-reaching customer base—necessitates continuous innovation and strategic adaptability for Johnson & Johnson to maintain its market position and drive future growth.

Firm level factors

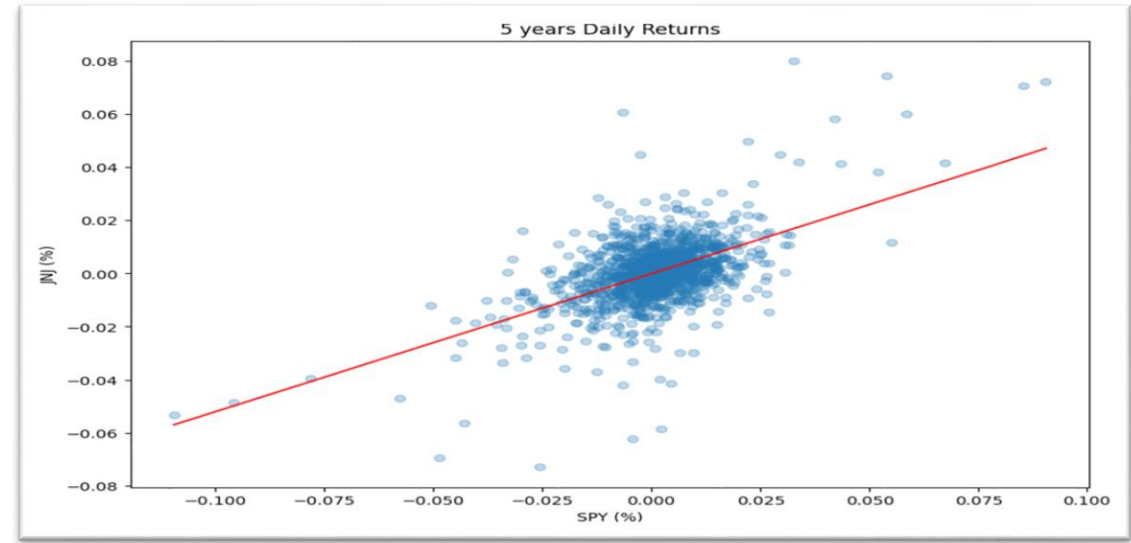
Risk profile:

	Asset	Beta
0	JNJ	0.52
1	SPY	1.00

J&J's beta is less than one, therefore this stock is less volatile against the market index, S&P500.



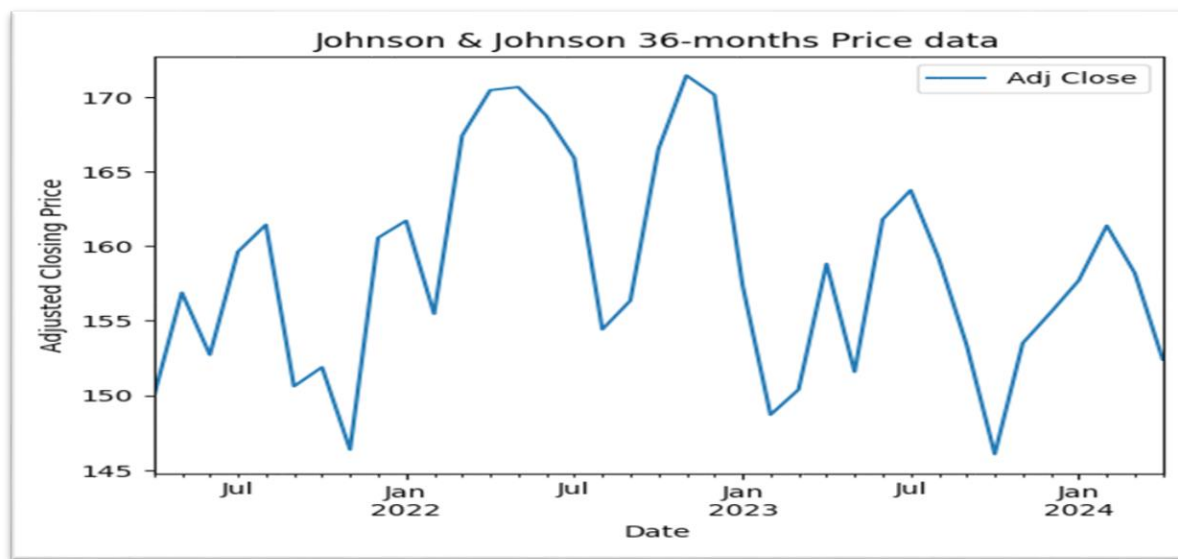
This plot depicts a comparison between Johnson & Johnson’s and the S&P500’s daily returns for the past 5 years



This linear regression model shows the relationship between the daily returns of S&P500 and J&J. The slope of the line is the beta coefficient for J&J, 0.52.

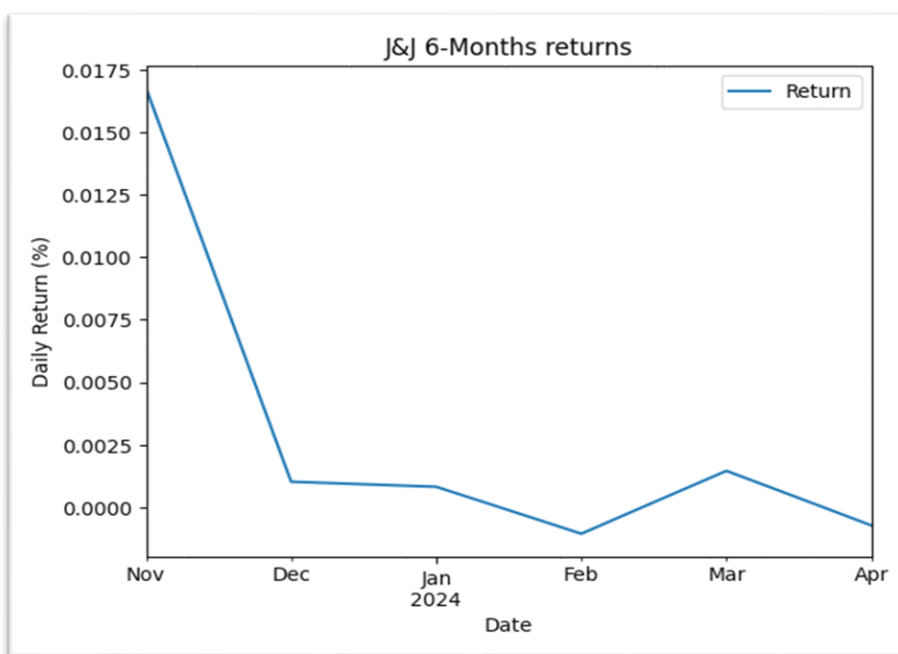
Return analysis:

The adjusted closing price data used to measure the asset’s performance trailing 6-months, 12-months and 36-months:



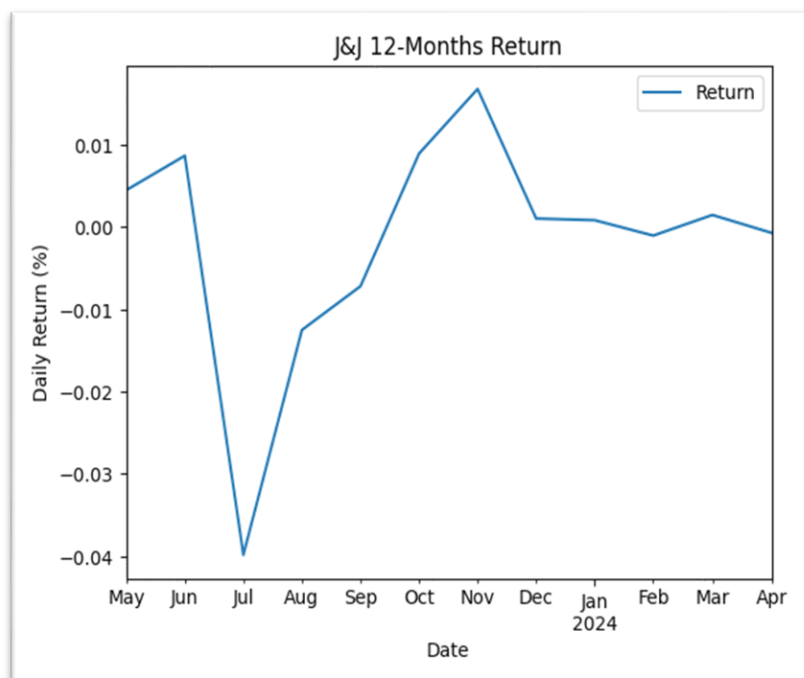
6-months return:

Date	Return
2023-11-30	0.016764
2023-12-31	0.001022
2024-01-31	0.000819
2024-02-29	-0.001052
2024-03-31	0.001456
2024-04-30	-0.000721



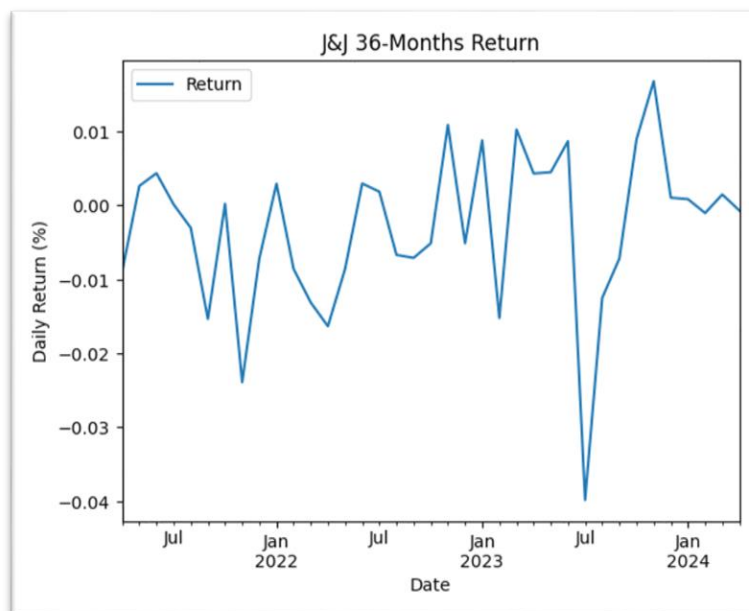
12-months return:

	Return
Date	
2023-05-31	0.004470
2023-06-30	0.008653
2023-07-31	-0.039833
2023-08-31	-0.012521
2023-09-30	-0.007203
2023-10-31	0.008910
2023-11-30	0.016764
2023-12-31	0.001022
2024-01-31	0.000819
2024-02-29	-0.001052
2024-03-31	0.001456
2024-04-30	-0.000721



36- months return:

	Return		Return
Date		Date	
2021-04-30	-0.008952	2022-10-31	-0.005147
2021-05-31	0.002607	2022-11-30	0.010847
2021-06-30	0.004328	2022-12-31	-0.005125
2021-07-31	0.000116	2023-01-31	0.008765
2021-08-31	-0.003052	2023-02-28	-0.015228
2021-09-30	-0.015364	2023-03-31	0.010233
2021-10-31	0.000184	2023-04-30	0.004294
2021-11-30	-0.023912	2023-05-31	0.004470
2021-12-31	-0.007196	2023-06-30	0.008653
2022-01-31	0.002911	2023-07-31	-0.039833
2022-02-28	-0.008615	2023-08-31	-0.012521
2022-03-31	-0.013141	2023-09-30	-0.007203
2022-04-30	-0.016352	2023-10-31	0.008910
2022-05-31	-0.008615	2023-11-30	0.016764
2022-06-30	0.002938	2023-12-31	0.001022
2022-07-31	0.001837	2024-01-31	0.000819
2022-08-31	-0.006710	2024-02-29	-0.001052
2022-09-30	-0.007111	2024-03-31	0.001456
		2024-04-30	-0.000721



Capital Budgeting

Johnson & Johnson

Year	Capital Expenditures (USD Millions)	Total Assets (USD Millions)	Capital Expenditures Ratios
2023	-4,543	167,558	-0.027
2022	-4,009	187,378	-0.021
2021	-3,652	182,018	-0.020
2020	-3,347	174,894	-0.019
2019	-3,498	157,728	-0.022

Pfizer

Year	Capital Expenditures (USD Millions)	Total Assets (USD Millions)	Capital Expenditures Ratios
2023	-3,907	226,501	-0.017
2022	-3,236	197,205	-0.016
2021	-2,711	181,476	-0.015
2020	-2,226	154,229	-0.014
2019	-2,490	167,594	-0.015

Procter & Gamble Co.

Year	Capital Expenditures (USD Millions)	Total Assets (USD Millions)	Capital Expenditures Ratios
2023	-3,062	120,829	-0.025
2022	-3,156	117,208	-0.027
2021	-2,787	119,307	-0.023
2020	-3,073	120,700	-0.025
2019	-3,347	115,095	-0.029

- Johnson & Johnson's capital expenditure to total assets ratio indicates a conservative investment approach, prioritizing efficiency over expansion.
- This is reflected in a decreasing trend over the past five years, suggesting a focus on optimizing existing assets.
- Compared to competitors like Pfizer and Procter & Gamble Co., Johnson & Johnson's capital expenditure ratio is lower, indicating a conservative investment strategy.

Johnson & Johnson

Year	R&D Expenditures (USD Millions)	Total Assets (USD Millions)	R&D to Total Assets Ratio
2023	15,048	167,558	0.090
2022	14,284	187,378	0.076
2021	14,744	182,018	0.081
2020	12,022	174,894	0.069
2019	11,250	157,728	0.071

Pfizer

Year	R&D Expenditures (USD Millions)	Total Assets (USD Millions)	R&D to Total Assets Ratio
2023	10,578	226,501	0.047
2022	11,426	197,205	0.058
2021	13,828	181,476	0.076
2020	9,395	154,229	0.061
2019	8,364	167,594	0.050

Procter & Gamble Co.

Year	R&D Expenditures (USD Millions)	Total Assets (USD Millions)	R&D to Total Assets Ratio
2023	2,000	120,829	0.017
2022	2,000	117,208	0.017
2021	1,900	119,307	0.016
2020	1,800	120,700	0.015
2019	1,861	115,095	0.016

- Johnson & Johnson's R&D expenditure to total assets ratio remains stable over the years, reflecting consistent investment in innovation.
- This demonstrates a commitment to product development and maintaining competitiveness in the healthcare industry.
- Compared to Pfizer, which shows a significant increase in R&D expenditure, Johnson & Johnson's approach appears steadier and more focused.

Financial (liability) Analysis

Johnson & Johnson

Year	Debt to Equity Ratio	Interest Coverage Ratio	Current Ratio	Quick Ratio	Cash Ratio
2023	0.39	36.04	1.16	0.91	0.50
2022	0.36	-	0.99	0.81	0.40
2021	0.42	48.72	1.35	1.12	0.70
2020	0.53	44.03	1.21	0.99	0.59
2019	0.46	42.32	1.26	1.01	0.54

Pfizer

Year	Debt to Equity Ratio	Interest Coverage Ratio	Current Ratio	Quick Ratio	Cash Ratio
2023	0.72	1.92	0.91	0.69	0.27
2022	0.37	30.37	1.22	1.00	0.54
2021	0.50	16.11	1.40	1.19	0.73
2020	0.60	-	1.35	1.04	0.47
2019	0.58	-	0.88	0.69	0.26

Procter & Gamble Co.

Year	Debt to Equity Ratio	Interest Coverage Ratio	Current Ratio	Quick Ratio	Cash Ratio
2023	0.53	29.83	0.63	0.44	0.23
2022	0.50	40.80	0.65	0.45	0.22
2021	0.51	37.05	0.70	0.52	0.31
2020	0.52	35.24	0.85	0.68	0.49
2019	0.43	28.50	0.75	0.58	0.34

- Johnson & Johnson's debt to equity ratio fluctuates but remains within a moderate range, indicating a balanced approach to financing.
- The interest coverage ratio indicates a strong ability to cover interest expenses with operating income, ensuring financial stability.
- Liquidity ratios like the current ratio and quick ratio suggest healthy liquidity and efficient management of working capital.
- When compared to competitors, Johnson & Johnson's financial metrics reflect sound financial health and risk management practices.

Valuation Analysis

Johnson & Johnson				
*end of year	2023	2022	2021	2020
<u>Value & Value Added</u>				
Market Capitalization	\$ 377,320,000,000.00	\$461,850,000,000	\$450,360,000,000	\$414,310,000,000
Market Value Added	\$ 377,251,226,000.00	\$461,773,196,000	\$450,285,977,000	\$414,246,722,000
Market to book ratio	5.44	5.79	5.7	6
<u>Measuring Profitability</u>				
Net Income	\$ 35,153,000,000.00	\$ 17,941,000,000.00	\$ 20,878,000,000.00	\$ 14,714,000,000.00
Cost of equity	7.89%	8.25%	5.79%	5.27%
Equity Capital	\$ 68,774,000,000.00	\$ 76,804,000,000.00	\$ 74,023,000,000.00	\$ 63,278,000,000.00
Cost of equity capital	\$ 5,426,268,600.00	\$ 6,336,330,000.00	\$ 4,285,931,700.00	\$ 3,334,750,600.00
Economic Value Added (EVA)	\$ 29,726,731,400.00	\$ 11,604,670,000.00	\$ 16,592,068,300.00	\$ 11,379,249,400.00
Return on Equity (ROE)	51.11%	23.36%	28.20%	23.25%
Return on Assets (ROA)	19.49%	9.99%	11.76%	8.93%
Return on Capital (ROC)	18.70%	16.50%	16.00%	15.90%
<u>Measuring Efficiency</u>				
Asset turnover ratio	50.82%	42.69%	43.26%	12.85%
Inventory turnover ratio	2.37%	2.40%	2.25%	3.04%
Average Days in Inventory	63.75 days	64.06 days	70.84 days	60 days
Receivables Turnover	5.73%	5.70%	5.15%	6.08%
Average Collection Period	8.88%	7.49%	8.40%	7.76%
<u>DuPont System</u>				
Profit Margin	41.28%	22.43%	26.52%	17.82%
Operating Profit Margin	17.69%	24.20%	24.36%	19.98%

Peer Group:

Pfizer Inc.				
*end of year	2023	2022	2021	2020
<u>Value & Value Added</u>				
Market Capitalization	\$ 162,560,000,000.00	\$287,620,000,000	\$331,430,000,000	\$204,600,000,000
Market Value Added	\$ 162,470,712,000.00	\$ 287,524,084,000.00	\$ 331,352,538,000.00	\$ 204,536,527,000.00
Market to book ratio	1.79	2.82	3.91	2.83
<u>Measuring Profitability</u>				
Net Income	\$ 2,119,000,000.00	\$ 2,119,000,000.00	\$ 2,119,000,000.00	\$ 2,119,000,000.00
Cost of equity	7.89%	8.25%	5.79%	5.27%
Equity Capital	\$ 89,288,000.00	\$ 95,916,000.00	\$ 77,462,000.00	\$ 63,473,000.00
Cost of equity capital	\$ 7,044,823.20	\$ 7,913,070.00	\$ 4,485,049.80	\$ 3,345,027.10
Economic Value Added (EVA)	\$ 2,111,955,176.80	\$ 2,111,086,930.00	\$ 2,114,514,950.20	\$ 2,115,654,972.90
Return on Equity (ROE)	2.19%	34.96%	30.05%	14.15%
Return on Assets (ROA)	0.99%	16.26%	12.75%	5.41%
Return on Capital (ROC)	3.20%	26.50%	20.20%	7.60%
<u>Measuring Efficiency</u>				
Asset turnover ratio	25.83%	50.88%	44.79%	27.01%
Inventory turnover ratio	2.45%	3.82%	3.40%	1.06%
Average Days in Inventory	69.74	39.84	51.54	69.34
Receivables Turnover	5.23%	9.16%	7.08%	5.26%
Average Collection Period	4.93%	5.55%	6.33%	5.13%
<u>DuPont System</u>				
Profit Margin	3.62%	31.27%	27.04%	21.99%
Operating Profit Margin	0.38%	34.83%	23.91%	19.81%

Johnson & Johnson Ratios				
	2023	2022	2021	2020
Leverage				
Long-term debt ratio	28%	27%	30%	35%
Long-term debt-equity ratio	39%	36%	42%	53%
Total debt ratio	59%	59%	59%	64%
Times interest earned	20.51	71.14	105.80	83.07
Cash covered ratio	24.38	82.26	120.50	95.67
Liquidity				
Net working capital to total assets	0.04	0.00	0.09	0.05
Current ratio	1.16	0.99	1.35	1.21
Quick ratio	0.91	0.70	1.12	0.91
Cash ratio	0.50	0.40	0.70	0.59
Growth				
Payout ratio	0.88	0.71	0.53	0.71
Plowback ratio	0.12	0.29	0.47	0.29
Sustainable growth	2%	6%	13%	7%

Peer Group:

Pfizer Ratios					Merk and Co., Inc. Ratios				
	2023	2022	2021	2020		2023	2022	2021	2020
Leverage					Leverage				
Long-term debt ratio	42%	27%	33%	38%	Long-term debt ratio	48%	39%	45%	51%
Long-term debt-equity ratio	72%	37%	50%	60%	Long-term debt-equity ratio	92%	65%	83%	105%
Total debt ratio	61%	51%	57%	59%	Total debt ratio	65%	58%	64%	72%
Times interest earned	1.48	29.05	19.83	5.86	Times interest earned	2.65	18.09	18.22	8.06
Cash covered ratio	2.18	30.23	20.99	6.78	Cash covered ratio	4.24	19.99	20.18	10.06
Liquidity					Liquidity				
Net working capital to total assets	0.08	0.08	0.06	0.14	Net working capital to total assets	0.06	0.11	0.06	0.00
Current ratio	3.79	2.81	2.49	3.49	Current ratio	1.25	1.47	1.27	1.02
Quick ratio	4.53	3.20	2.92	3.45	Quick ratio	0.71	0.96	0.75	0.56
Cash ratio	2.83	1.91	1.44	2.54	Cash ratio	0.28	0.55	0.34	0.29
Growth					Growth				
Payout ratio	4.34	0.29	0.39	1.27	Payout ratio	20.40	0.48	0.54	1.38
Plowback ratio	-3.34	0.71	0.61	-0.27	Plowback ratio	-19.40	0.52	0.46	-0.38
Sustainable growth	-8%	23%	18%	-3%	Sustainable growth	-19%	16%	15%	-7%

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