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**Merck & Co. (MRK)**

Intrinsic Value: $105.84

Market Value: $76.09

52 Week Range: $65.25 - $92.64

Market Cap (B): 190.2

Dividend Yield: 3.2%

52 Week Beta: 0.51

# Introduction

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Merck & Co. – MRK – is a large multinational company with a market cap (B) of $190.2. Merck operates in four main segments: Pharmaceutical, Animal Health, Health Care Services, and Alliances. The largest being pharmaceutical which makes up 90% of their revenue. The broad, well developed, and marketed pharmaceutical portfolio has products in oncology treatment, vaccines, diabetes, hospital acute care, diversified brands, cardiovascular, women’s health, virology, immunology, and neuroscience. Notable products include Keytruda – the market’s most widely used cancer treatment drug, Januvia and Janumet – growing diabetes treatment drugs, and the monopoly HPV vaccine Gardasil.

# Recommendation

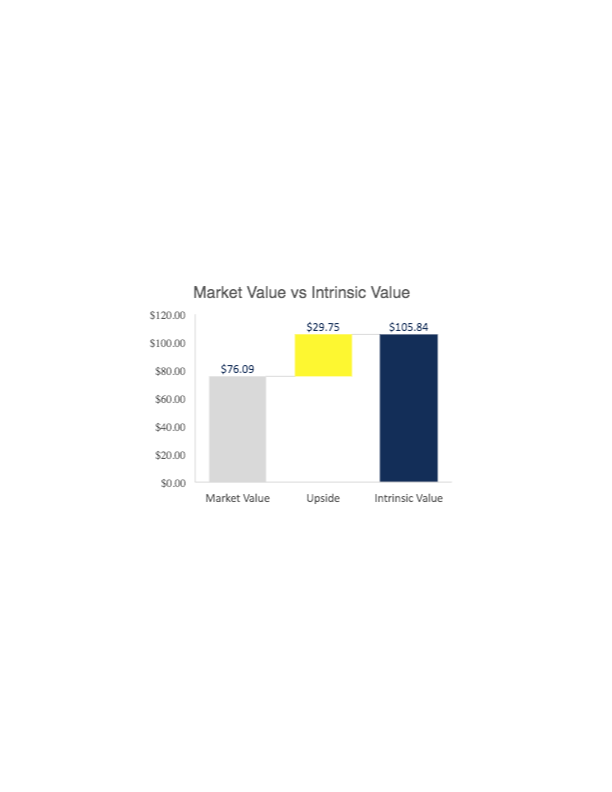
We are recommending a **BUY** for Merck and Co. By combining and weighting two valuation methods, discounted cash flow and multiples approach, the calculated target price comes out to a range of **$92-$118.** Combined with its current market price at $76.09, this stock has the potential to have a return of almost 40%. Merck’s aim at growth and bolstering its future pipeline highlighted in the investment thesis, that also addresses noted risks for the company, leads us to highly recommend this undervalued stock.

Figure 1: Market Value vs. Intrinsic Value

# Investment Thesis

## Product Diversification through M&A

Over the last two years Merck & Co. has been active in the mergers and acquisitions, accomplishing over 15 acquisitions since 2018. Many are geared at further enhancing Merck’s already impressive presence in the pharmaceuticals sector aimed at products for cancer treatment. However, a few are aimed at infectious disease and lesser-known diseases. Notable acquisitions include Provota Health and Infectious Disease Connect, Inc. Both are tech companies where Provota is focused on providing digital health solutions and Infectious Disease Connect is telehealth. Other acquisitions of interest involve five companies aimed at enhancing Merck’s animal health business segment that has seen a lot of activity recently. To address the concern of supply and demand for some of Merck’s products, Merck has most recently acquired another pharmaceuticals manufacturing company to grow product capacity.

## Consistently High R&D

Merck over the last few years has been investing heavily in its research and development department. With an average R&D investment of just over nine billion, it was only rivaled by Johnson & Johnson at 9.9 billion in the initial stock screen. Part of Merck’s success in being able to successfully invest so much has to do with the success it has found in the animal health segment which produces a lot of cash flow for its R&D. Merck is also the only large pharmaceutical company that still is directly linked to its animal health segment. Pfizer and Eli Lilly both separated and turned their animal health segments into standalone businesses. But bucking the trend has worked for Merck as the animal-health unit has experienced large operating margins last announced in 2018 at 40%.

## Global Restructuring Program

In 2019 Merck & Co. approved a new global restructuring program. The goal of this is to further optimize the company's manufacturing and supply networks along with decreasing their real estate footprint. Merck’s restructuring efforts impacted revenue in the first quarter of 2019 by 11%. Significant steps of the restructure are expected to be completed by 2023. The restructure has a pretax cost of $800 million – $1.2 billion. 55% of the costs are expected to be paid with cash, and the other 45% is primarily related to accelerated depreciation of facilities affected by the restructure. As 2023 comes closer, Merck is expecting to continue to see growth in international sales, especially in China, where sales increased 58% in 2019. The restructure also should positively affect their public image. Being environmentally friendly is becoming an important trend for large corporations to adopt.

## Increasing Margins

In February of 2020, Merck announced a spin-off company known as Organon & Co. The spin-off will focus on women’s health and realize many of Merck’s legacy brands. The net assets will be exchanged for 100% of Organon & Co’s common stock. What Merck believes is the spin-off will allow the two separate entities to grow faster and have better flexibility. The most important thing coming from this spin-off is the increasing operating margins. The initial impact is $1.5 billion in pre-tax operating efficiencies; Merck is expected to see a 40% increase in operating margins by 2024.

## Strategic Management Positioning

Given the current concerns in Merck’s pipeline and capacity, the research gathered on the company is indicative that Merck is currently undervalued with opportunity for impressive growth in the future. Observing the consistently high investment in R&D, that eventually pays off as more products come to market that are superior to the competition. Recent acquisitions enhance current portfolio by strengthening already notable segments while also diversifying products and services not fully explored by Merck. Some of which leverage digital solutions during a Covid-19 focused world and others that enhance its animal health segment that is a key player for covering further R&D expenses. While not at the front of the competition for Covid-19 solutions, Merck is currently working on several treatments with the aim at not being the first solution to the pandemic, but to be the best solution. To address its growing popularity and application of Keytruda; and its recently found dominance and growing scope with Gardasil, an HPV vaccine, Merck is growing its capacity to meet market demands. To demonstrate Merck’s true growth potential, Merck is spinning off some of its older assets to a new company so that it can focus on its future. These strategic moves show that Merck is ready for growth and is why the conclusion that it is underweighted has been made.

# Valuation

**Part I Using the DCF Model**

We have an estimate price of **$110-$160.** This price estimate reflects four assumptions made based off consensus research provided by FACTSET and Bloomberg. The following assumptions are as follows:

1. Long-Term growth rate: 9.1%
2. EBIT, D&A, △NWC, 1st year growth: 5%
3. EBIT, D&A, △NWC, 2nd and 3rd year growth: 6%
4. EBIT, D&A, △NWC, 2nd and 3rd year growth: 7%

Below you will see a matrix that shows potential prices relative to changing WACC and perpetuity growth rate. While we are confident in our DCF assumptions, it’s also important to become familiar with alternative prices.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **6.1** | **7.1** | **8.1** | **9.1** | **10.1** | **12.1** | **12.1** |
| **2.6** | 98 | 111 | 130 | 160 | 214 | 389 | 964 |
| **3.1** | 95 | 106 | 122 | 146 | 186 | 266 | 505 |
| **3.6** | 92 | 102 | 115 | 135 | 166 | 222 | 352 |
| **4.1** | 90 | 98 | 110 | 126 | 152 | 193 | 275 |
| **4.6** | 87 | 95 | 106 | 120 | 140 | 173 | 230 |
| **5.1** | 86 | 92 | 102 | 114 | 132 | 157 | 200 |
| **5.6** | 84 | 90 | 99 | 110 | 124 | 146 | 179 |

Table 1: Sensitivity Analysis

**Part II: Price Estimate using Multiples**

When using the multiples approach, we get a forward price estimate of $83-$95. At year-end 2019 MRK was trading at a P/E multiple of 13x while the majority of its competitors were trading at multiples of 16-20x. The only companies who had higher revenues in 2019 were Pfizer and Novartis. Novartis trading 17.5x and Pfizer 14.4x. MRK projected 2020 EPS is $5.91 and we feel that they should be trading at similar multiples as their peers. Assigning them a conservative multiple of 16x brings us to a price estimate of range $83-$95.

**Part III: Weighted Price Estimate:**

We assigned a weight to each price estimate and came up with a final price estimate range of $92-$118. We assigned the multiples pricing estimate with a weight of 65% and DCF of 35%.

# Risks

## Dependency on Keytruda

Merck made an important breakthrough with its development in Keytruda. It has quickly become one of the most recognizable cancer treatments on the market. It has only gained more ground since being introduced to the market as Merck continues to test its ability for treating more cancers both individually and paired with other drugs. It is important that Merck continues to maximize Keytruda’s potential as its future pipeline looks a little uncertain from now until 2023. Not to say that Keytruda is not the only successful product they have on the market; other drugs like Gardasil, and the agreement of Lynparza with AstraZeneca are also good forms of income. The concern however is that the growing dependency on Keytruda’s further success may damage the company if problems in research were to occur. Merck has been making significant investments in its future pipeline as well as acquiring more companies to diversify products and services, but if the problem is left unchecked Merck may struggle.

## Capacity Limitations

Merk’s vaccine Gardasil, used to treat HPV, has seen recent success. It is being used more in international markets, the age range of those who would benefit from receiving the vaccine, and the removal of its one key competitor, Cervarix, are what has essentially given Gardasil a monopoly on the market for the moment. The only problem right now are the limitations on its ability to meet demand regarding manufacturing limitations. Current estimations indicate that supply may be constrained until 2023. However, Merck has been making moves to remedy that problem through the recent acquisition of Takeda Dunboyne Biologics Ltd. to grow its manufacturing network. If this problem goes unaddressed, then Merck will be missing out on the potential success that Gardasil could have, and a more effective HPV vaccine may take its place before benefits are realized.

## Pipeline Efficiency & Patents

Lately Merck’s pipeline has appeared to become stagnant with its primary focus being on Keytruda’s success. Merck cannot be faulted for attempting to maximize the utility of Keytruda. By expanding research to discover all its effective applications, that allows Merck to maximize Keytruda's potential before its patent expires in 2028. This does lead to some concern of what the company will do when that expiration occurs. However, recent activity by Merck is promising with the recent addition of new companies acquired in the last two years. That brings in more resources and avenues of research to continue to innovate and bring new product to market. There is also the benefit of overlapping timelines with expectations of an active pipeline in 2023 and Keytruda’s expiration in 2028. The pipeline may also be less of a concern as Merck is also improving its manufacturing network to capitalize on other products like Gardasil. Further research on developing products show there are notable drugs in the testing phase, but until they have been fully authorized, there are no guarantees yet.

## Exchange Rate Risk

Because Merck & Co. is a multinational corporation (MNC), they’re exposed to foreign exchange rate risk. The US market accounts for 45% of sales, EMEA (Europe, Middle East, and Africa) region accounts for 25%, Japan for 10%, and China the remaining 5%. Merck historically has been very successful at hedging exchange rate risks. Generally, Merck is 80-90% hedged. We expect the CFO Robert Davis to continue this conservative strategy, especially with the uncertainty surrounding the USD right now.

## Covid-19 and 2020 U.S. Presidential Election

As previously mentioned, Merck is developing several vaccines attempting to become the best vaccine for Covid-19 with late entry knowledge. It is in a sense, trying to make the most out of a bad situation. Overall, Covid-19 has caused the market to become more volatile and is reflected in expectations that potential customers may elect to wait until conditions are safer on nonessential services and products. However, in terms of its subsector competition, this is a burden affecting everyone. With the 2020 U.S. presidential election nearing, there is not a lot expected for risks regarding the initial outcome. Any health care reform will most likely take time before anything is finalized and can be adjusted for as that information becomes available.

# Management & Board

## Kenneth C. Frazier – Chairman of the board and chief executive officer

Kenneth is one of the driving forces responsible for Merck’s dedication to its substantial investments into its research. He has been with the company since 1992 taking on more responsibilities over the years where he became chairman of the board and chief executive officer in 2011. He is active in many other organizations such as PhRMA and Weill Cornell Medicine to name a few.

\*1992-present = 28 years with Merck, Age: 65

## Robert M. Davis – Executive vice president, global services and chief financial officer

Rob has had an extensive career in the health care sector, being a part of companies like Baxter International Inc. and Eli Lilly & Company before coming to Merk as the company’s CFO in 2014 and then grew his responsibilities again in 2016. Those responsibilities involve corporate strategy but dive deeper into finance, IT, and real estate operations.

\*1990 – Present = 30 years relevant experience, Age: 53

## Dr. Roger M. Perlmutter – Executive vice president and president, Merck Research Laboratories

Roger is currently an executive vice president and president of Merck Research Laboratories. He worked with Merk back from 1997-2001 in the research laboratories with increasing responsibility but left in 2001 to work with Amgen as head of R&D and various other biotech companies. He returned in 2013 to accept his current roles. He will be succeeded by Dr. Dean Y. Li on January 1st, 2021. In his time, he has helped reinvigorate the research and development department within Merck and has been a part of over 100 regulatory approvals in that time with one of the crowning achievements being that of the introduction of Keytruda.

\*1984 – Present = 36 years of experience in medicine and biochemistry, Age: 68

## Dr. Dean Y. Li – Senior Vice President of Discovery Sciences and Translational Medicine, MRL and future successor of Dr. Roger M. Perlmutter

Dean Li prior to being a part of Merck in 2017 had various leadership roles in education such as Chief Scientific Officer, Associate Vice President, and Dean at the University of Utah Health System. He has also co-founded several biotech companies. His tenure relative to other executives in the company has been shorter but he has proven his abilities by growing discovery and translational medicine capabilities, as well as progressing Merck’s pipeline.

\*26 years of experience in medicine and biochemistry

# Peer Analysis

When looking at valuation ratios vs. competitors, MRK is trading on the lowest PE while providing the highest return on equity. Another factor to consider is its economic value (EV) relative to EBIT & EBITDA. MRK sits around the industry average for EV but has the highest EBIT & EBITDA. Free cash flow has been efficiently managed even with consistently high R&D expenses relative to competitors. While having success managing FCF and R&D exp, MRK has executed 16 M&A deals over the past 4 quarters. The following table summarizes a comparison of Merck & Co. vs. its top competitors.

Table 2: Merck & Co. vs. Top Competitors



# Ownership of Shares

|  |  |
| --- | --- |
| **Top 5 Institutional Holders** |  |
| The Vanguard Group, Inc. | 7.91% |
| BlackRock Fund Advisors | 5.28% |
| SSgA Funds Management, Inc. | 4.70% |
| Wellington Management Co. LLP | 1.67% |
| Geode Capital Management LLC | 1.43% |
| **Total** | **20.99%** |

Merck & Co. is primarily held by financial institutions accounting for over 75% of outstanding shares. The top 10 institutional holders consisting of members like The Vanguard Group, BlackRock Fund Advisors, and SSgA Funds Management account for a little over a quarter of all institutional ownership. Very little activism is present among the shareholders only exhibiting two of the top 10 shareholders having medium levels of activism. Both members, BlackRock Fund Advisors and Norges Bank Investment Management, have not demonstrated any forms of activism with Merck. The remaining approximate quarter of ownership are other investors that could be individual investors, mutual funds not covered due to non-disclosure laws, or investors with less than $100 million invested. Inside ownership accounts for about one tenth of a percent in total ownership and is primarily members of the executive team. Over the last six months there has been a trend of banking institutions and insurance companies reducing their holdings and they are being bought up by mutual funds.

Table 3: Top 5 Institutional Holders

Figure 2: Ownership of Shares