

A Work Project, presented as part of the requirements for the Award of a Master's degree in
Finance from the Nova School of Business and Economics.

THE BIGGEST HEALTHCARE ACQUISITION OF 2022:
JOHNSON & JOHNSON ACQUIRES ABIOMED INC.

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Abstract

This thesis investigates the rationale, financial elements, and market effects of Johnson & Johnson's acquisition of Abiomed Inc. in 2022. The acquisition was facilitated in large part by Abiomed's innovative Impella heart pump technology, which fit in well with Johnson & Johnson's plan to control the rapidly expanding cardiovascular device market. The \$16.6 billion deal, including the use of contingent value rights to align shareholder interests, is examined in the report. It also looks at post-acquisition technology integration and regulatory issues, highlighting the wider implications for future advancements in healthcare and competitive market positioning.

Keywords: Mergers and Acquisitions, Corporate Strategy, Financial Analysis, Technological Integration, COVID-19 Pandemic, Cardiovascular Health, Healthcare Innovation, Contingent Value Right.

This work used infrastructure and resources funded by Fundação para a Ciência e a Tecnologia (UID/ECO/00124/2013, UID/ECO/00124/2019 and Social Sciences DataLab, Project 22209), POR Lisboa (LISBOA-01-0145-FEDER-007722 and Social Sciences DataLab, Project 22209) and POR Norte (Social Sciences DataLab, Project 22209).

The Companies

Johnson & Johnson was founded in 1886 by Robert Wood Johnson, James Wood and Edward Mead Johnson. Their inspiration came from Joseph Lister's pioneering research into microbes and diseases, setting their sights on revolutionizing post-operative care. This ambition led to the development of surgical covers and sterilizing techniques, marking the beginning of a journey that would see the company evolve into a global healthcare leader. Officially starting the business in 1887, Johnson & Johnson quickly made its mark by introducing the first pre-made first aid kit and publishing guides on antiseptic wound care in 1888. By 1894, the company expanded its portfolio to include maternity and infant products, such as the now-famous baby powder, laying the groundwork for future innovations in baby care. Today, Johnson & Johnson encloses over 250 companies, generating around \$90 billion in annual revenue and solidifying its position as a leader in healthcare innovation. However, the past decade has not been without challenges for Johnson & Johnson: the company has faced numerous legal battles, predominantly centred around its talcum powder products. Allegations linking the talc to ovarian cancer have led to significant financial settlements, including a \$72 million payout in 2016, \$29 million in 2019, and a staggering \$2.1 billion settlement in 2020. These legal issues have impacted the company financially and tarnished its reputation, highlighting the complexities and risks inherent in the healthcare and consumer product industries.

Abiomed Inc., founded by David M. Lederman in 1981 in Danvers, Massachusetts, started on a mission to develop an artificial heart. Achieving a significant milestone in 2001, Abiomed implanted the first mechanical heart, the AbioCor. Under CEO Michael R. Minogue's guidance from 2004, the company shifted its focus towards cardiac recovery, evidenced by its acquisition of Impella CardioSystems AG in 2005. Abiomed's Impella heart pump platform stands out as a significant achievement, providing temporary ventricular support for patients with severe heart

function issues. Since acquiring Impella CardioSystems AG, Abiomed has introduced various models, including Impella 2.5, 5.0/LD, CP, and RP, demonstrating the platform's evolution and its potential in cardiovascular recovery.

Industries Overview

The pharmaceutical business in the United States experienced strong growth in 2022, driven by some important factors that highlighted the industry's tenacity and vital role in public health. Global demand for COVID-19 vaccines, which has been steadily increasing pharmaceutical output, has been a major factor in this rise. The sector's success was further enhanced by a pent-up demand for medical services, both essential and non-essential, that had been postponed because of the pandemic. Another notable feature in the pharmaceutical industry in the United States was the persistence of high levels of innovation and Research and Development (R&D). The approaching expiration of numerous blockbuster medicine patents over the next ten years encouraged pharmaceutical corporations to increase their R&D expenditures. This need to innovate was driven by a desire to increase gross margins through novel, ground-breaking pharmaceutical items as well as to counteract possible losses from patents that were about to expire. With increased concern over the effects of the pharmaceutical sector on the environment, particularly concerning the contamination of water and soil with pharmaceutical residues, environmental considerations also started to gain traction. This new issue is probably going to have an impact on industrial practices and future regulatory frameworks (Atradius, 2022).

Globally, the medical device market was expanding significantly due to several factors like ageing populations, rising healthcare costs, and technological improvements. Consumers in the medical device industry were looking for more innovative and inventive items with cutting-edge technology that may boost patient outcomes and increase the effectiveness of healthcare delivery. Additionally, they were searching for gadgets easy to use, and yield

dependable and accurate data. Furthermore, there was a rising need for wearable and portable medical technologies that allowed for individualized treatment and remote monitoring. The growing use of digital health technology was one of the major trends in the medical device industry. This covered the usage of mobile health apps, telemedicine, and connected gadgets. With the use of these technologies, medical professionals may collect data in real-time, monitor patients from a distance, and give individualized care. Additionally, they enhanced the general effectiveness of healthcare delivery and eased the integration of healthcare systems. The market was also seeing an increase in the need for minimally invasive medical equipment. Because of the tiny incisions required for these treatments, patients experienced less discomfort, spent less time in the hospital, and recovered more quickly (Statista, Updated 2024).

COVID-19 Impact

The COVID-19 pandemic had a significant impact on the healthcare sector, with different consequences on businesses according to their product offers, geographic locations of operation, and strategic orientations. Leading companies in the industry, Johnson & Johnson and Abiomed faced different possibilities and problems during the crisis.

With a broad portfolio of pharmaceuticals, medical equipment, and consumer health products, Johnson & Johnson was an assortment of businesses that responded to the epidemic in a variety of ways. Notably, the business made a major contribution to international immunization efforts by using its adenovirus technology to generate a single-dose COVID-19 vaccine. This accomplishment improved J&J's standing and demonstrated its strong R&D capabilities in tackling important global health issues. But the epidemic also brought with it serious difficulties, especially for the medical equipment industry. The demand for J&J's orthopaedic and surgical devices was negatively impacted by the frequent postponement and cancellation of routine procedures brought on by the COVID-19 cases' tremendous impact on hospitals.

The epidemic took a direct toll on Abiomed, hospitals prioritized COVID-19 patient care, which resulted in a large reduction in the consumption of its goods. This circumstance brought to light the dangers connected to Abiomed's excessive reliance on elective procedures carried out in hospital settings. Abiomed responded by stressing how vital its cardiovascular products are for emergency care and quickly made adjustments to make sure its devices are available and operational throughout the pandemic. This strategic turn helped sustain device usage and enabled a steady rebound in revenue as things started to get better. Abiomed persisted in giving R&D first priority in spite of the pressing obstacles it faced, making investments in new technologies and improving current equipment to satisfy the changing demands of healthcare professionals. This proactive strategy sought to fortify the company's position in the market and guarantee long-term growth beyond the epidemic's immediate effects.

Exhibit 1 shows the differences in the two businesses due to the COVID-19 pandemic.

The Merger

The technology's innovation and success made Abiomed an attractive acquisition target for Johnson & Johnson. Before the final offer that resulted in Johnson & Johnson purchasing Abiomed, earlier bids and discussions established the basis for the final deal. Johnson & Johnson first made a preliminary offer to purchase Abiomed on August 15th, 2022, for \$355.00 in cash per share. However, the board of Abiomed rejected this offer because, given their assessment of the company's standalone value, they considered the price to be unattractive. The reply suggested a lack of appetite for pursuing a deal on the conditions mentioned in the original proposal. After this refusal, talks went on, leading to a significant meeting between the CEO of Abiomed and executives from Johnson & Johnson on September 15th, 2022, that resulted in a revised proposal which they presented to improve the overall value proposition by raising the upfront price per share and bringing up the prospect of a Contingent Value Right (CVR), which will be discussed on the paragraph called “CVR Valuation” structure. Johnson & Johnson

thought that Abiomed's CVR was excessive and made the final offer that included terms for a prospective CVR and an acquisition price of \$380.00 per share, subject to Abiomed submitting certain information that would aid in determining its valuation (Johnson & Johnson, 2022). J&J officially announced the acquisition of Abiomed on the 1st of November 2022, representing an important milestone in consolidating its position in the cardiovascular industry. The acquisition, which came with a \$16.6 billion purchase price, was intended to increase J&J's standing in the quickly changing medical device industry (Johnson & Johnson, 2022).

The \$380 per share purchase price highlighted the strategic premium J&J was willing to pay for this technology. It represented a 50.7% premium over Abiomed's stock price on the eve of the announcement. The primary purpose of J&J was to enhance its medical devices segment by incorporating Abiomed's innovative heart pump, the Impella, crucial to maintain cardiac function throughout intricate heart procedures. Incorporating Abiomed's inventions allowed J&J to establish itself as a leader in a market where technological breakthroughs were closely associated with economic success, in addition to diversifying its product offerings. The timing of this acquisition was calculated to capitalize on the growing need for advanced cardiovascular therapies.

Johnson & Johnson's acquisition of Abiomed is the largest M&A transaction globally in 2022 (**Exhibit 2**) (Stewart, 2023).

Strategic Impact in the Market

By strategically acquiring Abiomed, Johnson & Johnson expanded its offering in the cardiovascular healthcare industry by using the innovative Impella heart pump technology, which represented a considerable advance in cardiac care. The Impella devices are essential for preserving heart function throughout difficult surgeries, strengthening Johnson & Johnson's product line and competitive advantage in a sector that places a premium on advanced technology, and offers solutions that improve surgical results and patient recovery times, which

are important considerations for healthcare providers when making decisions. Johnson & Johnson gained a significant competitive advantage with this acquisition, especially in terms of improved market differentiation given that Impella was the only FDA-approved heart pump for ventricular support in a variety of cardiac operations at the time of the takeover. Moreover, it leveraged Abiomed's recognized proficiency in the mechanical circulatory support industry, a specialized sector growing quickly, propelled by the worldwide surge in cardiovascular illnesses (Jackson et al., 2024). The advantages were further amplified by Johnson & Johnson's wide worldwide reach and strong distribution networks, which allowed Abiomed to effectively scale its solutions into underserved areas, especially developing nations where advanced cardiac care technologies were still being accepted. Johnson & Johnson's robust financial position and broad R&D capabilities allowed these technologies' continuous innovation and development, potentially yielding new products or improvements that guaranteed sustained growth and market leadership. The incorporation of Abiomed was consistent with Johnson & Johnson's strategy of concentrating on high-growth markets that correspond with worldwide trends in healthcare, like minimally invasive surgery and customized medicine.

The regulatory approvals that Abiomed has successfully obtained could greatly increase Johnson & Johnson's ability to develop and expedite product approvals. The strategic significance of this acquisition was also highlighted by the larger cardiovascular device global industry, estimated to be worth \$50,87 billion in 2020 and expected to expand at a compound annual growth rate of 6.9% from 2021 to 2028 (Cardiovascular Devices Market Size, n.d.).

The rising incidence of cardiovascular diseases associated with sedentary lifestyles, stress, and poor diets are factors driving the market's growth (**Exhibit 3**).

The Payment

Johnson & Johnson's acquisition of Abiomed was an all-cash payment purchase, which was supplemented by a non-tradeable CVR that could add up to \$35 per share if certain

milestones were met (Johnson & Johnson, 2022). This significant upfront cash payment, which made up the majority of the \$16.6 billion buyout sum, highlighted Johnson & Johnson's dedication to obtaining Abiomed's cutting-edge cardiac technologies and knowledge.

Many financial and strategic factors had a role in the choice to use cash payment for this acquisition. First of all, cash offers give shareholders instantaneous, tangible value, which can be very effective in winning their acceptance of the transaction. This is critical in a market for competitive acquisitions because the support of shareholders may make or break big deals. By presenting itself as a firm, confident investor in Abiomed's potential through the cash offer, Johnson & Johnson successfully attracted Abiomed's shareholders and facilitated a smoother transaction process. An all-cash transaction streamlined the transaction structure in terms of finances. It avoided the complications and possible diluting effects of stock transactions, where changes in the buyer's stock price could affect the true value transferred, making it more difficult to determine if the purchase was fair. By utilizing cash, Johnson & Johnson was able to highlight its solid balance sheet and liquidity while maintaining the current valuation of its shares. Moreover, Abiomed's future revenue streams from its pipeline products—particularly those still under regulatory review—were made less unpredictable by adding CVRs to the deal structure. When forecasts for the target's future earnings or product approvals disagree, CVRs might help close the valuation gap. By lining up continuous incentives and maybe simplifying discussions, they guaranteed that Abiomed's stockholders would continue to profit from the successful commercialization of their technology in the future. In addition to enabling quick returns for shareholders, this acquisition strategy was in line with more general business practices that call for the utilization of sizeable cash reserves to quickly acquire strategic assets. The premium that J&J paid was thought to be a sign of the strong value and potential for synergy of Abiomed's exclusive technologies.

CVR Valuation

To comprehend how mergers and acquisitions can provide shareholders with financial benefits beyond the initial takeover offer, it is essential to grasp the notion of a Contingent Value Right (CVR). A CVR is a financial tool used in mergers and acquisitions to attract the shareholders of the company being acquired with the possibility of receiving additional payments in the future contingent upon the achievement of predetermined milestones after the acquisition.

In an attempt to strategically match financial results with post-acquisition performance metrics, Johnson & Johnson integrated a CVR into its acquisition of Abiomed. This CVR, which offered an extra \$35.00 per share, was subject to reaching certain benchmarks that included commercial success, regulatory approvals, and clinical goals:

- *Commercial Sales Target:* A significant economic objective of \$17.50 per share is payable under the CVR if Abiomed's products generate net sales of more than \$3.7 billion in a given fiscal year (from Johnson & Johnson's fiscal Q2 2027 through Q1 2028). A reduced payment of \$8.75 per share is made if this goal is not reached within this timeframe but is attained at any point during a rolling four-quarter period before the conclusion of fiscal 2029.
- *FDA Premarket Approval:* By January 1, 2028, Impella medicines used in STEMI, that is a heart attack with a completely blocked coronary artery (Fraser Health, n.d), patients without cardiogenic shock must receive FDA premarket approval before a payment of \$7.50 per share can be made. This significant achievement will help extend the clinical applications of Abiomed's Impella products into new patient demographics, which could expand the product's market and use cases.
- *Clinical Recommendations:* A Class I, so that, devices present minimal potential for harm to the user and are often simpler in design than Class II or Class III devices. Examples include enema kits and elastic bandages. 47% of medical devices fall under this category

and 95% of these are exempt from the regulatory process(US Food and Drug Administration, 2017) recommendation for using Impella in high-risk PCI, which is a non-surgical procedure to improve blood flow through narrowed or blocked coronary arteries (Yale Medicine, 2022) or STEMI with or without cardiogenic shock is required to receive an additional \$10 per share. This recommendation must be obtained no later than December 31, 2029, but no later than four years after the date the respective clinical endpoints were published. By reaching this milestone, Impella devices will have more credibility and be recommended for use in critical care situations. This will strengthen their clinical standing and recommendation among the medical community.

These comprehensive CVR requirements were incorporated within the merger agreement for several strategic reasons. By tying a portion of the compensation to the effective post-merger integration and market performance of Abiomed's goods, it primarily reduced financial risk. Johnson & Johnson was shielded against overvaluation concerns by having payment linked to performance, which made the financial commitment subject to observable results.

The following risks were associated with Johnson & Johnson's integration of Abiomed's operations:

- *Compatibility with technology*: It was imperative to guarantee the smooth integration of Abiomed's technology with Johnson & Johnson's current systems and processes. Inconsistencies in data management systems or technological platforms may result in inefficiencies, higher expenses, and a delay in meeting integration milestones.
- *Aligning corporate cultures*: Combining two different corporate cultures could cause tensions that sabotage attempts to work together. A properly managed alignment process is necessary for effective integration to unify the values and working styles of both firms and

prevent staff attrition and productivity loss, which could undermine attempts to reach CVR milestones.

The market environment and competitive dynamics, which can be erratic and affect the integrated product lines' commercial performance, also played a significant role in the CVR's success.

- *Market acceptance:* The market's reaction to new or altered products is unpredictable, even in the event of a successful integration. Commercial milestones can be directly impacted by variations in healthcare provider goals, rival innovations, or changes in consumer tastes.
- *Competitive pressures:* There is fierce competition in the medical device sector, and rivals are always coming up with new and improved products. There is a high danger that the intended results won't be met if competitors make breakthroughs that threaten the market share and sales targets outlined in the CVR criteria.

The Outlook

After Johnson & Johnson acquired Abiomed, the newly combined business moved quickly to execute several aggressive integration strategies meant to maximize synergies and improve operational efficiency. Some of these actions included consolidating redundant tasks, strategically reorganizing the supply chain and manufacturing processes, and narrowing the focus to essential, advanced medical devices that enhance J&J's current product range were some of these actions. Early on in the merger's financial outcomes, J&J's revenue growth was positively impacted, mainly due to Abiomed's industry-leading heat pump technologies. Within the first year of the acquisition, J&J's earnings per share were expected to increase due to cost savings and expanded market reach. Strong quarter-over-quarter growth was demonstrated by the company's financial filings, which showed a solid alignment with the financial estimates given during the merger announcement. Future earnings could be impacted by factors like rising regulatory scrutiny in the medical device business, expensive R&D expenditures for medical

advances, and competitive challenges from existing firms and developing technology. The ageing of the world's population and technical developments in healthcare, however, are likely to support the need for sophisticated medical devices, thus the outlook is still positive.

Exhibit 1 – COVID-19 Impact on the Companies

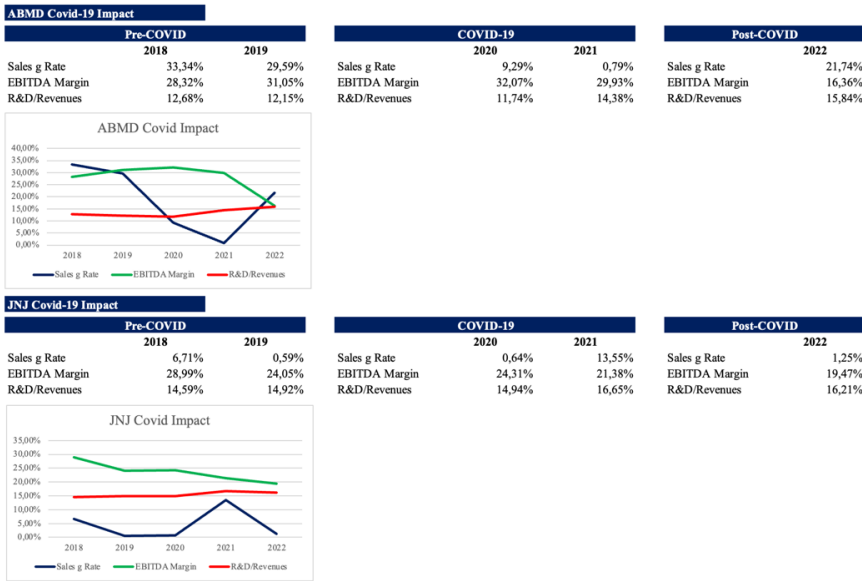
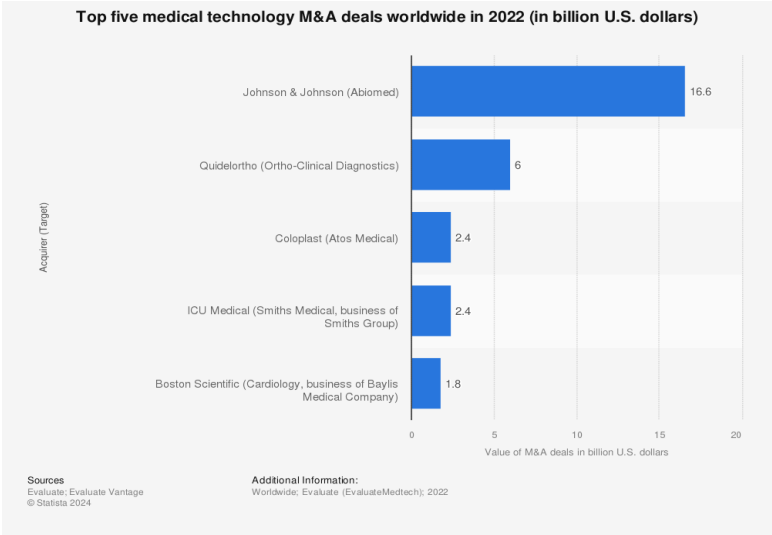


Exhibit 2 – Top 5 medical technology M&A deals worldwide in 2022



Top five medical technology M&A deals worldwide in 2022 (in billion U.S. dollars). February 9, 2023. Statista. Accessed March 06, 2024.

<https://www.statista.com/statistics/331778/value-of-top-medtech-merger-and-acquisition-deals-globally/>

Exhibit 3 - Trends in Cardiovascular Disease Mortality Rates Among Adults Aged ≥35 Years
U.S., 2010–2022

| Category | Age-adjusted CVD mortality rate per 100,000 (95% CI) | | | Annual avg. Percent change (95% CI) | | Relative Percent Change (95%) | |
|--------------------------------------|--|--------------|--------------|-------------------------------------|------------|-------------------------------|--------------|
| | 2010 | 2019 | 2022 | 2010-2019 | 2019-2022 | 2010 vs 2019 | 2019 vs 2022 |
| Total | 456.6 | 416.0 | 454.5 | -0.9 | 3.0 | -8.9 | 9.3 |
| Age Group (years) | | | | | | | |
| 35–54 | 64.3 | 61.8 | 64.8 | 0.5 | 0.5 | -3.9 | 4.9 |
| 55–64 | 231.8 | 239.5 | 250.9 | 1.1 | 1.1 | 3.3 | 4.8 |
| 65–74 | 530.0 | 505.1 | 541.4 | -0.0 | 1.2 | -4.7 | 7.2 |
| 75–84 | 1577.2 | 1344.3 | 1494.5 | -1.6 | 3.5 | -14.8 | 11.2 |
| ≥85 | 5694.9 | 5138.0 | 5697.5 | -0.9 | 3.8 | -9.8 | 10.9 |
| Sex | | | | | | | |
| Male | 549.2 | 504.7 | 546.5 | -0.8 | 2.7 | -8.1 | 8.3 |
| Female | 382.9 | 342.0 | 376.9 | -1.1 | 3.3 | -10.7 | 10.2 |
| Race & Hispanic Ethnicity | | | | | | | |
| White, NH | 454.0 | 420.4 | 463.2 | -0.6 | 3.6 | -7.4 | 10.2 |
| Black, NH | 603.3 | 550.1 | 596.9 | -0.3 | 2.2 | -8.8 | 8.5 |
| Hispanic | 347.1 | 304.9 | 333.6 | -0.7 | 2.7 | -12.2 | 9.4 |
| API, NH | 285.3 | 241.1 | 271.2 | -1.5 | 3.4 | -15.5 | 12.5 |
| AIAN, NH | 413.4 | 358.4 | 384.3 | -1.1 | 2.3 | -13.3 | 7.3 |

CVD deaths were defined as having International Classification of Diseases, 10th Revision Clinical Modification codes 100–199 listed as the underlying cause of death. Age-stratified rates are crude mortality rates that are not age-standardized. API, Asian or Pacific Islander; AIAN, American Indian or Alaska Native; CVD, cardiovascular disease; NH, non-Hispanic.

Own illustration, derived from Trends in Cardiovascular Disease Mortality Rates and Excess Deaths, 2010–2022. [https://www.ajpmonline.org/article/S0749-3797\(23\)00465-8/pdf#:~:text=Results%3A%20During%202010%E2%88%922022%2C,rate%20\(456.7%20per%20100%2C000\).](https://www.ajpmonline.org/article/S0749-3797(23)00465-8/pdf#:~:text=Results%3A%20During%202010%E2%88%922022%2C,rate%20(456.7%20per%20100%2C000).)

Exhibit 4 – Reformulated Abiomed Income Statement

| Reformulated Abiomed Income Statement | | | | | | |
|--|----------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
| Core Result | | | | | | |
| Revenue | \$1,031,753,00 | \$847,522,00 | \$840,883,00 | \$769,432,00 | \$593,749,00 | \$445,304,00 |
| Cost of revenue | \$188,158,00 | \$161,907,00 | \$151,305,00 | \$129,567,00 | \$98,581,00 | \$70,627,00 |
| Research and development | \$163,403,00 | \$121,875,00 | \$98,759,00 | \$93,503,00 | \$75,297,00 | \$66,386,00 |
| Selling, general and administrative | \$423,486,00 | \$334,183,00 | \$341,600,00 | \$321,550,00 | \$262,734,00 | \$218,153,00 |
| Core Result Before Taxes | \$256,706,00 | \$229,557,00 | \$249,219,00 | \$224,812,00 | \$157,137,00 | \$90,138,00 |
| Statutory Taxes | (\$53,908,26) | (\$48,206,97) | (\$52,335,99) | (\$47,210,52) | (\$49,498,16) | (\$31,548,30) |
| Tax Adjustments | (\$2,016,00) | \$294,00 | (\$2,688,00) | \$5,124,00 | (\$6,205,50) | \$70,00 |
| Core Result After Taxes | \$200,781,74 | \$181,644,03 | \$194,195,01 | \$182,725,48 | \$101,433,35 | \$58,659,70 |
| Core Result | \$200,781,74 | \$181,644,03 | \$194,195,01 | \$182,725,48 | \$101,433,35 | \$58,659,70 |
| Acquired in-process research & development | \$115,986,00 | \$0,00 | \$0,00 | \$0,00 | \$0,00 | \$0,00 |
| Interest & Other Income | \$49,840,00 | \$58,663,00 | \$7,606,00 | \$38,548,00 | \$3,300,00 | \$1,205,00 |
| Non-Core Result Before Taxes | (\$66,146,00) | \$58,663,00 | \$7,606,00 | \$38,548,00 | \$3,300,00 | \$1,205,00 |
| Statutory Taxes | \$13,890,66 | (\$12,319,23) | (\$1,597,26) | (\$8,095,08) | (\$1,039,50) | (\$421,75) |
| Tax Adjustments | \$3,570,00 | \$1,260,00 | \$2,688,00 | \$924,00 | \$5,764,50 | \$2,730,00 |
| Tax Adjustments due to roundings | (\$15,591,40) | (\$3,722,80) | \$117,25 | \$44,913,60 | \$2,711,66 | (\$10,056,95) |
| Non-Core Result After Taxes | (\$64,276,74) | \$43,880,97 | \$8,813,99 | \$76,290,52 | \$10,736,66 | (\$6,543,70) |
| Other comprehensive (loss) income | (\$15,715,00) | (\$256,00) | \$3,500,00 | (\$10,485,00) | \$16,402,00 | (\$6,066,00) |
| Non-Core Result | (\$79,991,74) | \$43,624,97 | \$12,313,99 | \$65,805,52 | \$27,138,66 | (\$12,609,70) |
| Checks | | | | | | |
| Result Before Taxes | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |
| Result After Taxes | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |
| Result After OCI | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |

Own illustration, derived from Abiomed Financials.

Exhibit 5 – Reformulated Abiomed Balance Sheet

| Reformulated Abiomed Balance Sheet | | | | | | |
|--|-----------------------|-----------------------|-----------------------|---------------------|---------------------|---------------------|
| Core Result | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
| CORE ASSETS, LIABILITIES & EQUITY | | | | | | |
| Cash and cash equivalents | \$132,818.00 | \$232,710.00 | \$192,341.00 | \$121,021.00 | \$42,975.00 | \$39,040.00 |
| Accounts receivable, net | \$90,608.00 | \$97,179.00 | \$84,650.00 | \$90,809.00 | \$70,010.00 | \$54,055.00 |
| Inventories, net | \$93,981.00 | \$81,059.00 | \$90,088.00 | \$80,942.00 | \$50,204.00 | \$34,931.00 |
| Prepaid expenses and other current assets | \$33,277.00 | \$26,032.00 | \$18,009.00 | \$13,748.00 | \$11,808.00 | \$8,024.00 |
| Property and equipment, net | \$202,490.00 | \$197,129.00 | \$164,931.00 | \$145,005.00 | \$117,167.00 | \$87,777.00 |
| Goodwill | \$76,786.00 | \$78,568.00 | \$31,969.00 | \$32,601.00 | \$35,808.00 | \$31,045.00 |
| Accounts payable | \$35,346.00 | \$34,842.00 | \$32,774.00 | \$32,185.00 | \$23,565.00 | \$20,620.00 |
| Accrued expenses | \$72,629.00 | \$66,046.00 | \$75,107.00 | \$57,420.00 | \$46,147.00 | \$37,703.00 |
| Deferred revenue | \$26,362.00 | \$24,322.00 | \$19,147.00 | \$16,393.00 | \$14,970.00 | \$10,495.00 |
| Core Invested Capital | \$495,623.00 | \$587,467.00 | \$454,960.00 | \$378,128.00 | \$243,290.00 | \$186,054.00 |
| NON-CORE ASSETS, LIABILITIES & EQUITY | | | | | | |
| Other assets | \$147,485.00 | \$113,082.00 | \$117,655.00 | \$85,115.00 | \$14,176.00 | \$8,286.00 |
| Deferred tax assets | \$10,552.00 | \$11,380.00 | \$43,336.00 | \$77,502.00 | \$70,746.00 | \$34,723.00 |
| Other intangibles, net | \$39,518.00 | \$42,150.00 | \$14,913.00 | \$15,208.00 | \$16,705.00 | \$14,482.00 |
| Other current liabilities | \$4,120.00 | \$3,759.00 | \$4,857.00 | | | |
| Contingent consideration | \$21,510.00 | \$24,706.00 | \$9,000.00 | \$9,575.00 | \$10,490.00 | \$9,153.00 |
| Other long-term liabilities | \$9,319.00 | \$10,162.00 | \$9,305.00 | \$1,061.00 | \$776.00 | \$3,251.00 |
| Deferred tax liabilities | \$781.00 | \$847.00 | \$806.00 | \$822.00 | \$903.00 | \$783.00 |
| Non-Core Invested Capital | \$161,825.00 | \$127,138.00 | \$151,936.00 | \$166,367.00 | \$89,458.00 | \$44,304.00 |
| Total Invested Capital | \$657,448.00 | \$714,605.00 | \$606,896.00 | \$544,495.00 | \$332,748.00 | \$230,358.00 |
| EQUITY | | | | | | |
| Additional paid in capital | \$870,074.00 | \$800,690.00 | \$739,133.00 | \$690,507.00 | \$619,905.00 | \$565,962.00 |
| Retained earnings / Accumulated deficit | \$964,512.00 | \$828,007.00 | \$602,482.00 | \$399,473.00 | \$140,457.00 | (\$46,959.00) |
| Treasury stock at cost | (\$304,555.00) | (\$288,030.00) | (\$265,411.00) | (\$138,852.00) | (\$67,078.00) | (\$46,763.00) |
| Accumulated other comprehensive loss | (\$27,160.00) | (\$11,445.00) | (\$11,189.00) | (\$14,689.00) | (\$4,204.00) | (\$20,606.00) |
| Share Capital | \$455 | \$453 | \$451 | \$451 | \$444 | \$437 |
| Total Equity | \$1,503,326.00 | \$1,329,675.00 | \$1,065,466.00 | \$936,890.00 | \$689,524.00 | \$452,071.00 |
| FINANCIALS | | | | | | |
| Long-term marketable securities | \$220,089.00 | \$264,085.00 | \$207,795.00 | \$21,718.00 | \$37,502.00 | \$47,143.00 |
| Short-term marketable securities | \$625,789.00 | \$350,985.00 | \$250,775.00 | \$370,677.00 | \$319,274.00 | \$190,908.00 |
| Capital lease obligation | | | | | | \$15,539.00 |
| Current portion of capital lease obligation | | | | | | \$799.00 |
| Net Financials | \$845,878.00 | \$615,070.00 | \$458,570.00 | \$392,395.00 | \$356,776.00 | \$221,713.00 |
| Checks | | | | | | |
| Total Equity = Core + Non-Core + Financials | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |

Own illustration, derived from Abiomed Financials.

<https://www.sec.gov/edgar/searchedgar/companysearch>

Exhibit 6 – Reformulated Abiomed Cash Flow Statement

| Reformulated Abiomed Cash Flow Statement | | | | | | |
|---|----------------------|---------------------|---------------------|---------------------|----------------------|-----------------------|
| Operating Cash Flows | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
| Core Result Before Taxes | \$256,706.00 | \$229,557.00 | \$249,219.00 | \$224,812.00 | \$157,137.00 | \$90,138.00 |
| Statutory Taxes | (\$53,908.26) | (\$48,206.97) | (\$52,335.99) | (\$47,210.52) | (\$49,498.16) | (\$31,548.30) |
| Tax Adjustments | (\$2,016.00) | \$294.00 | (\$2,688.00) | \$5,124.00 | (\$6,205.50) | \$70.00 |
| NOPLAT | \$200,781.74 | \$181,644.03 | \$194,195.01 | \$182,725.48 | \$101,433.35 | \$58,659.70 |
| Depreciation & Amortization | \$28,089.00 | \$24,097.00 | \$20,430.00 | \$14,121.00 | \$11,005.00 | \$6,202.00 |
| Gross Operating Cash Flow | \$228,870.74 | \$205,741.03 | \$214,625.01 | \$196,846.48 | \$112,438.35 | \$64,861.70 |
| CAPEX | \$26,307.00 | \$70,696.00 | \$19,798.00 | \$10,914.00 | \$15,768.00 | \$37,247.00 |
| ANWC | (\$197,996.00) | (\$149,186.00) | \$15,447.00 | (\$204,242.00) | (\$182,378.00) | (\$396,575.00) |
| Current Assets | \$976,473.00 | \$787,965.00 | \$635,863.00 | \$677,197.00 | \$494,271.00 | \$326,958.00 |
| Current Liabilities | \$138,457.00 | \$128,969.00 | \$131,885.00 | \$105,998.00 | \$84,682.00 | \$69,617.00 |
| NWC | \$1,114,930.00 | \$916,934.00 | \$767,748.00 | \$783,195.00 | \$578,953.00 | \$396,575.00 |
| Operating Unlevered Free-Cash Flow | \$57,181.74 | \$127,251.03 | \$249,870.01 | \$3,518.48 | (\$54,171.66) | (\$294,466.30) |
| Non Operating Cash Flows | | | | | | |
| Non-Core Result Before Taxes | (\$66,146.00) | \$58,663.00 | \$7,606.00 | \$38,548.00 | \$3,300.00 | \$1,205.00 |
| Statutory Taxes | \$13,890.66 | (\$12,319.23) | (\$1,597.26) | (\$8,095.08) | (\$1,039.50) | (\$421.75) |
| Tax Adjustments | \$3,570.00 | \$1,260.00 | \$2,688.00 | \$924.00 | \$5,764.50 | \$2,730.00 |
| Tax Adjustments due to roundings | (\$15,591.40) | (\$3,722.80) | \$117.25 | \$44,913.60 | \$2,711.66 | (\$10,056.95) |
| Other comprehensive (loss) income | (\$15,715.00) | (\$256.00) | \$3,500.00 | (\$10,485.00) | \$16,402.00 | (\$6,066.00) |
| Non-Core Cash Flows | (\$79,991.74) | \$43,624.97 | \$12,313.99 | \$65,805.52 | \$27,138.66 | (\$12,609.70) |
| Total Unlevered Free-Cash Flows | (\$22,810.00) | \$170,876.00 | \$262,184.00 | \$69,324.00 | (\$27,033.00) | (\$307,076.00) |
| Checks | | | | | | |
| Income Taxes | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |
| Comprehensive Income | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |

Own illustration, derived from Abiomed Financials.

<https://www.sec.gov/edgar/searchedgar/companysearch>

Exhibit 7 – Reformulated Johnson & Johnson Income Statement

| Reformulated JNJ Income Statement | | | | | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Core Result | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
| Revenue | \$94,943,000 | \$93,775,000 | \$82,584,000 | \$82,059,000 | \$81,581,000 | \$76,450,000 |
| COGS | \$31,089,000 | \$29,855,000 | \$28,427,000 | \$27,556,000 | \$27,091,000 | \$25,439,000 |
| Selling, Marketing and administrative expenses | \$24,765,000 | \$24,659,000 | \$22,084,000 | \$22,178,000 | \$22,540,000 | \$21,520,000 |
| R&A | \$14,603,000 | \$14,714,000 | \$12,159,000 | \$11,355,000 | \$10,775,000 | \$10,594,000 |
| Interest Income | (\$490,000) | (\$53,000) | (\$111,000) | (\$357,000) | (\$611,000) | (\$385,000) |
| Interest Expense | \$276,000 | \$183,000 | \$201,000 | \$318,000 | \$1,005,000 | \$934,000 |
| Core Result Before Taxes | \$24,700,000 | \$24,417,000 | \$19,824,000 | \$21,009,000 | \$20,781,000 | \$18,348,000 |
| Statutory Taxes | (\$5,187,000) | (\$5,127,57) | (\$4,163,04) | (\$4,411,89) | (\$6,546,02) | (\$6,421,80) |
| Tax Adjustments | (\$1,22) | (\$2,39) | (\$1,89) | (\$0,92) | (\$1,29) | (\$5,50) |
| Core Result After Taxes | \$19,511,78 | \$19,287,04 | \$15,659,07 | \$16,596,19 | \$14,233,69 | \$11,920,71 |
| Core Result | \$19,511,78 | \$19,287,04 | \$15,659,07 | \$16,596,19 | \$14,233,69 | \$11,920,71 |
| In-process R&A | \$783,000 | \$900,000 | \$181,000 | \$890,000 | \$1,126,000 | \$408,000 |
| Other Income (expense), net | \$1,871,000 | \$489,000 | \$2,899,000 | \$2,525,000 | \$1,405,000 | (\$42,000) |
| Restructuring | \$321,000 | \$252,000 | \$247,000 | \$266,000 | \$251,000 | \$309,000 |
| Non-Core Result Before Taxes | (\$2,975,000) | (\$1,641,000) | (\$3,327,000) | (\$3,681,000) | (\$2,782,000) | (\$675,000) |
| Statutory Taxes | \$624,75 | \$344,61 | \$698,67 | \$773,01 | \$876,33 | \$236,25 |
| Tax Adjustments | \$0,46 | (\$0,27) | (\$0,25) | (\$0,82) | (\$0,60) | \$25,66 |
| Tax Adjustments due to roundings | \$779,01 | \$2,887,63 | \$1,683,51 | \$1,431,62 | \$2,969,58 | (\$10,207,61) |
| Non-Core Result After Taxes | (\$1,570,78) | \$1,590,96 | (\$945,07) | (\$1,477,19) | \$1,063,31 | (\$10,620,71) |
| Other comprehensive (loss) income | \$91,000 | \$2,184,000 | \$649,000 | (\$669,000) | (\$1,791,000) | \$1,702,000 |
| Non-Core Result | (\$1,479,78) | \$3,774,96 | (\$296,07) | (\$2,146,19) | (\$727,69) | (\$8,918,71) |

| Checks | | | | | | |
|---------------------|------|------|------|------|------|------|
| Result Before Taxes | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |
| Result After Taxes | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |
| Result After OCI | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |

Own illustration, derived from Johnson & Johnson Financials.

<https://www.sec.gov/edgar/searchedgar/companysearch>

Exhibit 8 – Reformulated Johnson & Johnson Balance Sheet

| Reformulated JNJ Balance Sheet | | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Core Result | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
| CORE ASSETS, LIABILITIES & EQUITY | | | | | | |
| Cash and cash equivalents | \$14,127,000 | \$14,487,000 | \$13,985,000 | \$17,305,000 | \$18,107,000 | \$17,824,000 |
| Inventories, net | \$12,483,000 | \$10,387,000 | \$9,344,000 | \$9,020,000 | \$8,599,000 | \$8,765,000 |
| Prepaid expenses and other receivables | \$3,132,000 | \$3,701,000 | \$3,132,000 | \$2,392,000 | \$2,699,000 | \$2,537,000 |
| Accounts receivable trade, less allowances for doubtful accounts | \$16,160,000 | \$15,283,000 | \$13,576,000 | \$14,481,000 | \$14,098,000 | \$13,490,000 |
| Property and equipment, net | \$19,803,000 | \$18,962,000 | \$18,766,000 | \$17,766,000 | \$17,035,000 | \$17,005,000 |
| Goodwill | \$45,231,000 | \$35,246,000 | \$36,393,000 | \$33,639,000 | \$30,453,000 | \$31,906,000 |
| Intangible assets | \$48,325,000 | \$46,392,000 | \$53,402,000 | \$47,643,000 | \$47,611,000 | \$53,228,000 |
| Accounts payable | \$11,703,000 | \$11,055,000 | \$9,505,000 | \$8,544,000 | \$7,537,000 | \$7,310,000 |
| Accrued liabilities | \$11,456,000 | \$13,612,000 | \$13,968,000 | \$9,715,000 | \$7,601,000 | \$7,304,000 |
| Loans & Notes payable | \$12,771,000 | \$3,766,000 | \$2,631,000 | \$1,202,000 | \$2,796,000 | \$3,906,000 |
| Accrued taxes on income | \$2,127,000 | \$1,112,000 | \$1,392,000 | \$2,266,000 | \$818,000 | \$1,854,000 |
| Employee related obligations | \$6,767,000 | \$8,898,000 | \$10,771,000 | \$10,663,000 | \$9,951,000 | \$10,074,000 |
| Core Invested Capital | \$114,437,000 | \$106,015,000 | \$110,331,000 | \$109,748,000 | \$109,899,000 | \$114,307,000 |
| NON-CORE ASSETS, LIABILITIES & EQUITY | | | | | | |
| Assets held for sale | | | | \$94,000 | \$95,000 | |
| Deferred tax assets | \$9,123,000 | \$10,223,000 | \$8,534,000 | \$7,819,000 | \$7,640,000 | \$7,105,000 |
| Other assets | \$9,602,000 | \$10,216,000 | \$6,562,000 | \$5,695,000 | \$4,182,000 | \$4,971,000 |
| Accrued rebates, returns & promotion | \$14,417,000 | \$12,095,000 | \$11,513,000 | \$10,883,000 | \$9,380,000 | \$7,210,000 |
| Accrued compensation and employee related obligations | \$3,328,000 | \$3,586,000 | \$3,484,000 | \$3,354,000 | \$3,098,000 | \$2,953,000 |
| Long-term debt | \$26,888,000 | \$29,985,000 | \$32,635,000 | \$26,494,000 | \$27,684,000 | \$30,675,000 |
| Deferred taxes on income | \$6,374,000 | \$7,487,000 | \$7,214,000 | \$5,958,000 | \$7,506,000 | \$8,368,000 |
| Long-term taxes payable | \$4,306,000 | \$5,713,000 | \$6,559,000 | \$7,444,000 | \$8,242,000 | \$8,472,000 |
| Other liabilities | \$10,437,000 | \$10,686,000 | \$11,944,000 | \$11,734,000 | \$8,589,000 | \$9,017,000 |
| Non-Core Invested Capital | (\$47,025,000) | (\$49,113,000) | (\$58,253,000) | (\$52,259,000) | (\$51,727,000) | (\$54,619,000) |
| Total Invested Capital | \$67,412,000 | \$56,902,000 | \$52,078,000 | \$57,489,000 | \$58,172,000 | \$59,688,000 |
| EQUITY | | | | | | |
| Accumulated other comprehensive income (loss) | (\$12,967,000) | (\$13,058,000) | (\$15,242,000) | (\$15,891,000) | (\$15,222,000) | (\$13,199,000) |
| Retained earnings | \$128,345,000 | \$123,060,000 | \$113,890,000 | \$110,659,000 | \$106,216,000 | \$101,793,000 |
| Less: common stock held in treasury, at cost | \$41,694,000 | \$39,099,000 | \$38,490,000 | \$38,417,000 | \$34,362,000 | \$31,554,000 |
| Common stock — par value \$1.00 per share | \$3,120,000 | \$3,120,000 | \$3,120,000 | \$3,120,000 | \$3,120,000 | \$3,120,000 |
| Total Equity | \$76,804,000 | \$74,023,000 | \$63,278,000 | \$59,471,000 | \$59,752,000 | \$60,160,000 |
| FINANCIALS | | | | | | |
| Short-term marketable securities | \$9,392,000 | \$17,121,000 | \$11,200,000 | \$1,982,000 | \$1,580,000 | \$472,000 |
| Checks | | | | | | |
| Total Equity = Core + Non-Core + Financials | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |

Own illustration, derived from Johnson & Johnson Financials.

<https://www.sec.gov/edgar/searchedgar/companysearch>

Exhibit 9 – Reformulated Johnson & Johnson Cash Flow Statement

| Reformulated JNJ Cash Flow Statement | | | | | | |
|---|---------------------|--------------------|--------------------|---------------------|--------------------|----------------------|
| Operating Cash Flows | | | | | | |
| | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 |
| Core Result Before Taxes | \$24,700,00 | \$24,417,00 | \$19,824,00 | \$21,009,00 | \$20,781,00 | \$18,348,00 |
| Statutory Taxes | (\$5,187,00) | (\$5,127,57) | (\$4,163,04) | (\$4,411,89) | (\$6,546,02) | (\$6,421,80) |
| Tax Adjustments | (\$1,22) | (\$2,39) | (\$1,89) | (\$0,92) | (\$1,29) | (\$5,50) |
| NOPLAT | \$19,511,78 | \$19,287,04 | \$15,659,07 | \$16,596,19 | \$14,233,69 | \$11,920,71 |
| Depreciation & Amortization | \$6,970,00 | \$7,390,00 | \$7,231,00 | \$7,009,00 | \$6,929,00 | \$5,642,00 |
| Gross Operating Cash Flow | \$26,481,78 | \$26,677,04 | \$22,890,07 | \$23,605,19 | \$21,162,69 | \$17,562,71 |
| CAPEX | \$16,955,00 | \$6,243,00 | \$9,985,00 | \$10,195,00 | \$5,476,00 | \$37,548,00 |
| ANWC | (\$4,891,00) | (\$12,475,00) | (\$12,492,00) | (\$3,975,00) | (\$3,638,00) | (\$73,625,00) |
| Current Assets | \$55,294,00 | \$60,979,00 | \$51,237,00 | \$45,274,00 | \$46,033,00 | \$43,088,00 |
| Current Liabilities | \$55,802,00 | \$45,226,00 | \$42,493,00 | \$35,964,00 | \$31,230,00 | \$30,537,00 |
| NWC | \$111,096,00 | \$106,205,00 | \$93,730,00 | \$81,238,00 | \$77,263,00 | \$73,625,00 |
| Operating Unlevered Free-Cash Flow | \$38,545,78 | \$20,445,04 | \$20,383,07 | \$29,825,19 | \$23,000,69 | (\$18,514,30) |
| Non Operating Cash Flows | | | | | | |
| Non-Core Result Before Taxes | (\$2,975,00) | (\$1,641,00) | (\$3,327,00) | (\$3,681,00) | (\$2,782,00) | (\$675,00) |
| Statutory Taxes | \$624,75 | \$344,61 | \$698,67 | \$773,01 | \$876,33 | \$236,25 |
| Tax Adjustments | \$0,46 | (\$0,27) | (\$0,25) | (\$0,82) | (\$0,60) | \$25,66 |
| Tax Adjustments due to roundings | \$779,01 | \$2,887,63 | \$1,683,51 | \$1,431,62 | \$2,969,58 | (\$10,207,61) |
| Other comprehensive (loss) income | \$91,00 | \$2,184,00 | \$649,00 | (\$669,00) | (\$1,791,00) | \$1,702,00 |
| Non-Core Cash Flows | (\$1,479,78) | \$3,774,96 | (\$296,07) | (\$2,146,19) | (\$272,69) | (\$8,918,71) |
| Total Unlevered Free-Cash Flows | \$37,066,00 | \$24,220,00 | \$20,087,00 | \$27,679,00 | \$22,273,00 | (\$27,433,00) |
| Checks | | | | | | |
| Income Taxes | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |
| Comprehensive Income | | | | | | |
| Check | TRUE | TRUE | TRUE | TRUE | TRUE | TRUE |

Own illustration, derived from Johnson & Johnson Financials.

<https://www.sec.gov/edgar/searchedgar/companysearch>

Exhibit 10 – Abiomed Credit Rating

| | | | | | | |
|----------------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|
| EBIT | \$140,720,00 | \$229,557,00 | \$249,219,00 | \$224,812,00 | \$157,137,00 | \$90,138,00 |
| Interest Income | \$49,840,00 | \$58,663,00 | \$7,606,00 | \$38,548,00 | \$3,300,00 | \$1,205,00 |
| Int. Coverage Ratio | 2,823434992 | 3,913147981 | 32,76610571 | 5,83200166 | 47,61727273 | 74,80331195 |
| <i>Median</i> | <i>3,913147981</i> | | | | | |

| Large cap (>\$5 billion) | Small cap or risky (<\$5 billion) | Rating is (S&P/ Moody's) | Spread (11/13) |
|--------------------------|-----------------------------------|--------------------------|----------------|
| >8.50 | >12.5 | Aaa/AAA | 0.40% |
| 6.5-8.5 | 9.5-12.5 | Aa2/AA | 0.70% |
| 5.5-6.5 | 7.5-9.5 | A1/A+ | 0.85% |
| 4.25-5.5 | 6-7.5 | A2/A | 1.00% |
| 3-4.25 | 4.5-6 | A3/A- | 1.30% |
| 2.5-3 | 4-4.5 | Baa2/BBB | 2.00% |
| 2.25-2.5 | 3.5-4 | Ba1/BB+ | 3.00% |
| 2-2.25 | 3-3.5 | Ba2/BB | 4.00% |
| 1.75-2.25 | 2.5-3 | B1/B+ | 5.50% |
| 1.5-1.75 | 2-2.5 | B2/B | 6.50% |
| 1.25-1.5 | 1.5-2 | B3/B- | 7.25% |
| 0.8-1.25 | 1.25-1.5 | Caa/CCC | 8.75% |
| 0.65-0.8 | 0.8-1.25 | Ca2/CC | 9.50% |
| 0.2-0.65 | 0.5-0.8 | C2/C | 10.50% |
| <0.2 | <0.5 | D2/D | 12.00% |

Exhibit 11 – Historical Prices

| Date | ABMD | SP500 | JNJ |
|----------|----------|------------|----------|
| 01/01/17 | \$106,37 | \$2,278,90 | \$113,25 |
| 01/02/17 | \$117,97 | \$2,363,60 | \$122,21 |
| 01/03/17 | \$125,20 | \$2,362,70 | \$124,55 |
| 01/04/17 | \$130,32 | \$2,384,20 | \$123,47 |
| 01/05/17 | \$137,43 | \$2,411,80 | \$128,25 |
| 01/06/17 | \$143,30 | \$2,423,40 | \$132,29 |
| 01/07/17 | \$148,09 | \$2,470,30 | \$132,72 |
| 01/08/17 | \$150,80 | \$2,471,70 | \$132,37 |
| 01/09/17 | \$168,60 | \$2,519,40 | \$130,01 |
| 01/10/17 | \$192,92 | \$2,575,30 | \$139,41 |
| 01/11/17 | \$194,84 | \$2,647,60 | \$139,33 |
| 01/12/17 | \$187,41 | \$2,673,60 | \$139,72 |
| 01/01/18 | \$235,00 | \$2,823,80 | \$138,19 |
| 01/02/18 | \$268,18 | \$2,713,80 | \$129,88 |
| 01/03/18 | \$290,99 | \$2,640,90 | \$128,15 |
| 01/04/18 | \$300,95 | \$2,648,10 | \$126,49 |
| 01/05/18 | \$381,14 | \$2,705,30 | \$119,62 |
| 01/06/18 | \$409,05 | \$2,718,40 | \$121,34 |
| 01/07/18 | \$354,53 | \$2,816,30 | \$132,52 |
| 01/08/18 | \$406,58 | \$2,901,50 | \$134,69 |
| 01/09/18 | \$449,75 | \$2,914,00 | \$138,17 |
| 01/10/18 | \$341,20 | \$2,711,70 | \$139,99 |
| 01/11/18 | \$332,68 | \$2,760,20 | \$146,90 |
| 01/12/18 | \$325,04 | \$2,506,80 | \$129,05 |
| 01/01/19 | \$351,07 | \$2,704,10 | \$133,08 |
| 01/02/19 | \$334,50 | \$2,784,50 | \$136,64 |
| 01/03/19 | \$285,59 | \$2,834,40 | \$139,79 |
| 01/04/19 | \$277,41 | \$2,945,80 | \$141,20 |
| 01/05/19 | \$261,92 | \$2,752,10 | \$131,15 |
| 01/06/19 | \$260,49 | \$2,941,80 | \$139,28 |
| 01/07/19 | \$278,56 | \$2,980,40 | \$130,22 |
| 01/08/19 | \$193,07 | \$2,926,50 | \$128,36 |
| 01/09/19 | \$177,89 | \$2,976,70 | \$129,38 |
| 01/10/19 | \$207,58 | \$3,037,60 | \$132,04 |
| 01/11/19 | \$196,18 | \$3,141,00 | \$137,49 |
| 01/12/19 | \$170,59 | \$3,230,80 | \$145,87 |
| 01/01/20 | \$186,29 | \$3,225,50 | \$148,87 |
| 01/02/20 | \$150,26 | \$2,954,20 | \$134,48 |
| 01/03/20 | \$145,16 | \$2,584,60 | \$131,13 |
| 01/04/20 | \$191,25 | \$2,912,40 | \$150,04 |
| 01/05/20 | \$223,90 | \$3,044,30 | \$148,75 |
| 01/06/20 | \$241,56 | \$3,100,30 | \$140,63 |
| 01/07/20 | \$299,94 | \$3,271,10 | \$145,76 |
| 01/08/20 | \$307,62 | \$3,500,30 | \$153,41 |
| 01/09/20 | \$277,06 | \$3,363,00 | \$148,88 |
| 01/10/20 | \$251,88 | \$3,270,00 | \$137,11 |
| 01/11/20 | \$274,10 | \$3,621,60 | \$144,68 |
| 01/12/20 | \$324,20 | \$3,756,10 | \$157,38 |
| 01/01/21 | \$348,25 | \$3,714,20 | \$163,13 |
| 01/02/21 | \$324,55 | \$3,811,20 | \$158,46 |
| 01/03/21 | \$318,73 | \$3,972,90 | \$164,35 |
| 01/04/21 | \$320,73 | \$4,181,20 | \$162,73 |
| 01/05/21 | \$284,58 | \$4,204,10 | \$169,25 |
| 01/06/21 | \$312,11 | \$4,297,50 | \$164,74 |
| 01/07/21 | \$327,14 | \$4,395,30 | \$172,20 |
| 01/08/21 | \$363,96 | \$4,522,70 | \$173,13 |
| 01/09/21 | \$325,52 | \$4,307,50 | \$161,50 |
| 01/10/21 | \$332,04 | \$4,605,40 | \$162,88 |
| 01/11/21 | \$314,78 | \$4,567,00 | \$155,93 |
| 01/12/21 | \$359,17 | \$4,766,20 | \$171,07 |
| 01/01/22 | \$295,87 | \$4,515,60 | \$172,29 |
| 01/02/22 | \$310,74 | \$4,373,90 | \$164,57 |
| 01/03/22 | \$331,24 | \$4,530,40 | \$177,23 |
| 01/04/22 | \$286,58 | \$4,131,90 | \$180,46 |
| 01/05/22 | \$263,70 | \$4,132,10 | \$179,53 |
| 01/06/22 | \$247,51 | \$3,785,40 | \$177,51 |
| 01/07/22 | \$293,01 | \$4,130,30 | \$174,52 |
| 01/08/22 | \$259,28 | \$3,955,00 | \$161,34 |
| 01/09/22 | \$245,66 | \$3,585,60 | \$163,36 |
| 01/10/22 | \$252,08 | \$3,872,00 | \$173,97 |
| 01/11/22 | \$377,79 | \$4,080,10 | \$178,00 |

Exhibit 12 – Firms' Values

| Abiomed Inc. | | J&J | |
|--------------------------|--------------|--------------------------|---------|
| Nr of Shares Outstanding | 45.545 | Nr of Shares Outstanding | 2.664 |
| Net Debt | \$160.000 | Net Debt | 22.856 |
| Share Price | \$331 | Share Price | 176,82 |
| Equity | \$15.086.326 | Equity | 471.048 |
| Enterprise Value | \$15.246.326 | Enterprise Value | 493.904 |

Assumptions

- The risk-free Rate is the 22nd of November 2022 rate, 4,07% to better reflect current market conditions at the announcement date
- Market Risk Premium considered is 4,60% (Damodaran Historic US equity risk premium)
- % growth rates in both DCFs are the arithmetic average of the last 3 years' % growth because going too far in the past would bias the study
- Expected long-term growth rates are completely arbitrary except that they were chosen by seeing the individual prospect of growth without the takeover and how they could move in the market after 5 years from 2022
- COGS with synergies, Growth Rate with synergies, and long-term growth Rate with synergies are completely arbitrary except that they were chosen by seeing the conditions of the markets in the past, their reaction to events, financial and otherwise
- All the rates without the synergies, except for the COGS one, are the weighted average between both the JNJ & ABMD rates considered
- CVR valuation: The correct % growth rate to reach \$3.700.000,00 of revenues is 27,54% computed from the following formula $\implies FV = PV \cdot (1+r)^t$. Since in the contingent projections, the total revenue would not result in 3.700.000,00, the rate should be changed to 27,405%

Appendix

Exhibit 1 – Abiomed DCF

| Abiomed DCF | | | | | | | | | | | |
|-------------------------|----------------|----------------|----------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Ticker | ABMD | | | | | | | | | | |
| | | | | | | | Projections | | | | |
| DCF | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| Revenue | \$445,304 | \$593,749 | \$769,432 | \$840,883 | \$847,522 | \$1,031,753 | \$1,141,164.68 | \$1,262,178.86 | \$1,396,025.92 | \$1,544,066.72 | \$1,707,806.42 |
| % of Revenue | 21.63% | 33.34% | 29.59% | 9.29% | 0.79% | 21.74% | 10.60% | 10.60% | 10.60% | 10.60% | 10.60% |
| EBITDA | \$96,340.00 | \$168,142.00 | \$238,933.00 | \$269,649.00 | \$253,654.00 | \$168,809.00 | \$298,063.23 | \$329,671.18 | \$364,630.98 | \$403,298.07 | \$446,065.59 |
| % of Revenue | 21.63% | 28.32% | 31.05% | 32.07% | 29.93% | 16.36% | 26.12% | 26.12% | 26.12% | 26.12% | 26.12% |
| D&A | \$6,202.00 | \$11,005.00 | \$14,121.00 | \$20,430.00 | \$24,097.00 | \$28,089.00 | \$30,413.08 | \$33,638.21 | \$37,205.36 | \$41,150.78 | \$45,514.59 |
| % of Revenue | 1.39% | 1.85% | 1.84% | 2.43% | 2.84% | 2.72% | 2.67% | 2.67% | 2.67% | 2.67% | 2.67% |
| EBIT | \$90,138 | \$157,137 | \$224,812 | \$249,219 | \$229,557 | \$140,720 | \$267,650.15 | \$296,032.97 | \$327,425.62 | \$362,147.29 | \$400,551.00 |
| % of Revenue | 20.24% | 26.47% | 29.22% | 29.64% | 27.09% | 13.64% | 23.45% | 23.45% | 23.45% | 23.45% | 23.45% |
| Taxes | \$39,227.00 | \$48,267.00 | \$4,344.00 | \$53,816.00 | \$62,695.00 | \$54,055.00 | \$69,788.31 | \$90,100.96 | \$116,325.85 | \$150,183.77 | \$193,896.42 |
| Tax Rate | 43.52% | 30.72% | 1.93% | 21.59% | 27.31% | 38.41% | 29.11% | 29.11% | 29.11% | 29.11% | 29.11% |
| Cash & Cash Equivalents | \$39,040.00 | \$42,975.00 | \$121,021.00 | \$192,341.00 | \$232,710.00 | \$132,818.00 | \$240,422.21 | \$265,917.65 | \$294,116.74 | \$325,306.19 | \$359,803.11 |
| % of Revenue | 8.77% | 7.24% | 15.73% | 22.87% | 27.46% | 12.87% | 21.07% | 21.07% | 21.07% | 21.07% | 21.07% |
| ANWC | (\$396,575.00) | (\$182,378.00) | (\$204,242.00) | \$15,447.00 | (\$149,186.00) | (\$197,996.00) | (\$132,968.00) | (\$147,068.51) | (\$162,664.31) | (\$179,913.96) | (\$198,992.84) |
| % of Revenue | -89.06% | -30.72% | -26.54% | 1.84% | -17.60% | -19.19% | -11.65% | -11.65% | -11.65% | -11.65% | -11.65% |
| CAPEX | \$37,247.00 | \$15,768.00 | \$10,914.00 | \$19,798.00 | \$70,696.00 | \$26,307.00 | \$50,384.94 | \$55,727.98 | \$61,637.63 | \$68,173.95 | \$75,403.42 |
| % of Revenue | 8.36% | 2.66% | 1.42% | 2.35% | 8.34% | 2.55% | 4.42% | 4.42% | 4.42% | 4.42% | 4.42% |
| Free Cash Flow | | | | | | | | | | | |
| Revenue | \$445,304.00 | \$593,749.00 | \$769,432.00 | \$840,883.00 | \$847,522.00 | \$1,031,753.00 | \$1,141,164.68 | \$1,262,178.86 | \$1,396,025.92 | \$1,544,066.72 | \$1,707,806.42 |
| EBITDA | \$96,340.00 | \$168,142.00 | \$238,933.00 | \$269,649.00 | \$253,654.00 | \$168,809.00 | \$298,063.23 | \$329,671.18 | \$364,630.98 | \$403,298.07 | \$446,065.59 |
| EBIT | \$90,138.00 | \$157,137.00 | \$224,812.00 | \$249,219.00 | \$229,557.00 | \$140,720.00 | \$267,650.15 | \$296,032.97 | \$327,425.62 | \$362,147.29 | \$400,551.00 |
| Tax Rate | 43.52% | 30.72% | 1.93% | 21.59% | 27.31% | 38.41% | 29.11% | 29.11% | 29.11% | 29.11% | 29.11% |
| EBIAT | \$50,911.00 | \$108,870.00 | \$220,468.00 | \$195,403.00 | \$166,862.00 | \$86,665.00 | \$189,747.61 | \$209,869.30 | \$232,124.77 | \$256,740.31 | \$283,966.20 |
| D&A | \$6,202.00 | \$11,005.00 | \$14,121.00 | \$20,430.00 | \$24,097.00 | \$28,089.00 | \$30,413.08 | \$33,638.21 | \$37,205.36 | \$41,150.78 | \$45,514.59 |
| ANWC | (\$396,575.00) | (\$182,378.00) | (\$204,242.00) | \$15,447.00 | (\$149,186.00) | (\$197,996.00) | (\$132,968.00) | (\$147,068.51) | (\$162,664.31) | (\$179,913.96) | (\$198,992.84) |
| CAPEX | \$37,247.00 | \$15,768.00 | \$10,914.00 | \$19,798.00 | \$70,696.00 | \$26,307.00 | \$50,384.94 | \$55,727.98 | \$61,637.63 | \$68,173.95 | \$75,403.42 |
| UFCF | \$416,441.00 | \$286,485.00 | \$427,917.00 | \$180,588.00 | \$269,449.00 | \$286,443.00 | \$302,743.75 | \$334,848.04 | \$370,356.82 | \$409,631.10 | \$453,070.21 |
| WACC | | | | | | | 9.97% | 9.97% | 9.97% | 9.97% | 9.97% |
| PV of UFCF | | | | | | | \$275,301.10 | \$276,893.83 | \$278,495.78 | \$280,107.00 | \$281,727.54 |
| Sum of PV | | | | | | | | | | | \$1,392,525.24 |

| Valuation | | | |
|--|-----------------|-------------------------------|-----------------|
| Terminal Value (Perpetuity Growth Method) | | | |
| Long Term Growth Rate | 6.00% | Intrinsic Value | |
| WACC | 9.97% | Enterprise Value | \$9,369,606.32 |
| Free Cash Flow | \$480,254.42 | Net Debt | \$160,000.00 |
| Terminal Value | \$12,828,628.07 | Equity Value | \$9,209,606.32 |
| PV of Terminal Value | \$7,977,081.08 | Shares Outstanding | 45,545.00 |
| | | Equity Value per Share | \$202.21 |

| Sensitivity Analysis | | | | | | | | | |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|--|
| Long Term Rate | 6.00% | | | | | | | | |
| WACC | 9.97% | | | | | | | | |
| | WACC | | | | | | | | |
| | \$202.21 | 9.22% | 9.47% | 9.72% | 9.97% | 10.22% | 10.47% | 10.72% | |
| 5.25% | 205,750,071 | 193,249,012 | 182,175,537 | 172,290,768 | 163,425,776 | 155,430,234 | 148,184,601 | | |
| 5.50% | 218,671,436 | 204,559,179 | 192,145,819 | 181,145,802 | 171,334,034 | 162,530,961 | 154,591,209 | | |
| 5.75% | 233,457,925 | 217,392,203 | 203,378,821 | 191,052,285 | 180,129,903 | 170,385,82 | 161,644,027 | | |
| 6.00% | 250,544,201 | 232,077,768 | 216,124,501 | 202,208,943 | 189,968,385 | 179,121,299 | 169,445,824 | | |
| 6.25% | 270,511,364 | 249,047,329 | 230,709,026 | 214,867,944 | 201,049,367 | 188,894,013 | 178,122,330 | | |
| 6.50% | 294,154,292 | 268,878,755 | 247,563,792 | 229,354,163 | 213,622,491 | 199,900,001 | 187,829,062 | | |
| 6.75% | 322,589,909 | 292,359,612 | 267,259,316 | 246,093,413 | 228,010,437 | 212,388,026 | 198,760,731 | | |

Exhibit 2 – Johnson & Johnson DCF

| JNJ DCF | | | | | | | | | | | |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Ticker | JNJ | | | | | | | | | | |
| DCF | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| Revenue | \$76,450,000 | \$81,581,000 | \$82,059,000 | \$82,584,000 | \$93,775,000 | \$94,943,000 | \$99,828,25 | \$104,964,87 | \$110,365,79 | \$116,044,61 | \$122,015,64 |
| % growth | | 6.71% | 0.59% | 0.64% | 13.55% | 1.25% | 5.15% | 5.15% | 5.15% | 5.15% | 5.15% |
| EBITDA | \$23,703.00 | \$23,647.00 | \$19,733.00 | \$20,080.00 | \$20,049.00 | \$18,489.00 | \$21,685.47 | \$22,801.28 | \$23,974.51 | \$25,208.11 | \$26,505.18 |
| % margin | 31.00% | 28.99% | 24.05% | 24.31% | 21.38% | 19.47% | 21.72% | 21.72% | 21.72% | 21.72% | 21.72% |
| D&A | \$5,642.00 | \$6,929.00 | \$7,009.00 | \$7,231.00 | \$7,390.00 | \$6,970.00 | \$7,978.85 | \$8,389.40 | \$8,821.08 | \$9,274.96 | \$9,752.20 |
| % of Revenue | 7.38% | 8.49% | 8.54% | 8.76% | 7.88% | 7.34% | 7.99% | 7.99% | 7.99% | 7.99% | 7.99% |
| EBIT | \$18,061 | \$16,718 | \$12,724 | \$12,849 | \$12,659 | \$11,519 | \$13,706.61 | \$14,411.88 | \$15,153.44 | \$15,933.15 | \$16,752.98 |
| % margin | 23.62% | 20.49% | 15.51% | 15.56% | 13.50% | 12.13% | 13.73% | 13.73% | 13.73% | 13.73% | 13.73% |
| Taxes | \$16,373.00 | \$2,702.00 | \$2,209.00 | \$1,783.00 | \$1,898.00 | \$3,784.00 | \$4,562.49 | \$5,501.15 | \$6,632.92 | \$7,997.53 | \$9,642.89 |
| Tax Rate | 90.65% | 16.16% | 17.36% | 13.88% | 14.99% | 32.85% | 20.57% | 20.57% | 20.57% | 20.57% | 20.57% |
| Cash & Cash Equivalents | \$17,824.00 | \$18,107.00 | \$17,305.00 | \$13,985.00 | \$14,487.00 | \$14,127.00 | \$15,727.08 | \$16,536.31 | \$17,387.18 | \$18,281.83 | \$19,222.51 |
| % of Revenue | 23.31% | 22.20% | 21.09% | 16.93% | 15.43% | 14.88% | 15.75% | 15.75% | 15.75% | 15.75% | 15.75% |
| ANWC | (\$73,625.00) | (\$3,638.00) | (\$3,975.00) | (\$12,492.00) | (\$12,475.00) | (\$4,891.00) | (\$11,174.46) | (\$11,749.43) | (\$12,354.00) | (\$12,989.67) | (\$13,658.04) |
| % of Revenue | -96.30% | -4.46% | -4.84% | -15.13% | -13.30% | -5.15% | -11.19% | -11.19% | -11.19% | -11.19% | -11.19% |
| CAPEX | \$37,548.00 | \$5,476.00 | \$10,195.00 | \$9,985.00 | \$6,243.00 | \$16,955.00 | \$12,181.12 | \$12,807.89 | \$13,466.92 | \$14,159.85 | \$14,888.44 |
| % of Revenue | 49.11% | 6.71% | 12.42% | 12.09% | 6.66% | 17.86% | 12.20% | 12.20% | 12.20% | 12.20% | 12.20% |
| Free Cash Flow | | | | | | | | | | | |
| Revenue | \$76,450.00 | \$81,581.00 | \$82,059.00 | \$82,584.00 | \$93,775.00 | \$94,943.00 | \$99,828.25 | \$104,964.87 | \$110,365.79 | \$116,044.61 | \$122,015.64 |
| EBITDA | \$23,703.00 | \$23,647.00 | \$19,733.00 | \$20,080.00 | \$20,049.00 | \$18,489.00 | \$21,685.47 | \$22,801.28 | \$23,974.51 | \$25,208.11 | \$26,505.18 |
| EBIT | \$18,061.00 | \$16,718.00 | \$12,724.00 | \$12,849.00 | \$12,659.00 | \$11,519.00 | \$13,706.61 | \$14,411.88 | \$15,153.44 | \$15,933.15 | \$16,752.98 |
| Tax Rate | 90.65% | 16.16% | 17.36% | 13.88% | 14.99% | 32.85% | 20.57% | 20.57% | 20.57% | 20.57% | 20.57% |
| EBIAT | \$1,688.00 | \$14,016.00 | \$10,515.00 | \$11,066.00 | \$10,761.00 | \$7,735.00 | \$10,886.71 | \$11,446.88 | \$12,035.87 | \$12,655.17 | \$13,306.34 |
| D&A | \$5,642.00 | \$6,929.00 | \$7,009.00 | \$7,231.00 | \$7,390.00 | \$6,970.00 | \$7,978.85 | \$8,389.40 | \$8,821.08 | \$9,274.96 | \$9,752.20 |
| ANWC | (\$73,625.00) | (\$3,638.00) | (\$3,975.00) | (\$12,492.00) | (\$12,475.00) | (\$4,891.00) | (\$11,174.46) | (\$11,749.43) | (\$12,354.00) | (\$12,989.67) | (\$13,658.04) |
| CAPEX | \$37,548.00 | \$5,476.00 | \$10,195.00 | \$9,985.00 | \$6,243.00 | \$16,955.00 | \$12,181.12 | \$12,807.89 | \$13,466.92 | \$14,159.85 | \$14,888.44 |
| UFCF | \$43,407.00 | \$19,107.00 | \$11,304.00 | \$20,804.00 | \$24,383.00 | \$2,641.00 | \$17,858.90 | \$18,777.82 | \$19,744.03 | \$20,759.95 | \$21,828.14 |
| WACC | | | | | | | 8.57% | 8.57% | 8.57% | 8.57% | 8.57% |
| PV of UFCF | | | | | | | \$16,449.83 | \$15,931.56 | \$15,429.63 | \$14,943.51 | \$14,472.70 |
| Sum of PV | | | | | | | | | | | \$77,227.23 |
| Valuation | | | | | | | | | | | |
| Terminal Value (Perpetuity Growth Method) | | | | | | Intrinsic Value | | | | | |
| Long Term Growth Rate | 4.00% | | | | | Enterprise Value | \$420,066.12 | | | | |
| WACC | 8.57% | | | | | Net Debt | \$22,856.00 | | | | |
| Free Cash Flow | \$22,701.27 | | | | | Equity | \$397,210.12 | | | | |
| Terminal Value | \$517,079.40 | | | | | Shares Outstanding | 2,664.00 | | | | |
| PV of Terminal Value | \$342,838.89 | | | | | Equity per Share | \$149.10 | | | | |
| Sensitivity Analysis | | | | | | | | | | | |
| WACC | 8.57% | | | | | | | | | | |
| Long Term g Rate | 4.00% | | | | | | | | | | |
| | | WACC | | | | | | | | | |
| | \$149.10 | 7.82% | 8.07% | 8.32% | 8.57% | 8.82% | 9.07% | 9.32% | | | |
| 3.25% | 151,727,066 | 143,476,741.5 | 136,059,501.8 | 129,357,522.7 | 123,274,154.3 | 117,729,694.9 | 112,656,338.2 | | | | |
| 3.50% | 160,007,248 | 150,844,485.6 | 142,652,882.5 | 135,288,356.5 | 128,633,935.1 | 122,593,666.7 | 117,088,102.4 | | | | |
| 3.75% | 169,307,406 | 159,067,398.5 | 149,969,792.2 | 141,836,356.1 | 134,524,047.1 | 127,916,736.1 | 121,919,163 | | | | |
| 4.00% | 179,828,013 | 168,303,225.5 | 158,135,963 | 149,102,897.9 | 141,027,080.9 | 133,766,498.1 | 127,205,855.3 | | | | |
| 4.25% | 191,825,762 | 178,751,051 | 167,308,050.6 | 157,212,847.3 | 148,243,715.9 | 140,224,976.8 | 133,015,634.9 | | | | |
| 4.50% | 205,634,755 | 190,665,789.5 | 177,683,763.8 | 166,321,780.4 | 156,297,958.8 | 147,392,160.7 | 139,429,964.4 | | | | |
| 4.75% | 221,698,072 | 204,379,231.7 | 189,516,256.3 | 176,626,043.4 | 165,344,315.7 | 155,391,205.9 | 146,548,148 | | | | |

Exhibit 4 – Synergies Valuation

| Synergies Valuation | | | | | | |
|---|---|--------------------------------|------------------|-----------------|-----------------|-----------------|
| 2022 Financial Information | | | | | | |
| | JNJ | ABMD | | | | |
| Revenues | \$94,943,00 | \$1,031,753,00 | | | | |
| COGS as % of Revenues | 32,74% | 18,24% | | | | |
| Income Tax Rate | 21% | 21% | | | | |
| Interest Expenses | \$276,00 | \$0,00 | | | | |
| Depreciation | \$6,970,00 | \$28,089,00 | | | | |
| CAPEX | \$16,955,00 | \$26,307,00 | | | | |
| WC as % of Revenues | -0,54% | 81,22% | | | | |
| Projections of growth in earnings | | | | | | |
| Expected growth rate - next 5 years | 5,15% | 10,60% | | | | |
| Expected growth rate - after 5 years | 4% | 6% | | | | |
| Risk measures | | | | | | |
| Beta | 0,72 | 1,27 | | | | |
| General Information | | | | | | |
| Current risk free rate | 4,07% | | | | | |
| Risk premium over risk free rate | 4,60% | | | | | |
| Synergies Benefits | | | | | | |
| What form does the synergy benefit take | 1 (1:Cost reduction, 2:Cost reduction & Increase growth, 3:Increase growth) | | | | | |
| Cost Reduction | | | | | | |
| COGS w/o synergies | 19,46% | | | | | |
| COGS with synergies | 15% | | | | | |
| Cost Reduction & Growth Increase | | | | | | |
| Growth Rate w/o synergies | 10,32% | Weighted growth rate | | | | |
| Growth Rate with synergies | 13% | | | | | |
| Growth Increase after Y5 | | | | | | |
| Growth Rate w/o synergies | 5,92% | Weighted long term growth rate | | | | |
| Growth Rate with synergies | 10% | | | | | |
| | | | | | | |
| | JNJ | ABMD | A+B (No Synergy) | A+B (Synergies) | | |
| FCF | \$22,701,27 | \$416,441,00 | \$439,142,27 | \$667,833,57 | | |
| Growth rate for first 5 years | 5,15% | 10,60% | 10,32% | 10,32% | | |
| Growth rate after 5 years | 4% | 6% | 5,92% | 5,92% | | |
| Beta | 0,72 | 1,27 | 1,25 | 1,25 | | |
| WACC | 8,57% | 9,97% | 9,83% | 9,83% | | |
| Riskfree Rate | 4,07% | | | | | |
| Year | | | | | | |
| | 2023 | 2024 | 2025 | 2026 | 2027 | Present Value |
| FCF JNJ | \$23.870,38 | \$25.099,71 | \$26.392,34 | \$27.751,55 | \$29.180,75 | |
| Terminal Value | | | | | \$664.666,24 | \$543.924,63 |
| FCF ABMD | \$460.602,26 | \$509.446,57 | \$563.470,55 | \$623.223,47 | \$689.312,86 | |
| Terminal Value | | | | | \$18.413.028,61 | \$13.568.190,20 |
| FCF A+B | \$484.472,64 | \$534.546,28 | \$589.862,89 | \$650.975,02 | \$718.493,62 | |
| Terminal Value A+B | | | | | \$19.077.694,84 | \$14.165.600,41 |
| FCF A+B-S | \$736.770,56 | \$812.823,55 | \$896.727,10 | \$989.291,57 | \$1.091.410,99 | |
| Terminal Value A+B:S | | | | | \$29.574.041,30 | \$21.892.276,53 |
| Gains from Synergies | 7.726.676,12 | | | | | |
| Max bid | 21.294.866,32 | | | | | |
| % Premium over the Mkt price | 56,95% | | | | | |

Exhibit 5 – CVR Probabilities for each component

| CVR Term | Probabilities |
|--------------------------|---------------|
| Sales \geq \$3.7B | 70% |
| FDA Approval | 90% |
| Clinical Recommendations | 90% |

Exhibit 6 – CVR Valuation

Abiomed CVR

Ticker ABMD
Abiomed Contingent Value Right was based on 3 components

1a \$17.50 per share, payable if net sales for Abiomed products exceeds \$3.7 billion during Johnson & Johnson's fiscal second quarter of 2027 through fiscal first quarter of 2028

% growth for Contingent Projections 27,54%

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Revenue | \$445,304,00 | \$593,749,00 | \$769,432,00 | \$840,883,00 | \$847,522,00 | \$1,031,753,00 | |
| % growth | | 33,34% | 29,59% | 9,29% | 0,79% | 21,74% | |
| Average Projections | | | | | | | |
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total Revenue |
| Revenue | \$1,141,164,68 | \$1,262,178,86 | \$1,396,025,92 | \$1,544,066,72 | \$1,707,806,42 | \$1,888,909,82 | |
| % growth | 10,60% | 10,60% | 10,60% | 10,60% | 10,60% | 10,60% | |
| 3 quarters of 2027 and 1 quarter of 2028 | | | | | \$1,280,854,82 | \$472,227,45 | \$1,753,082,27 |
| Contingent Projections | | | | | | | |
| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total Revenue |
| Revenue | \$1,314,504,91 | \$1,674,744,98 | \$2,133,708,84 | \$2,718,451,75 | \$3,463,443,45 | \$4,412,600,13 | |
| % growth | 27,41% | 27,41% | 27,41% | 27,41% | 27,41% | 27,41% | |
| 3 quarters of 2027 and 1 quarter of 2028 | | | | | \$2,597,582,59 | \$1,103,150,03 | \$3,700,732,62 |
| Extra Increase in revenue needed from normal growth | \$1,947,650,35 | | | | | | |
| Shares outstanding as of March 31 | 45,545 | | | | | | |
| Price per Share | \$42,76 | | | | | | |
| Actual Growth in Revenue in last 5 Years | 10,60% | | | | | | |
| Required Rev. Growth to achieve the contingency level of | 27,41% | | | | | | |
| Contingency that ABMD rev. target will be achieved | 70% | | | | | | |
| CVR Value/share | \$29,93 | | | | | | |
| Actual CVR Value/share decided in this scenario | \$17,50 | | | | | | |

1b If this threshold is not met during this period and is subsequently met during any rolling four quarter period up to the end of Johnson & Johnson's fiscal first quarter of 2029, \$8.75 per share

It means the CVR value for meeting this criteria will remain 50% of the above decided value

CVR/Share \$8,75

2 \$7.50 per share payable upon FDA premarket application approval of the use of Impella® products in STEMI patients without cardiogenic shock by January 1, 2028

| | |
|---|---------------------|
| If this FDA Approval will be sought by 1 January 2028 then the Abiomed Net Profit will be increased by almost | \$380,000,00 |
| Contingency that ABMD Net Profit target will be achieved | 90% |
| Contingent Net profit | \$342,000,00 |
| Shares outstanding as of March 31 | 45,545 |
| CVR Value/share | \$7,51 |
| Actual CVR Value/share | \$7,50 |

3 \$10.00 per share payable upon the first publication of a Class I recommendation for the use of Impella® products in high risk PCI or STEMI with or without cardiogenic shock within four years from their respective clinical endpoint publication dates, but in all cases no later than December 31, 2029.

| | |
|---|---------------------|
| If class I recommendation for the use of impella Products published then the Abiomed Net Profit will increase by almost | \$500,000,00 |
| Contingency that ABMD Net Profit target will be achieved | 90% |
| Contingent Net profit | \$450,000,00 |
| Shares outstanding as of March 31 | 45,545 |
| CVR Value/share | \$9,88 |
| Actual CVR Value/share decided in this scenario | \$10,00 |

OVERALL CVR VALUE OF ABIOMED \$35,00

Exhibit 7 – Abiomed Beta

| Date | ABMD | SP500 | Var. ABMD | Var. S&P 500 | Beta Raw |
|----------|----------|------------|-----------|--------------|--------------------|
| 01/01/17 | \$106,37 | \$2,278,90 | | | 1,41 |
| 01/02/17 | \$117,97 | \$2,363,60 | 0,10905 | 0,03717 | Beta Adjusted 1,27 |
| 01/03/17 | \$125,20 | \$2,362,70 | 0,06129 | -0,00038 | R2 0,27 |
| 01/04/17 | \$130,32 | \$2,384,20 | 0,04089 | 0,00910 | |
| 01/05/17 | \$137,43 | \$2,411,80 | 0,05456 | 0,01158 | |
| 01/06/17 | \$143,30 | \$2,423,40 | 0,04271 | 0,00481 | |
| 01/07/17 | \$148,09 | \$2,470,30 | 0,03343 | 0,01935 | |
| 01/08/17 | \$150,80 | \$2,471,70 | 0,01830 | 0,00057 | |
| 01/09/17 | \$168,60 | \$2,519,40 | 0,11804 | 0,01930 | |
| 01/10/17 | \$192,92 | \$2,575,30 | 0,14425 | 0,02219 | |
| 01/11/17 | \$194,84 | \$2,647,60 | 0,00995 | 0,02807 | |
| 01/12/17 | \$187,41 | \$2,673,60 | -0,03813 | 0,00982 | |
| 01/01/18 | \$235,00 | \$2,823,80 | 0,25394 | 0,05618 | |
| 01/02/18 | \$268,18 | \$2,713,80 | 0,14119 | -0,03895 | |
| 01/03/18 | \$290,99 | \$2,640,90 | 0,08505 | -0,02686 | |
| 01/04/18 | \$300,95 | \$2,648,10 | 0,03423 | 0,00273 | |
| 01/05/18 | \$381,14 | \$2,705,30 | 0,26646 | 0,02160 | |
| 01/06/18 | \$409,05 | \$2,718,40 | 0,07323 | 0,00484 | |
| 01/07/18 | \$354,53 | \$2,816,30 | -0,13328 | 0,03601 | |
| 01/08/18 | \$406,58 | \$2,901,50 | 0,14681 | 0,03025 | |
| 01/09/18 | \$449,75 | \$2,914,00 | 0,10618 | 0,00431 | |
| 01/10/18 | \$341,20 | \$2,711,70 | -0,24136 | -0,06942 | |
| 01/11/18 | \$332,68 | \$2,760,20 | -0,02497 | 0,01789 | |
| 01/12/18 | \$325,04 | \$2,506,80 | -0,02296 | -0,09180 | |
| 01/01/19 | \$351,07 | \$2,704,10 | 0,08008 | 0,07871 | |
| 01/02/19 | \$334,50 | \$2,784,50 | -0,04720 | 0,02973 | |
| 01/03/19 | \$285,59 | \$2,834,40 | -0,14622 | 0,01792 | |
| 01/04/19 | \$277,41 | \$2,945,80 | -0,02864 | 0,03930 | |
| 01/05/19 | \$261,92 | \$2,752,10 | -0,05584 | -0,06575 | |
| 01/06/19 | \$260,49 | \$2,941,80 | -0,00546 | 0,06893 | |
| 01/07/19 | \$278,56 | \$2,980,40 | 0,06937 | 0,01312 | |
| 01/08/19 | \$193,07 | \$2,926,50 | -0,30690 | -0,01808 | |
| 01/09/19 | \$177,89 | \$2,976,70 | -0,07862 | 0,01715 | |
| 01/10/19 | \$207,58 | \$3,037,60 | 0,16690 | 0,02046 | |
| 01/11/19 | \$196,18 | \$3,141,00 | -0,05492 | 0,03404 | |
| 01/12/19 | \$170,59 | \$3,230,80 | -0,13044 | 0,02859 | |
| 01/01/20 | \$186,29 | \$3,225,50 | 0,09203 | -0,00164 | |
| 01/02/20 | \$150,26 | \$2,954,20 | -0,19341 | -0,08411 | |
| 01/03/20 | \$145,16 | \$2,584,60 | -0,03394 | -0,12511 | |
| 01/04/20 | \$191,25 | \$2,912,40 | 0,31751 | 0,12683 | |
| 01/05/20 | \$223,90 | \$3,044,30 | 0,17072 | 0,04529 | |
| 01/06/20 | \$241,56 | \$3,100,30 | 0,07887 | 0,01840 | |
| 01/07/20 | \$299,94 | \$3,271,10 | 0,24168 | 0,05509 | |
| 01/08/20 | \$307,62 | \$3,500,30 | 0,02561 | 0,07007 | |
| 01/09/20 | \$277,06 | \$3,363,00 | -0,09934 | -0,03923 | |
| 01/10/20 | \$251,88 | \$3,270,00 | -0,09088 | -0,02765 | |
| 01/11/20 | \$274,10 | \$3,621,60 | 0,08822 | 0,10752 | |
| 01/12/20 | \$324,20 | \$3,756,10 | 0,18278 | 0,03714 | |
| 01/01/21 | \$348,25 | \$3,714,20 | 0,07418 | -0,01116 | |
| 01/02/21 | \$324,55 | \$3,811,20 | -0,06805 | 0,02612 | |
| 01/03/21 | \$318,73 | \$3,972,90 | -0,01793 | 0,04243 | |
| 01/04/21 | \$320,73 | \$4,181,20 | 0,00627 | 0,05243 | |
| 01/05/21 | \$284,58 | \$4,204,10 | -0,11271 | 0,00548 | |
| 01/06/21 | \$312,11 | \$4,297,50 | 0,09674 | 0,02222 | |
| 01/07/21 | \$327,14 | \$4,395,30 | 0,04816 | 0,02276 | |
| 01/08/21 | \$363,96 | \$4,522,70 | 0,11255 | 0,02899 | |
| 01/09/21 | \$325,52 | \$4,307,50 | -0,10562 | -0,04758 | |
| 01/10/21 | \$332,04 | \$4,605,40 | 0,02003 | 0,06916 | |
| 01/11/21 | \$314,78 | \$4,567,00 | -0,05198 | -0,00834 | |
| 01/12/21 | \$359,17 | \$4,766,20 | 0,14102 | 0,04362 | |
| 01/01/22 | \$295,87 | \$4,515,60 | -0,17624 | -0,05258 | |
| 01/02/22 | \$310,74 | \$4,373,90 | 0,05026 | -0,03138 | |
| 01/03/22 | \$331,24 | \$4,530,40 | 0,06597 | 0,03578 | |
| 01/04/22 | \$286,58 | \$4,131,90 | -0,13483 | -0,08796 | |
| 01/05/22 | \$263,70 | \$4,132,10 | -0,07984 | 0,00005 | |
| 01/06/22 | \$247,51 | \$3,785,40 | -0,06140 | -0,08390 | |
| 01/07/22 | \$293,01 | \$4,130,30 | 0,18383 | 0,09111 | |
| 01/08/22 | \$259,28 | \$3,955,00 | -0,11512 | -0,04244 | |
| 01/09/22 | \$245,66 | \$3,585,60 | -0,05253 | -0,09340 | |
| 01/10/22 | \$252,08 | \$3,872,00 | 0,02613 | 0,07988 | |
| 01/11/22 | \$377,79 | \$4,080,10 | 0,49869 | 0,05374 | |

Exhibit 8 – Johnson & Johnson Beta

| Date | JNJ | SP500 | Var. JNJ | Var. S&P 500 | Beta Raw | 0,58 |
|----------|----------|------------|----------|--------------|---------------|------|
| 01/01/17 | \$113,25 | \$2.278,90 | | | | |
| 01/02/17 | \$122,21 | \$2.363,60 | 0,07912 | 0,03717 | | |
| 01/03/17 | \$124,55 | \$2.362,70 | 0,01915 | -0,00038 | | |
| 01/04/17 | \$123,47 | \$2.384,20 | -0,00867 | 0,00910 | Beta Adjusted | 0,72 |
| 01/05/17 | \$128,25 | \$2.411,80 | 0,03871 | 0,01158 | | |
| 01/06/17 | \$132,29 | \$2.423,40 | 0,03150 | 0,00481 | | |
| 01/07/17 | \$132,72 | \$2.470,30 | 0,00325 | 0,01935 | | |
| 01/08/17 | \$132,37 | \$2.471,70 | -0,00264 | 0,00057 | | |
| 01/09/17 | \$130,01 | \$2.519,40 | -0,01783 | 0,01930 | | |
| 01/10/17 | \$139,41 | \$2.575,30 | 0,07230 | 0,02219 | | |
| 01/11/17 | \$139,33 | \$2.647,60 | -0,00057 | 0,02807 | | |
| 01/12/17 | \$139,72 | \$2.673,60 | 0,00280 | 0,00982 | | |
| 01/01/18 | \$138,19 | \$2.823,80 | -0,01095 | 0,05618 | | |
| 01/02/18 | \$129,88 | \$2.713,80 | -0,06013 | -0,03895 | | |
| 01/03/18 | \$128,15 | \$2.640,90 | -0,01332 | -0,02686 | | |
| 01/04/18 | \$126,49 | \$2.648,10 | -0,01295 | 0,00273 | | |
| 01/05/18 | \$119,62 | \$2.705,30 | -0,05431 | 0,02160 | | |
| 01/06/18 | \$121,34 | \$2.718,40 | 0,01438 | 0,00484 | | |
| 01/07/18 | \$132,52 | \$2.816,30 | 0,09214 | 0,03601 | | |
| 01/08/18 | \$134,69 | \$2.901,50 | 0,01637 | 0,03025 | | |
| 01/09/18 | \$138,17 | \$2.914,00 | 0,02584 | 0,00431 | | |
| 01/10/18 | \$139,99 | \$2.711,70 | 0,01317 | -0,06942 | | |
| 01/11/18 | \$146,90 | \$2.760,20 | 0,04936 | 0,01789 | | |
| 01/12/18 | \$129,05 | \$2.506,80 | -0,12151 | -0,09180 | | |
| 01/01/19 | \$133,08 | \$2.704,10 | 0,03123 | 0,07871 | | |
| 01/02/19 | \$136,64 | \$2.784,50 | 0,02675 | 0,02973 | | |
| 01/03/19 | \$139,79 | \$2.834,40 | 0,02305 | 0,01792 | | |
| 01/04/19 | \$141,20 | \$2.945,80 | 0,01009 | 0,03930 | | |
| 01/05/19 | \$131,15 | \$2.752,10 | -0,07118 | -0,06575 | | |
| 01/06/19 | \$139,28 | \$2.941,80 | 0,06199 | 0,06893 | | |
| 01/07/19 | \$130,22 | \$2.980,40 | -0,06505 | 0,01312 | | |
| 01/08/19 | \$128,36 | \$2.926,50 | -0,01428 | -0,01808 | | |
| 01/09/19 | \$129,38 | \$2.976,70 | 0,00795 | 0,01715 | | |
| 01/10/19 | \$132,04 | \$3.037,60 | 0,02056 | 0,02046 | | |
| 01/11/19 | \$137,49 | \$3.141,00 | 0,04128 | 0,03404 | | |
| 01/12/19 | \$145,87 | \$3.230,80 | 0,06095 | 0,02859 | | |
| 01/01/20 | \$148,87 | \$3.225,50 | 0,02057 | -0,00164 | | |
| 01/02/20 | \$134,48 | \$2.954,20 | -0,09666 | -0,08411 | | |
| 01/03/20 | \$131,13 | \$2.584,60 | -0,02491 | -0,12511 | | |
| 01/04/20 | \$150,04 | \$2.912,40 | 0,14421 | 0,12683 | | |
| 01/05/20 | \$148,75 | \$3.044,30 | -0,00860 | 0,04529 | | |
| 01/06/20 | \$140,63 | \$3.100,30 | -0,05459 | 0,01840 | | |
| 01/07/20 | \$145,76 | \$3.271,10 | 0,03648 | 0,05509 | | |
| 01/08/20 | \$153,41 | \$3.500,30 | 0,05248 | 0,07007 | | |
| 01/09/20 | \$148,88 | \$3.363,00 | -0,02953 | -0,03923 | | |
| 01/10/20 | \$137,11 | \$3.270,00 | -0,07906 | -0,02765 | | |
| 01/11/20 | \$144,68 | \$3.621,60 | 0,05521 | 0,10752 | | |
| 01/12/20 | \$157,38 | \$3.756,10 | 0,08778 | 0,03714 | | |
| 01/01/21 | \$163,13 | \$3.714,20 | 0,03654 | -0,01116 | | |
| 01/02/21 | \$158,46 | \$3.811,20 | -0,02863 | 0,02612 | | |
| 01/03/21 | \$164,35 | \$3.972,90 | 0,03717 | 0,04243 | | |
| 01/04/21 | \$162,73 | \$4.181,20 | -0,00986 | 0,05243 | | |
| 01/05/21 | \$169,25 | \$4.204,10 | 0,04007 | 0,00548 | | |
| 01/06/21 | \$164,74 | \$4.297,50 | -0,02665 | 0,02222 | | |
| 01/07/21 | \$172,20 | \$4.395,30 | 0,04528 | 0,02276 | | |
| 01/08/21 | \$173,13 | \$4.522,70 | 0,00540 | 0,02899 | | |
| 01/09/21 | \$161,50 | \$4.307,50 | -0,06717 | -0,04758 | | |
| 01/10/21 | \$162,88 | \$4.605,40 | 0,00854 | 0,06916 | | |
| 01/11/21 | \$155,93 | \$4.567,00 | -0,04267 | -0,00834 | | |
| 01/12/21 | \$171,07 | \$4.766,20 | 0,09709 | 0,04362 | | |
| 01/01/22 | \$172,29 | \$4.515,60 | 0,00713 | -0,05258 | | |
| 01/02/22 | \$164,57 | \$4.373,90 | -0,04481 | -0,03138 | | |
| 01/03/22 | \$177,23 | \$4.530,40 | 0,07693 | 0,03578 | | |
| 01/04/22 | \$180,46 | \$4.131,90 | 0,01822 | -0,08796 | | |
| 01/05/22 | \$179,53 | \$4.132,10 | -0,00515 | 0,00005 | | |
| 01/06/22 | \$177,51 | \$3.785,40 | -0,01125 | -0,08390 | | |
| 01/07/22 | \$174,52 | \$4.130,30 | -0,01684 | 0,09111 | | |
| 01/08/22 | \$161,34 | \$3.955,00 | -0,07552 | -0,04244 | | |
| 01/09/22 | \$163,36 | \$3.585,60 | 0,01252 | -0,09340 | | |
| 01/10/22 | \$173,97 | \$3.872,00 | 0,06495 | 0,07988 | | |
| 01/11/22 | \$178,00 | \$4.080,10 | 0,02316 | 0,05374 | | |

Beta Raw 0,58

Beta Adjusted 0,72

R2 0,34

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