Lisbon School of Economics & Management
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MASTERS IN
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PROJECT

EQUITY RESEARCH: NOVARTIS AG

ANA LEONOR RAFAEL

JUNE 2025

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Abstract

Novartis AG, a leading Swiss pharmaceutical company, is a global player in this industry with a strategic focus on high growth therapeutic areas, such as oncology, neuroscience, immunology and cardiovascular/metabolic diseases. This strategy is anchored in three core pillars: delivering high value medicines, embedding operational excellence, and strengthening the foundations of long-term growth through investment in Research & Development.

To determine the fair value of the company a Discounted Cash Flow Model (DCF) was employed, supported by complementary absolute valuation methods such as the Adjusted Present Value (APV), the Flow to Equity (FTE), and the Dividend Discount Model (DDM). A relative valuation was conducted and the findings support the DCF. This method uses price-based and enterprise multiples allowing to benchmark Novartis against key industry peers.

This report issues a HOLD recommendation, with a 2026YE price target of $139.48/share, based on the DCF, which implies an annualized return of 12.16% from the closing price of June 2nd, 2025.

Novartis faces various industry-specific and macroeconomic risks, including patents expiration, regulatory pricing pressure, biosimilar competition, and geopolitical instability that could impact global supply chains and market access. The company addresses these challenges through lifecycle management strategies, diversified manufacturing, and expansion in priority markets such as the United States of America (USA) and China.

Additionally, the company demonstrates strong performance in ESG criteria, with ambitious sustainability goals – including carbon, water, and waste neutrality by 2030 – reflecting its leadership in responsible healthcare innovation. The company's ESG commitments and operational discipline further support its position as a top-tier investment in the global pharmaceutical sector.

JEL classification: F23, G10, G32, J10, O32.
Keywords: Novartis AG; Equity Research; Valuation; Research & Development; Innovative Medicines; Pharmaceutical Industry.

Resumo

A Novartis AG, uma empresa farmacêutica suíça de referência, é um dos principais intervenientes globais no setor com um foco estratégico em áreas terapêuticas de elevado crescimento, como oncologia, neurociência, imunologia e doenças cardiovasculares/metabólicas. Esta estratégia assenta em três pilares fundamentais: fornecimento de medicamentos de elevado valor, excelência operacional e reforço das bases de crescimento a longo prazo através do investimento em Investigação & Desenvolvimento.

Para determinar o valor justo da empresa, foi utilizado um Modelo de Fluxos de Caixa Descontados (DCF), complementado por métodos de avaliação absoluta, como o Valor Atualizado Ajustado (APV), o Fluxo para os Capitais Próprios (FTE) e o Modelo de Desconto de Dividendos (DDM). Foi ainda realizada uma avaliação relativa, cujo o resultado também suporta o DCF. Este método utiliza rácios baseados em preço e em valor da empresa, permitindo comparar a Novartis com os principais concorrentes do setor.

Este relatório emite uma recomendação de HOLD, com um preço-alvo para o final de 2026 de $139.48/ação, com base no DCF, o que implica um retorno anualizado de 12,16% face ao preço de fecho de 2 de junho de 2025.

A Novartis enfrenta diversos riscos específicos do setor e macroeconómicos, incluindo o termo de patentes, pressões regulatórias sobre preços, concorrência de biossimilares e instabilidade geopolítica, que poderão afetar as cadeias de abastecimento globais e o acesso aos mercados. A empresa responde a estes desafios através de estratégias de gestão do ciclo de vida, diversificação da produção e expansão em mercados prioritários como os Estados Unidos da América e a China.

Adicionalmente, a empresa apresenta um forte desempenho em critérios ESG, com metas de sustentabilidade ambiciosas – incluindo neutralidade carbónica, hídrica e de resíduos até 2030 – refletindo a sua liderança na inovação em cuidados de saúde responsáveis. Os compromissos ESG e a disciplina operacional da empresa reforçam ainda mais a sua posição como um investimento de topo no setor farmacêutico global.

Classificação JEL: F23, G10, G32, J10, O32.
Palavras-Chave: Novartis AG; *Equity Research*; Avaliação de Empresas; Investigação & Desenvolvimento; Medicamentos Inovadores; Indústria Farmacêutica.

Acknowledgments

I would like to begin by thanking my parents, my sister, and Mami. Your unconditional love, encouragement, and constant belief in me have been my greatest source of strength. None of this would have been possible without your support and I will be forever grateful for everything you have done. I love you deeply.

A special thank you also goes to my boyfriend and all my friends, who have shown endless patience and unwavering support. You never left my side, and your presence made all the difference during this important journey. I truly hope you'll continue to be there for the milestones still to come.

I am especially grateful to my supervisors, Sumaira Ashraf and Victor Barros, for their valuable guidance, as well as to all the professors who have accompanied me throughout my bachelor's and master's degrees.

Finally, I want to express my heartfelt appreciation to ISEG. For the past five years, it has been much more than a place of learning—it has been a place of growth, discovery, and connection. I leave with knowledge, unforgettable experiences, and friendships that I will carry with me for life.

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Abbreviations

ADR: American Depositary Receipt
ADS: American Depositary Share
AI: Artificial Intelligence
AGM: Annual General Meeting
API: Active Pharmaceutical Ingredient
APV: Adjusted Present Value

B: Billions

CAGR: Compound Annual Growth Rate
CAPM: Capital Asset Pricing Model
CEO: Chief Executive Officer
CFO: Chief Financial Officer
CHF: Swiss Franc
COB: Chairman of the Board
CRP: Country Risk Premium
CV: Cardiovascular

DCF: Discounted Cash Flow
DPS: Dividend Per Share

E: Expected
EBIT: Earnings Before Interest and Taxes
EBITDA: Earnings Before Interest, Taxes, and Depreciation and Amortizations
ECB: European Central Bank
ECN: Executive Committee of Novartis
ESG: Environmental, Social, and Governance
EU: European Union

FCFE: Free Cash Flow to Equity
FCFF: Free Cash Flow to the Firm

GDP: Gross Domestic Product

IMF: International Monetary Fund
IP: Intellectual Property

M: Millions
M&A: Mergers & Acquisitions
MRP: Market Risk Premium

PT: Price Target
PV: Present Value

R&D: Research & Development
RFR: Risk Free Rate
RLT: Radioligand Therapy
RV: Relative Valuation

TV: Terminal Value

UN: United Nations
USA: United States of America
USD: American Dollar

WACC: Weighted Average Cost of Capital
WHO: World Health Organization

YE: Year End
YoY: Year over Year

1. Research Snapshot

My investment recommendation for **Novartis AG** is to **HOLD**, with a **2026YE Price Target (PT) of $139.48/share**, given **medium risk**. This PT implies an **annualized return of 12.16%,** against the closing price as of June 2nd, 2025.

The valuation that supports this recommendation is based on a **Discounted Cash Flow (DCF) Model**, that uses forecasted financial statements from 2025E to 2029E.

Novartis is assessed as a **medium risk** investment due to, primarily, industry specific exposures to risks and macroeconomic uncertainties. Some of the **key risks** that the pharmaceutical industry faces include the expiration of intellectual property (IP), increasing competition from generics and biosimilars competitors, and growing pricing pressures originating from regulators and public health systems.
On top of this, there are still ongoing consequences of the Russia-Ukraine conflict and a protectionist United States of America (USA) trade policy that pose as **potential risks** for supply chains and market access.

The company has identified the USA, China, Germany and Japan as its **priority markets** and is expanding the commercial footprint. Novartis is investing in research centres in the USA and manufacturing capabilities in Asia, to mitigate geopolitical risks and enhance the supply chain's resilience.

Regarding **ESG**, it is possible to say that Novartis is fully committed to environmental and social responsibility as the company aims to achieve water, carbon, and waste neutrality by 2030. ESG metrics are integrated into governance and reporting, and Novartis ranks as one of the **industry leaders** in these topics. According to Sustainalytics, the company has a risk rating of 15.9, which means that it is considered low risk (10-20). It ranks as the 29th company out of 843 in the pharmaceuticals group, placing the company well inside the top 5%.

In terms of capital return, the company continues to offer a stable dividend that is supported by consistent free cash flow generation. Novartis has increased the dividend payout for **27 consecutive years.**

Price Target	**$139.48**
Current Share Price	$116.33
Upside Potential	19.90%
Annualized Return	**12.16%**
Ticker	NOVN
Market Cap ($M)	233,926.57
Shares Outstanding	1,975.10

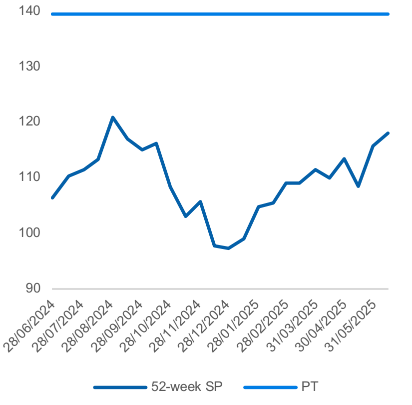

Figure 1: 52-week Stock Price vs PT
Source: Author's Analysis, Bloomberg

Financial Highlights			
	2024	**2026E**	**2029E**
Revenues ($M)	50,317	56,095	66,029
EBIT ($M)	14,544	12,215	14,985
Op. Margin (%)	28.12%	21.29%	22.22%
Net Inc. ($M)	11,939	9,651	11,936
NPM (%)	23.08%	16.82%	17.70%
Int. Cov.	14.46	12.64	13.86
R&D ($M)	10,022	12,048	13,951
ROE (%)	27.06%	20.26%	25.06%

Table 1: Financial Highlights
Source: Author's Analysis

2. Business Description

The Company

Novartis AG (NOVN.S) is a Swiss-based global healthcare company recognized as one of the world's leading pharmaceutical players, presenting revenues of $50.3B and a market capitalization of $193.9B in 2024.

The company is primarily focused on the discovery, development, and commercialization of innovative medicines, having spent $10B in Research & Development (R&D) in 2024 (Figure 2). Novartis' therapeutic areas include oncology, immunology, neuroscience, and cardiovascular diseases, among others.

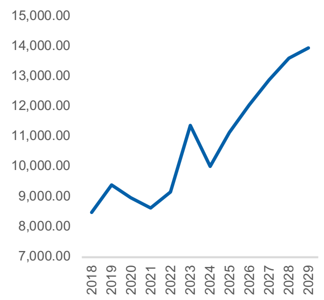

Figure 2: Research & Development
Source: Author's Analysis

With a mission to **improve and extend people's lives** and a recent focus on specialized therapies and personalized medicine, Novartis has also committed to strengthening its scientific base through investments in artificial intelligence (AI) and digital platforms to enhance drug's discovery and development.

The History

Novartis was founded in 1996 through the merger of Ciba-Geigy, a chemicals and dyes trading company, and Sandoz, a chemical company, both based in Basel, Switzerland. The company is now a major player in the pharmaceutical industry, selling products in approximately 120 countries, with USA being the most significant one, accounting for 42% of total revenues (Figure 5). In 2024, the company had approximately 75,900 full-time employees.

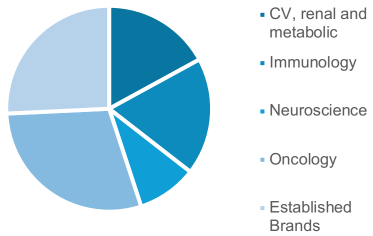

Figure 3: Revenues by Therapeutic Area
Source: Annual Report

Company Operations and Structure

Novartis is an innovative medicines company. Following the spin-off of Sandoz in October 2024, the company no longer has divisions and presents itself with five organizational units that represent parts of the company: Biomedical Research, Development, Operations and two commercial units – USA and International – which are focused on their respective geographic areas.

In 2024, net sales were $50.3B (vs 2023 $45.4B) with this growth being mainly driven by a continued strong performance from some of the key growth brands like Entresto, Kesimpta, Kisgali and Pluvicto. Core operating income reached $19.5B, mainly driven by higher net sales which were partly offset by higher R&D investments.

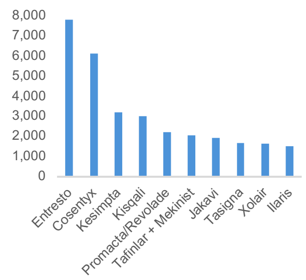

Figure 4: Novartis Top Drugs by Revenue
Source: Annual Report

Key Profitability Drivers

Novartis' profitability is primarily driven by investment in R&D (Figure 6), which is in line with the majority of the companies in the industry. R&D allows companies to expand their pipelines and boost profitability, as a robust pipeline strengthens their competitive position.

Mergers & Acquisitions (M&A) plays a crucial role in the industry's growth, facilitating portfolio diversification and enabling firms to more rapidly access new technologies and geographies.

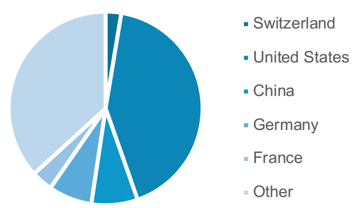

Figure 5: Revenues by Geography
Source: Annual Report

The increased use of AI and machine learning by pharmaceutical companies allows for the optimization of processes and cost reduction, which, in turn, will lead to better operational efficiency and operational margins. These tools do not only reduce time-to-market, but they also increase targeting and efficacy, supporting more successful outcomes.

Population growth and aging all around the world is a big driver of profitability in this industry. As life expectancy increases, so does the incidence of chronic disease, leading to a continuous demand of pharmaceutical inventions, boosting the growth of the industry. Population growth also leads to an expansion to emerging markets, such as China, India and Brazil, due to their large populations and improvements in healthcare systems.

Drivers of Costs

Notwithstanding being the key profitability driver of the industry, R&D is also a key driver of costs. Regardless of the current global efforts to improve efficiency using AI and digital platforms, R&D remains unavoidable when trying to sustain long-term growth.

Patent expirations can expose companies to revenue loss, continuing to drive urgency to plug pipeline gaps through increased M&A activity, partnerships, and investment in R&D for innovative therapies. As patents expire, there is a rise in competition from generics which leads to pressure from descendent prices (Figure 8).

Another major cost driver is the exchange rate volatility. As a Swiss-based multinational, Novartis faces continuous exposure to currency oscillations since it has major operations in the USA, Europe, Asia and Latin America (Figure 9). While Novartis engages in hedging strategies to offset the risks, this is still a structural cost driver, as a strong Swiss Franc relative to other currencies reduces translated revenues.

Company Strategy

The strategy of Novartis is to provide high-value medicines that reduce disease burdens in society through technology leadership in R&D and innovative access approaches. **The goal of this strategy is to generate long-term value – to promote ongoing progress in human health, to provide returns to shareholders and to benefit the whole of society.**

The company's focus is attached to four primary therapeutic areas that exhibit significant growth potential and unmet patient needs: cardiovascular, renal and metabolic; immunology; neuroscience; and oncology. The implemented strategy allows to develop strength in these areas, in an effort to discover new ways to treat and cure disease, intervene earlier in chronic illnesses, and improve the quality of life. While these four areas remain the strategic priority, Novartis is also investing in key technology platforms – chemistry and biotherapeutics, radioligand therapy (RLT)[1], xRNA[2], and gene and cell therapy – which are expected to support the next generation of breakthrough treatments.

In geographic terms, the company prioritizes **four core markets** – USA, Germany, China and Japan – that represent the **majority of global healthcare expenditure** growth projected over the next five years.

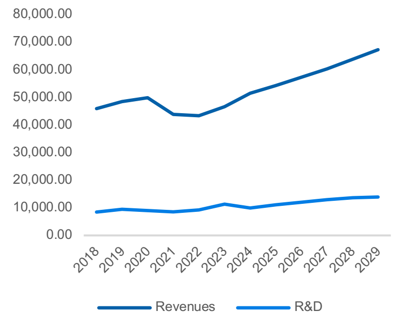

Figure 6: Revenues vs R&D
Source: Author's Analysis

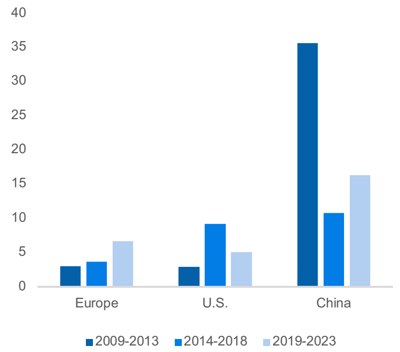

Figure 7: Annual Growth of Pharma R&D Spending in Major Regions
Source: Statista

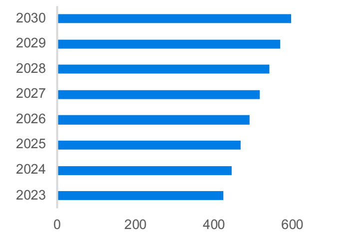

Figure 8: Total Global Generic Drugs Market from 2023-2030 ($B)
Source: Statista

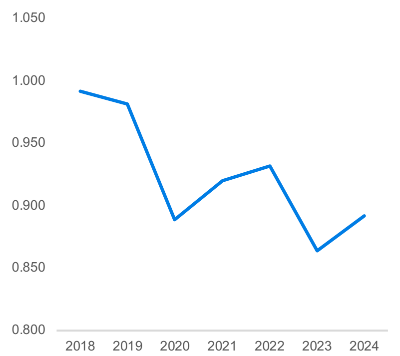

Figure 9: USD/CHF Fluctuations
Source: Trading Economics

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[1] Combines a targeting compound – the ligand – that attaches to a specific marker with a radioisotope. This ligand acts as a guide, directing the radioisotope to the cancer cells expressing the specific marker, even when they have spread throughout the body. The goal is to damage or destroy target cancer cells or cells of the tumor microenvironment while minimizing harm to nearby healthy cells.

[2] RNA therapies use numerous forms of ribonucleic acid (RNA) to modify biological pathways in the body to treat or cure specific illnesses.

To reinforce the key focus areas identified, the company established three priorities:

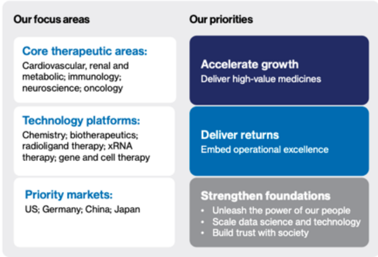

Figure 10: Company Strategy
Source: Annual Report

Deliver high-value medicines: the goal is to drive top-line expansion sustained by continued strong momentum in the existing portfolio of medicines – **Entresto, Kisqali, Kesimpta, Cosentyx, Scemblix, Pluvicto and Leqvio** – along with important future launches. The company's end-to-end R&D approach integrates discovery, clinical development, and commercialization, with a focus on advancing priority programs and executing effectively in late-stage trials.

Integrate operational excellence: in a more competitive landscape, the company is simplifying its operational structure to enhance efficiency and effectiveness that fosters and supports the reinvestment in R&D and shareholder's value creation.

Strengthen the foundations of the business: the company continues investing to fortify the pillars of its long-term success. Novartis made progresses strengthening its culture to attract and retain talent while developing AI capabilities in R&D and building stronger trust amongst stakeholders and society. The goal is to be a sector leader for key ESG issues, focussing in the areas from where to exert greater influence through the company's core business.

Dividend Policy

Novartis' dividend policy is to pay an increasing annual dividend in Swiss Francs (CHF) per share. Accordingly, every year, the Board of Directors proposes the dividend amount to be approved by the shareholders – the value of the American Depositary Receipts' (ADR) holders can vary due to the USD/CHF exchange fluctuations. The policy is subject to the financial conditions of the company at the time, the results of operations, and other factors.

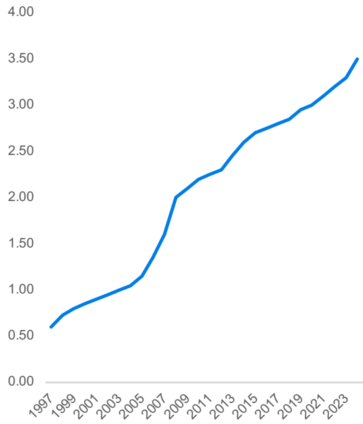

Figure 11: Dividend per Share (DPS) in CHF
Source: Novartis Website

In 2024, shareholders approved the 28th consecutive dividend increase per share since the creation of Novartis, with a growth of 6.1% to CHF 3.50 per share for that same year (Figure 11).

3. Management and ESG

Environmental, Social and Governance

Novartis has, according to LSEG/Refinitiv, an average ESG Score of **86.11** (Table 2) over the last five reporting periods. Of the three pillars that make up the overall ESG score, the Social pillar performed the best (91.31), followed by the Environmental pillar (83.55), and the Governance pillar (80.00).

ESG Scores	
ESG Score	86.11
Environmental	83.55
Social	91.31
Governance	80.00

Table 2: ESG Score
Source: LSEG/Refinitiv

From a valuation standpoint, Novartis' ESG leadership supports a lower equity risk premium relative to less sustainable peers. Sustainalytics has assigned Novartis an ESG risk rating of 15.9, classified as "low risk," in comparison to the peer group average of 21.2 (Figure 12). This allows for the assumption of a lower Weighted Average Cost of Capital (WACC) in the DCF model, thereby increasing the present value estimate of future cash flows. Furthermore, the company's strong focus on social impact – particularly regarding access to medicine, drug safety, and innovation in severe diseases – directly supports long-term revenue growth assumptions. Novartis' leadership in ESG (Table 3) is consistent with a rising demand for sustainable investments among market participants. Consequently, ESG can be seen not only as a tool for managing reputation, but also as a financial asset.

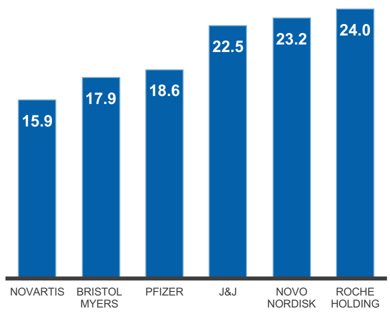

Figure 12: ESG Risk Ratings
Source: Sustainalytics

One of the core components of Novartis' corporate strategy is building trust with the society. This is critical for the company's purpose of reimagining medicine to improve and extend people's lives, as such, ESG efforts are embedded across the company and are key to driving long-term sustainable value for the stakeholders.

Novartis positions itself as a leader in areas where it can make a difference in people's lives and society. This encompasses integrating key topics into their primary operations by using innovation to address severe illnesses and expand the reach of own medicines. Ensuring the quality and safety of those medicines is essential to these initiatives and is a key aspect of the company's primary operations.

ESG Ratings/Rankings	
Access to Medicine Index	1st
MSCI	AA
ISS ESG	B
Sustainalytics	Low Risk
CDP Climate Change	AA
CDP Water Security	AA

Table 3: ESG Ratings/Rankings
Source: Novartis Website

The company's ESG Targets of the company are aligned with the strategic priorities, facilitating improvements in healthcare equity while still generating sustainable social and environmental impact for the society. Novartis' strategic ESG pillars – deliver high-value medicines, build trust with society, unleash the power of the people in the company, and embed operational excellence – and the strategic priorities (Figure 13) presented by the company in the "Novartis in Society – Integrated Report 2023" are as follow:

Innovation and access to medicines: deliver high-value medicines; build trust with society.
To achieve this Novartis aims to implement a global access strategy for new medicines launched, increase the number of patients with strategic innovative medicines in low-and-middle-income countries and increase the number of patients reached with Novartis Global Health flagship initiatives. These initiatives aim to shift the focus from neglected diseases to neglected patient populations.

Figure 13: ESG Framework
Source: Novartis Integrated Report, 2023

Human capital: unleash the power of the people in the company.
To do so, Novartis closed the gender pay gap in 2023, achieved gender balance in management, removed bias from the system and created pay transparency for employees.

Ethical Standards: build trust with society.

Novartis conducted risk assessments for all new eligible suppliers through the External Partner Risk Management process, ensuring compliance not only with quality expectations but also with ethical, environmental, and human rights standards.

Environmental Sustainability: embed operational excellence; build trust with society.

The company aims to become carbon neutral in its own operations by 2025 and in supply chain by 2030, including environmental criteria in all supplier contracts. It also plans to reduce water consumption by halve, while aiming to eliminate water quality impacts from manufacturing effluents. Furthermore, Novartis aims to become water neutral in its own operations and enhance the water quality where they have operations by 2030.

Regarding plastics, Novartis goals are to become plastic neutral by 2030, ensuring all new products have sustainable design principles.

While Novartis is ranked among the ESG leaders in the industry, it is important to mention that the achievement of net-zero goals may require substantial capital expenditures. If these efforts prove to be more expensive than what was expected, or if targets are missed, than investor confidence may suffer, leading to an increase in the equity risk premium, pressuring valuation.

CEO	Vasant Narasimhan
CFO	Harry Kirsch
COB	Giovanni Caforio

Table 4: Management Team
Source: Novartis Website

Figure 14: Chairman of the Board
Source: Novartis Website

Corporate Governance

Novartis operates under a governance system that was designed to ensure effective checks and balances across its leadership bodies.

The primary governance entities of the company are the Annual General Meeting (AGM) of shareholders, the Board of Directors, and the Executive Committee of Novartis (ECN).

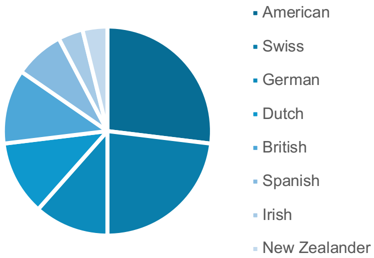

Figure 15: Nationality of Board Members
Source: Annual Report

Annual General Meeting

At the **AGM**, shareholders approve dividend payments, maximum aggregate compensation for members of the Board and ECN, as well as financial statements, the nonfinancial report, along with other disclosures. Shareholders also elect the Board Chairman (COB), the members of the Board of Directors, the Board's Compensation Committee, the Independent Proxy, and the external auditor. The AGM is held at least once annually, typically in February or March.

Board of Directors

The Board of Directors, led by the COB Giovanni Caforio, holds ultimate decision-making authority (for those decisions not reserved for shareholders) and is responsible for the direction, strategy, organization and administration of the company.

The Board acts in the interests of all stakeholders and oversees the work of the ECN.

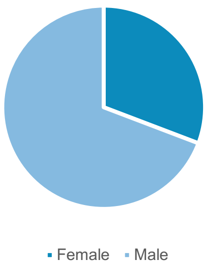

Figure 16: Gender of Board Members
Source: Annual Report

It operates through five permanent committees:

Audit and Compliance Committee: supervises the external auditor, accounting policies, internal audits and control standards; approves financial statements for the first three quarters, reviews the annual financial statements; oversees compliance; reviews updates with regards to Quality Assurance.

Compensation Committee: reviews, recommends, advises and makes decisions regarding the compensation policies and programs. Advises the Board on the Board members and the Chief Executive Officer (CEO)'s compensations.

Figure 17: Chief Executive Officer
Source: Annual Report

Governance, Sustainability and Nomination Committee: oversees the company's ESG strategy, governance and progress; reviews everything related to the Board; discusses emerging trends and regularly advises the Board on ESG matters

Risk Committee: oversees the risk management system and processes; conducts the review and analysis of key areas and of risk portfolio.

Science & Technology Committee: manages and evaluates the company's scientific, technological and R&D activities.

Executive Committee of Novartis

The ECN is responsible for operational management, including financial performance and the implementation of the company's strategic objectives. The ECN has 12 members, including the CEO, Vasant Narasimhan, the Chief Financial Officer (CFO), Harry Kirsch, along with the heads of Novartis' organizational units – Biomedical Research, Development, Operations, USA and International – as well as those of other functions. ECN members are chosen by the Board of Directors.

Registered Shareholders by Type		
	Shareholders %	Shares %
Individual Shareholders	96.94	20.47
Legal entities	3.03	45.14
Nominees, fiduciaries, and ADS depositary	0.03	34.39

Table 5: Registered Shareholder by Type
Source: Annual Report

Share Ownership

Novartis AG, as of December 31, 2024, had 2,189,930,497 registered and listed shares on the SIX Swiss Exchange (SIX) with a nominal value of CHF 0.49 each and on the New York Stock Exchange (NYSE) in the form of ADR that represent the American Depositary Shares (ADS). Each ADR entitles the holder to one Novartis share and to receive his equivalent dividends which are kept by JP Morgan Chase Bank, the ADSs depositary of Novartis.

Share Price (CHF)			
	2024	2023	2022
Year-end	88.7	84.87	83.59
High	102.7	93.87	87.82
Low	84.52	74.62	73.98
Market Cap ($B)	193.9	206.3	191.5

Table 6: Share Price, CHF
Source: Annual Report

As of December 31, 2024, Novartis had approximately 186,000 registered shareholders. Most of those are individual shareholders (96.94%), followed by legal entities (3.03%) and the remaining are nominees, fiduciaries and ADS's depositaries (0.03%). However, legal entities own the biggest percentage of shares (45.14%).

The 2024YE share price was CHF 88.70 and the ADR price was USD 97.31

4. Industry Overview

Outlook of the Pharmaceutical Industry

The pharmaceutical industry plays a crucial role within the healthcare sector, encompassing the discovery, development, manufacturing and marketing of medicines. Innovation is the central pillar of advancement in the industry, as continuous improvements in patient care and disease management rely on medical breakthroughs.

To prosecute the innovation driver, the pharmaceutical industry directs a substantial investment into R&D (Figure 18), while also leveraging M&A and embracing technological advancements like AI.

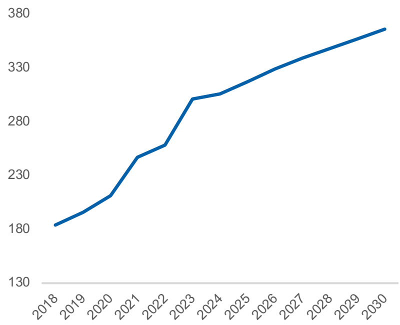

Figure 18: Global Spending in Pharmaceutical R&D ($B)
Source: Statista

R&D expenditure in the industry is projected to continue growing, although at a slower pace. According to the 2024 report of Evaluate Pharma, the compound annual growth rate (CAGR) of R&D was over 9% between 2019 and 2023. The value is expected to decrease below 3% from 2023 to 2030. The report highlights that various factors may be in play for this deceleration, such as streamlining pipelines and operations of some companies due to commercial pressures, which encourages reliance on M&A activities – “M&A may be playing a relatively greater role given some pharma’s’ need to replace genericising blockbusters. AI promises to boost R&D and operational efficiency, though it’s too early to quantify to what extent”.

One of the most pressing challenges facing the industry is the impending revenue loss due to patent expirations. As exclusivity windows for drugs close, generic and biosimilar competition enters the market rapidly, leading to significant erosion in branded drug revenues (Figure 19). To offset this, companies are prioritizing life-cycle management strategies and accelerated pipeline development. Notwithstanding, replacing the lost revenues remains a critical challenge.

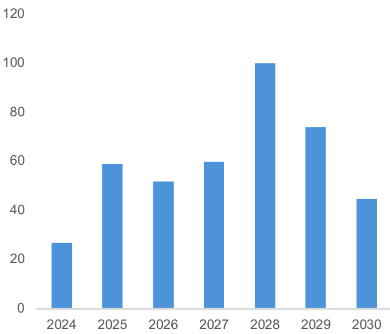

Figure 19: Revenue at Risk from Patent Expiration ($B)
Source: Statista

Global prescription drug sales are expected to reach an estimated $1.7 trillion by 2030 (Figure 20). This value highlights the enduring strength of pharmaceutical demand, despite broader economic challenges.

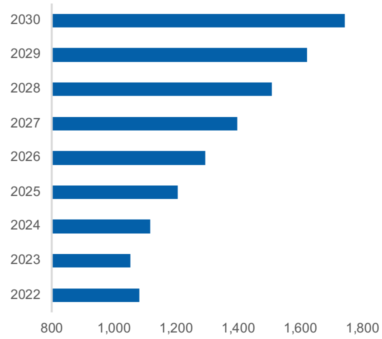

Figure 20: Total Prescription Drug Revenue ($B)
Source: Statista

Mergers and Acquisitions

M&A activity has become crucial within the pharmaceutical industry. Faced with impending patent expirations, large firms are turning to M&A to fill portfolio gaps, gain access to innovative technologies and load their pipelines without having to bear the full risk of R&D failures internally.

As reported by Evaluate Pharma in the 2024 Report, “more M&A is likely as patents expire, obesity/diabetes drug revenue pile up and as innovation continues to flourish”. Smaller strategic acquisitions like Novartis’ purchase of Calypso (auto-immune focused) in 2024, are increasingly popular. These types of transactions provide access to late-stage pipeline products and offer strategic synergies through operational integration, quicker market entry and enhanced market access capabilities.

Technology and Artificial Intelligence in Research & Development

The R&D framework is being reshaped by technological advancements, especially through the application of AI (Figure 21). Over the last years, AI has become a transformative tool across the drug development chain.

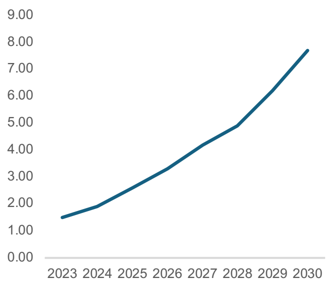

Figure 21: Projected global AI in drug discovery market from 2023-2030 ($B)
Source: Statista

According to Evaluate Pharma, “50% of global healthcare companies plan to implement AI strategies by 2025”, with AI-driven activities expected to grow at an annual rate of 40%. The impact of these technologies is felt across multiple stages of drug development, from early-stage drug discovery to clinical trials design and patient recruitment.

AI allows pharmaceutical companies to reduce R&D costs, shorten the time to deliver new drugs to the market and increase success rates. According to a McKinsey study, AI could unlock between “$60B and $110B in annual value across the pharmaceutical industry value chain”, providing competitive advantage to early adopters. This type of technology may be used in clinical trials to enhance patient selection, accelerate data analysis and improve trials’ monitoring, thus leading to more reliable and faster outcomes.

Nonetheless, the adoption of AI faces several challenges. Data availability and quality are still major constraints as effective models require large, diverse and high-quality datasets. Additionally, skilled personnel is still short to fill the gap between data and pharmaceutical science.

Economic Outlook

World Economic Outlook

According to the International Monetary Fund (IMF) projections, global Gross Domestic Product (GDP) growth is forecasted at 2.8% in 2025. This figure is lower than the long-term average of 3.7% that was observed between 2000 and 2019 and the IMF’s earlier estimate of 3.3% published in January. This projection reflects the impacts of the looming trade tariffs, escalating particularly between the USA, China and the European Union (EU), which are expected to lead to a decrease in the global trade growth to 1.7%. This decrease may further indirectly affect companies through supply chain logistics and raw material costs.

Inflation however continues to moderate across the majority of advanced and emerging economies. The IMF projects global inflation to fall to 4.3% in 2025 and 3.6% in 2026; nonetheless the pace of disinflation has been revised upwards when compared to the World Economic Outlook of January 2025, indicating that inflation is easing at a slower pace than previously anticipated.

Beyond these economic indicators, population’s growth and ageing around the world is also affecting the global economy. According to the United Nations (UN), the world’s population is projected to rise to around 8.5B by 2030 and the proportion of people aged 60 and above is expected to increase, particularly in developed countries. This tendency puts pressure on healthcare systems around the world and fuels the demand for chronic diseases therapies.

Europe Economic Outlook

The economic activity in the Euro Area is slowing recovering, though it still has not reached pre-pandemic levels. IMF projects an annual percentage change of 1.3% in GDP growth during 2025.

The European economy has been weighed down by high energy prices linked to the Russia-Ukraine war and persisting effects of tight monetary policies. However, the European Central Bank (ECB) has been lowering the interest rates, and, as a

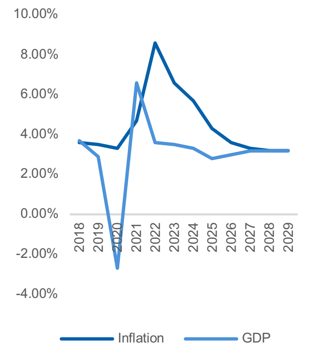

Figure 22: Inflation and GDP Annual Change Worldwide
Source: IMF

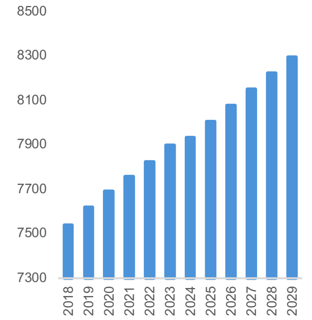

Figure 23: World Population (in Millions)
Source: IMF

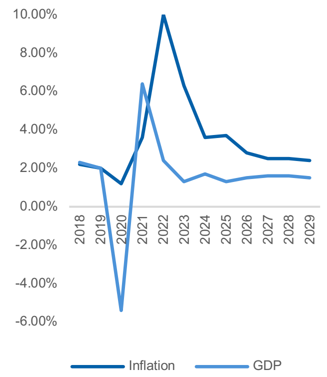

Figure 24: Inflation and GDP Annual Change in Europe
Source: IMF

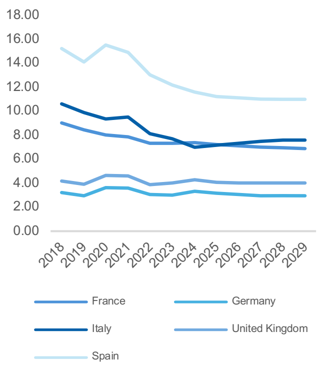

Figure 25: Unemployment Rate in the 5 Largest European Economies
Source: Statista

consequence, inflation rates are now forecasted at 2% in 2025, nearing the declared target after the peak at over 5% in 2023.

Many European countries maintain national healthcare systems where drug pricing is regulated. Economic pressures typically lead to more aggressive price control measures and increased use of generics or biosimilars.

USA Economic Outlook

The USA economy is expected to slow to 1.8% GDP growth in 2025, after facing above-trend growth in the previous two years. This slowdown is a result of tighter credit conditions and the escalating trade conflict with China and the EU.

Inflation is expected to reaccelerate to 3.0% in 2025, after experiencing a steady decline through 2024. This is driven by the rising import costs and tariffs. The primary source of unpredictability in the USA is the monetary policy.

Being the largest market of Novartis, a deceleration in the US economy's growth could lead to political and regulatory pressure to control healthcare costs (enabled by the Inflation Reduction Act, for example).

China Economic Outlook

China's economy is expected to grow around 4.0% in 2025, falling from 5.2% in 2024, reflecting the impact of pressures the country is facing such as a structural demographic decline. The IMF assesses that without major structural reforms the potential growth of China could drop below 4.0% by 2027.

The People's Bank of China continues to maintain a supportive approach, including selective rate cuts and liquidity injections, and inflation is expected to change 0.90% until 2026.

The Chinese government's prioritized healthcare reforms, aligned with the demographic trends, such as the particularly rapid population aging, are expected to sustain strong demand for products targeting chronic conditions, oncology, and neurodegenerative diseases.

Demand and Supply Drivers

Demand Drivers in the Pharmaceutical Industry

Demographics and Chronic Diseases

The industry's most powerful and structural demand driver is the ageing of population globally (Figure 29). According to the World Health Organization, by 2030, "1 in 6 people in the world will be aged 60 years or over and the share of the population aged 60 years and over will increase from 1B in 2020 to 1.4B".

The general rise in chronic diseases across all age groups due to sedentary lifestyles and unhealthy diets, aligned with an increased life expectancy, further supports the long-term demand growth of this industry.

Supply Drivers in the Pharmaceutical Industry

Technological Advancements

Technological advancements have reshaped the manufacturing and distribution processes of the pharmaceutical industry, increasing the ability to deliver products more efficiently and at a lower operational risk.

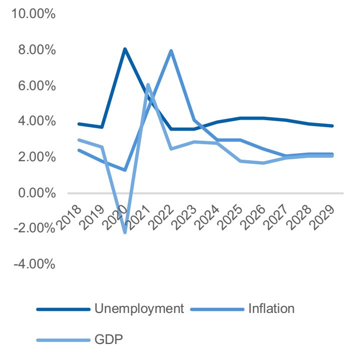

Figure 26: Unemployment rate, Inflation and GDP Annual Change in USA
Source: IMF

Figure 27: Unemployment rate, Inflation and GDP Annual Change in China
Source: IMF

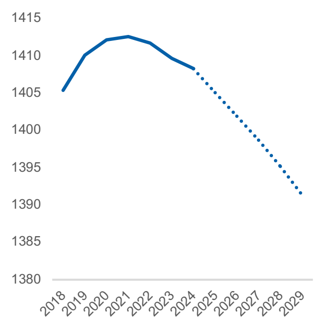

Figure 28: China´s Population, Millions
Source: IMF

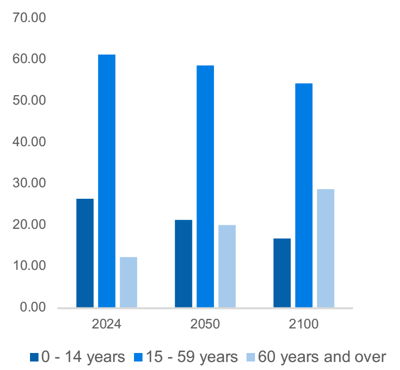

Figure 29: Projected distribution of the world's population from 2024 to 2100, by age group
Source: Statista

The utilization of automated production lines allows for greater consistency and quality assurance, reducing the probability of batch failures and regulatory compliance issues.

The integration of these tools supports ESG commitments by enhancing energy efficiency and minimizing waste.

Exchange Rates

Players in the pharmaceutical industry often operate international supply chains, sourcing raw materials and active pharmaceutical ingredients (API) from countries like China or India. Exchange rates affect the cost of these imports, raising production costs, profitability and the pricing strategies of the companies.

Competitive Positioning

SWOT Analysis

Figure 30: SWOT Analysis
Source: Author's Analysis

PESTEL Analysis

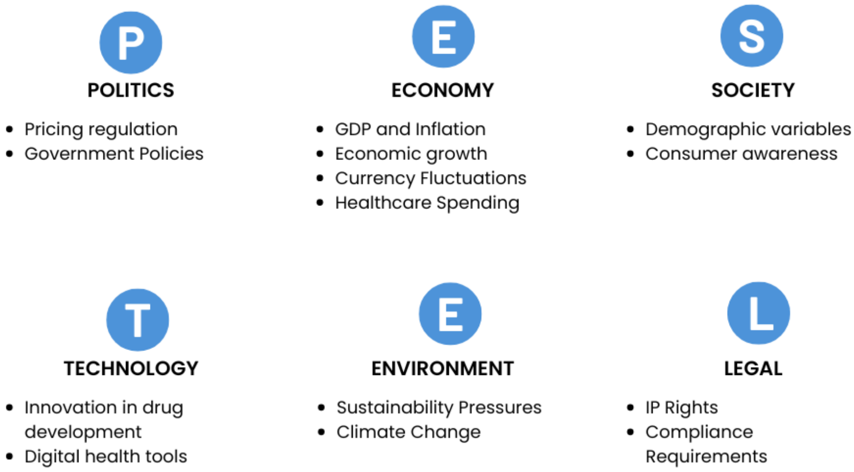

Figure 31: PESTEL Analysis
Source: Author Analysis

Porter's 5 Forces

Threat of New Entrants – LOW

The pharmaceutical industry presents itself with high barriers to entry such as intense costs, strict regulations and strong IP protection.

Developing, approving and commercializing new products requires intense investment in R&D, typically exceeding a decade of work. Beyond financial cost, firms must demonstrate safety, efficacy, and quality under a rigorous regulatory environment, with extremely challenging approval processes that are managed by entities such as the Food and Drug Administration in the USA, and the European Medicines Agency, in Europe.

Moreover, patent protection reinforces the difficulty of accessing the market. Patents grant the companies the exclusive rights of own products, often for up to 20 years, during which competitors are legally prohibited from producing identical or similar formulations. This allows players to maintain a monopoly in specific therapeutic areas.

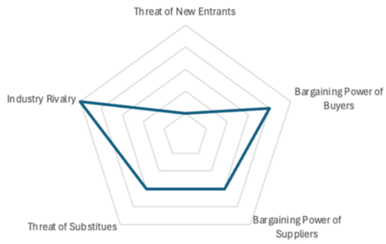

Figure 32: Porter's 5 Forces
Source: Author's Analysis

Bargaining Power of Suppliers – MEDIUM

API, excipients, and packaging materials are often commoditized and available from multiple global sources. Many pharmaceutical firms maintain diversified supplier networks to reduce dependency and pricing risk.

Suppliers have some power when there is a specialized need for complex drugs, or manufacturing is geographically concentrated. In the past few years supply chain vulnerabilities were exposed by the COVID-19 pandemic and geopolitical tensions, forcing firms to somehow diversify their production, while increasing the power of the suppliers in the short-term.

Bargaining Power of Buyers – MEDIUM TO HIGH

In the pharmaceutical industry, buyers such as governments and health insurance providers wield significant power. This is highly influenced by bulk purchases and increasing public scrutiny.

Governments and large health insurance companies leverage their purchasing power, since they account for a substantial share of pharmaceutical expenditures, to negotiate lower drug prices. In the case of countries that have national health systems, authorities impose price caps, constraining the pricing flexibility of companies. Growing attention to drug affordability has also enhanced buyer influences. Public criticism over the cost of drugs may trigger political and regulatory interventions, compelling firms to adopts more transparent pricing strategies.

Additionally, buyers have the option to choose generic or biosimilar alternatives, which offer equivalent therapeutic value at significantly lower prices. This ability to switch reinforces their negotiating power.

Threat of Substitutes – MEDIUM

Patent expirations allow for the introduction of generic and biosimilar alternatives, which offer equivalent therapeutic efficacy at significant lower prices.

Beyond pharmaceutical substitutes, non-traditional healthcare approaches are gaining strength. Technological alternatives such as telemedicine, wearable health technologies and digital therapeutics, present complementary or even substitutive options to conventional treatments.

Industry Rivalry – HIGH

Industry rivalry is very high in this sector, driven by the presence of several global firms that compete on innovation, drug pricing and market access very aggressively. The competition intensifies when a drug loses patent protection. Once exclusivity ends, generic and biosimilar versions enter the market rapidly, eroding the pricing power and capturing a significant market share.

Companies with robust pipelines and diverse portfolios in high-growth therapeutic areas (oncology, immunology and neuroscience) can maintain a competitive edge. However, to be competitive there is a strong need for innovation, and that can't happen without high investment in R&D.

Peers Strategies

Novo Nordisk: Danish company that is highly specialized in chronic diseases, such as diabetes, obesity, and rare endocrine disorders. Has a strong commercial execution and a leadership position in GLP-1[3] based treatments. The key strategic targets of Novo Nordisk are volume expansion, globalizing supply chains and widening the pipeline into cardiovascular diseases

Comparison with Peers		
Key Metric	Novartis	Peers Median
ROIC	18.91%	24.43%
Net Debt/EBITDA	0.80	0.78
Revenue Growth	10.73%	7.32%
R&D Expense	$10B	$11B
R&D/Revenue	19.38%	19.40%

Table 7: Comparison of Key Metrics
Source: Bloomberg, Author's Analysis

Roche: Swiss company whose priorities lie in personalized oncology and companion diagnostics, while reinforcing pipelines in neuroscience and immunology. Roche does not rely on large acquisitions and has a strategic focus on digital diagnostics and expansion towards the Asia-Pacific

Pfizer: American company currently in a transitional phase, post-COVID. The company is expecting flat to mid-single-digit revenue growth supported by a cost-savings program that includes automation and AI deployment. The 2025 strategy emphasizes four dimensions – oncology, vaccines, cardiovascular, and immunology – paired with targeted M&A. Pfizer leverages AI and digital partnerships to drive R&D and operational efficiency.

Johnson & Johnson: American company with a diversified business model with pharmaceuticals, medical devices, and, until very recently, consumer health. The flagship R&D areas of J&J are oncology, immunology and neuroscience, reinforced by cell and gene therapies.

Bayer: American company that is undergoing a strategic transformation driven by investor pressures and crop science underperformance. Bayer is sharpening its focus on pharma, consumer health, and crop science, weighing potential divestitures of non-core assets. Furthermore, the company is intensifying the investment in R&D in oncology and cardiovascular medicines.

[3] Natural hormone that plays a role in regulating blood sugar levels, appetite, and digestion; active ingredient in Ozempic.

5. Investment Summary

The base case recommendation stands at **HOLD**, with a 2026YE price target of **$139.48**, which represents an **upside potential of 12.16%** from the June 2nd, 2025, closing price, with **medium risk.**

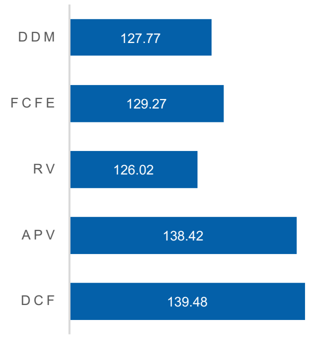

Figure 33: Valuation Methods
Source: Author's Analysis

Novartis is one of the major players in the pharmaceutical sector and is recognized by its strong presence in high-growth therapeutic areas. In 2024 the company recorded $50.3B in net sales, representing a 10.73% YoY increase. Management targets a 5% CAGR in sales between 2023 and 2028 that is driven by product expansion and strategic launches.
The pipeline of this company is supported by advanced technologies such as RLT, gene and cell therapy, and xRNA, which are expected to drive future value.

Valuation Models

To obtain the Price Target different valuation models were used, with the PT spanning from **$126.02-$139.48/share**, which represents differences in valuation perspectives**.** Therefore, a sensitivity analysis based on variations in WACC and terminal growth rate was also applied.

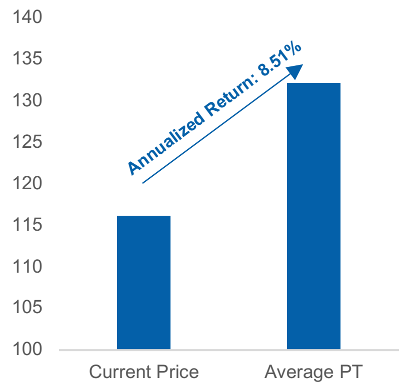

Figure 34: Current PT vs Average PT
Source: Author's Analysis

The PT used on the investment recommendation is the one resulting from the **DCF Method** - **$139.48/share**, as the model better reflects the company's long-term fundamentals and strategic positioning.

The lowest PT was derived from the **Relative Valuation** – $126.02/share – using peer multiples such as EV/EBITDA, P/E and EV/Sales from a selected group of pharmaceutical companies – Bristol-Myers, Novo-Nordisk, Jonhson & Johnson, Roche, and Pfizer.

Investment Risks

Investors should be aware that Novartis faces structural and operations risks that will influence the investment profile, as any other innovation-driven pharmaceutical company.

Being this a research-intensive business, one of the primary risks is related to R&D uncertainty. Despite investing around 20% of revenues in R&D, there is no guarantee that the drugs in the pipeline will achieve approval or commercial success.

	BEAR CASE	BASE CASE	BULL CASE
% Growth Revenue	4.47%	5.59%	6.70%
WACC	6.71%	6.21%	5.71%
g	1.38%	1.88%	2.38%

Table 8: Scenario Analysis Assumptions
Source: Author's Analysis

Additionally, there is a continuous escalation of pricing pressures in markets such as the USA and Europe, where healthcare insurers and governments are implementing stricter reimbursement frameworks. This happens as a result of an increase in the number of people suffering from chronic diseases and an ageing population.

However, the major risk that any company in this industry faces is the risk of patent expirations. Failing to secure extensions or new IP protection could impact the revenue streams negatively, which by extension will impact the stock price.

Scenario Analysis

A scenario analysis was conducted (Table 8), arriving at a PT of **$97.61/share** in the **Bear Case** and **$206.98/share** in the **Bull Case** (Table 9)

	BEAR CASE	BASE CASE	BULL CASE
Price Target	$97.61	$139.48	$206.98
Upside/Downside Potential	-16.09%	19.90%	77.92%
Annualized Return	-10.50%	12.16%	43.98%

Table 9: Scenario Analysis
Source: Author's Analysis

6. Valuation

Aiming to establish a comprehensive Price Target for Novartis, different methods were employed, such as the WACC method, using **Discounted Cash Flows**, and sales and enterprise multiples. The forecasted price for the **2026YE** is **$139.48/share** or **CHF 114.09/share.**

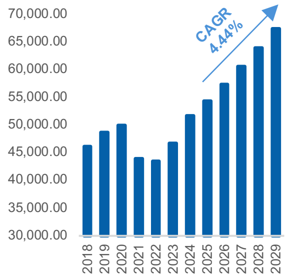

Figure 35: Revenues Evolution
Source: Author's Analysis

DCF Model

The method used to evaluate the 2026 PT was the DCF Method. In order to do so, the FCFF forecasted from 2025 to 2029, and the terminal value were used to estimate a price target of $139.48, which corresponds to CHF 114.09. This represents an **upside potential** of **19.90%,** with an **annualized return** of **12.16%** when compared with the share price of June 2nd, 2025, leading to a **HOLD** recommendation.

The key factors that have an influence in this model are the revenues, the WACC and the terminal value assumptions.

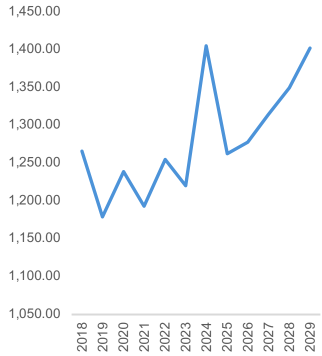

Figure 36: Other Revenues
Source: Author's Analysis

Revenues Assumptions

The most important drivers for Novartis' revenues are in line with the profitability drivers identified for the whole industry, such as the ageing and increasing population around the world.

As the company does not have segments since 2023, all of the forecasts made were in line with this fact. The revenues were computed based on the average growth of the last 5 years of the Innovative Medicines segments, as this was the one kept by the company, arriving at a **CAGR of 4.44%** between 2025-2029, which is in line with the expectations from the company – having a CAGR of 5% until 2028.

Peers Selection

In order to compute WACC and a levered beta for the company, the SARD (Sum of Absolute Rank Differences) model was employed, as presented by Knudsen et al. (2017).

Peer	SARD Rank
BRISTOL-MYERS	1
NOVO-NORDISK	4
ROCHE HOLDING	3
JOHNSON & JOHNSON	2
PFIZER	4

Table 10: SARD Model
Source: Author's Analysis

The potential peer group was identified from companies suggested by LSEG/Refinitiv in the pharmaceutical sector, chosen for their similarities with Novartis. The key variables analysed with this model included **Return on Invested Capital (ROIC)** as a proxy for profitability, **Net Debt/EBITDA** as a proxy for risk, **Revenue Growth** as a proxy for growth, **R&D/Revenue** as a proxy for operational characteristics and **Market Capitalization** as a proxy for size.

Attempting to arrive at a small number of peers there was a requirement to exclude the companies in the sample that had values out of the normal range, such as the ones that did not achieve positive earnings (Appendix 9). Thus, five companies were selected: Johnson & Johnson, Pfizer Inc., Bristol-Myers Squibb Co, Novo Nordisk, and Roche Holding AG (Table 10).

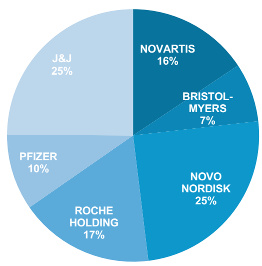

Figure 37: Market Share
Source: Author's Analysis

WACC Assumptions

To reach the WACC there is a requirement to compute the cost of equity and the levered beta.

Using the **Capital Asset Pricing Model (CAPM)** method, a **cost of equity of 6.68%** was reached. The **risk-free rate** (RFR) was based on the German 10-Year Bond yields with a value used of **2.65%**. The **Country Risk Premium (CRP)** included in this computation is 0.36%, a value that reflects an average of the major revenue contributors. Following the downgrade of the USA credit rating from AAA, Damodaran nowadays applies a premium to the benchmark of that country, so a CRP of 0.53% was used for USA. The **Market Risk Premium (MRP)** used was 4.33%, which is, according to Damodaran, the MRP of Switzerland.

The **beta** was calculated using the **Pure Play Method**, arriving at a value of 0.71. However, this approach is sensitive to market volatility, peer selection, and noise in historical beta estimates – particularly when peers differ in geographic exposure or business lines. For robustness, the value obtained through the Pure Play Method was compared with the industry beta provided by **Damodaran**, which is 1.01. This estimate benefits from broad diversification, meaning it averages risk across many companies, smoothing idiosyncratic risks, and reducing the estimation error, but it may not capture some of the firm-specific characteristics that Novartis presents. To balance firm specificity and market-wide robustness, an average of both methods was used, resulting in a beta of **0.86.** The estimated cost of equity with this beta is **6.71%.**

Beta	
Beta Unlevered Peers	0.39
Beta Unlevered Cash Adjusted	0.44
Beta Unlevered Peers Adjusted	0.15
Beta Unlevered Novartis	**0.68**
Beta Levered Novartis	**0.86**

Table 11: Beta Assumptions
Source: Author's Analysis

The **cost of debt** was estimated as interest expense over debt, arriving at a value of **3.20%.**

Using a corporate tax rate of 14.6% and a D/V of 11.79%, a WACC of 6.24% was estimated.

WACC	
RFR	2.65%
Beta Levered	0.86
MRP	4.33%
CRP	0.36%
Re	6.68%
Rd	3.20%
Tc	14.60%
WACC	**6.21%**
Unlevered Cost of Equity	**5.85%**

Table 12: WACC Assumptions
Source: Author's Analysis

Terminal Value Assumptions

Given Novartis' strong brand recognition and its established position as a major player in the pharmaceutical industry, it is reasonable to expect that the company will keep growing sustainably over the long term.

To estimate the **terminal growth rate** (*g*), different methods were tested. The first model tested was the **Stable Growth Model** (Appendix 11), that considers *g* = Reinvestment Rate*ROIC, obtaining a ***g*** of **0.24%.** This is not a reasonable value, and it should not be considered, since it indicates that the company would not grow in the long-term. However, the low value is obtained as this is a model that depends heavily on CAPEX, which is lower than D&A in the case of Novartis, leading to a negative value in some of the years. As stated previously, companies in this sector invest more in R&D or M&A than CAPEX, making it difficult to implement this model.

NPV	32,554.82
PV Terminal Value	255,049.00
EV	**287,603.83**
Debt	26,411.60
Cash	14,288.10
Equity Value	**275,480.33**
Shares Outstanding	1,975.10
PT	**139.48**
Current Share Price	116.33
Annualized Return	**12.16%**

Table 13: DCF Method
Source: Author's Analysis

The second model tested was the **PRAT Model** (Appendix 12), and a ***g*** of **1.22%** was obtained. This happens because of the value of 2028E (-9.23%), which is very low due to the extraordinary dividend assumed in this year.

Finally, a macroeconomic perspective was applied, the **Fisher Model**, which combines the expected real GDP growth and inflation rates in the United States – since it is the major revenue contributor of Novartis – and the other contributors (Appendix 13). Based on the average 2025 forecasts for these metrics, the **terminal growth rate** achieved was **1.88%**. This was the value used in the presented model, since *g* ranges, typically, between the historic inflation and average GDP growth rate.

Adjusted Present Value

Through the APV method, the FCFF is discounted for each year of the forecasted period using the **unlevered cost of equity – 5.85%** and including the tax shield which is calculated by multiplying the interest expense of each year by the corporate tax rate.

A corporate tax rate of 14.6% was applied throughout the forecasted period, consistent across all valuation methods. This value corresponds to the expected Swiss corporate tax rate in 2025, according to Damodaran.

As a result of the APV method, the PT achieved for the 2026FY was **$138.42/share**, which represents an **annualized return** of **11.62%** (Appendix 15).

NPV using Ke	32,780.10
PV Terminal Value	281,434.54
PV TV Tax Shield	4,076.52
EV	**285,511.06**
Debt	26,411.60
Cash	14,288.10
Equity Value	**273,387.56**
Shares Outstanding	1,975.10
PT	**138.42**
Current Share Price	116.33
Annualized Return	**11.62%**

Table 14: APV Method
Source: Author's Analysis

Flow-to-Equity

To calculate the PT using the FTE method, one should subtract the interest expense and sum the debt variation to achieve the Free Cash Flow to Equity. Then, these values should be discounted using the **cost of equity – 6.68%.** The equity value corresponds to the sum of the discounted cash flows and the terminal value, which is achieved using a ***g*** of **1.88%.**

Through this method the PT achieved was **$129.27/share**, which corresponds to an **annualized return** of **6.90%** (Appendix 16)**.**

NPV using Ke	31,602.27
PV Terminal Value	223,713.51
EV	**255,315.78**
Shares Outstanding	1,975.10
PT	**129.27**
Current Share Price	116.33
Annualized Return	**6.90%**

Table 15: FTE Method
Source: Author's Analysis

Dividend Discount Model

This approach was based on the Gordon Growth Model, applied through a H-model with different growth rates. The short-term one is **6.11%**, which, according to the Evaluate Pharma report of 2024, corresponds to the CAGR of the industry between 2025-2030. The long-term growth rate used was **1.88%**, derived from the Fisher Model. A half-time life of 14 years was considered, as this aligns with how many years, on average, drugs have on market.

Novartis pays dividends every year and it keeps increasing its DPS. Due to an unrealistic amount of cash in the forecasted years, it is required to assume the payment of an extraordinary dividend on 2028E.

A PT of **$127.77/share** was obtained through this approach, thus representing an **annualized return** of **6.11%** (Appendix 17).

	DPS	Re	PV Dividends
2027E	4.30	6.68%	4.03
2028E	7.70	6.68%	6.77
2029E	5.00	6.68%	4.12
Sum PV	14.92		
TV	137.01		
PV TV	112.85		
PV DPS + TV	**127.77**		
Current Price	116.33		
Upside/Downside Potential	**9.83%**		
Annualized Return	**6.11%**		

Table 16: DDM
Source: Author's Analysis

Relative Valuation

The last approach used to achieve a PT was Relative Valuation. Through this method, the PT of the company is determined by comparing it to market peers (obtained through SARD) using various multiples.
The Relative Valuation involved the EV/Sales, EV/EBIT, and P/E.

A PT of **$109.56-$136.59/share** was achieved.

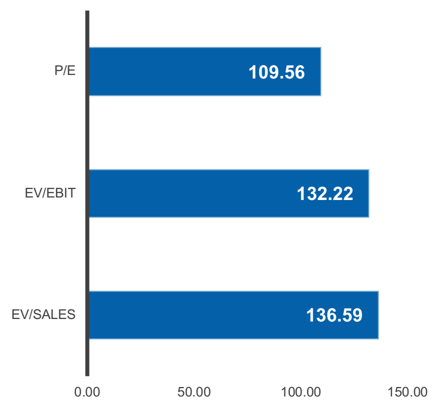

Figure 38: Relative Valuation
Source: Author's Analysis

7. Financial Analysis

Novartis continues to demonstrate strong financial performance over the years, reinforced by consistent profitability and efficient operational metrics.

Resilient Profitability in a Competitive Industry

By looking at Novartis' profitability ratios over the years, it emerges that the company has stable numbers. These ratios reflect the ability to generate earnings relative to sales and equity, highlighting the operational efficiency of the company.

Gross Profit Margin grows from 80.14% in 2018 to 84.09% in 2024. The margin is relatively stable over the forecasted years, being ~81.82% in this period. The **Operating Margin** also remains relatively constant over the whole period in analysis, maintaining an average of 21.63% in the forecasted years. The values for this period are in line with the ones from the historical values, excluding 2024, thus meaning that the company improved cost management (Figure 39).

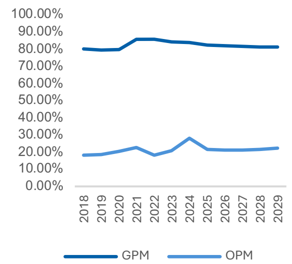

Figure 39: Profitability Ratios
Source: Author's Analysis

Net Profit Margin presents itself with two very high values in 2021 and 2023, but in the forecasted years it normalizes again, with an average of 17.07% (Figure 40). Regarding **Return on Equity (ROE)**, this metric was calculated using **DuPont Analysis** and presents values obviously similar to the Net Profit Margin, with two peaks in 2021 and 2023, then stabilizing with an average of 21.99% in the forecasted period.

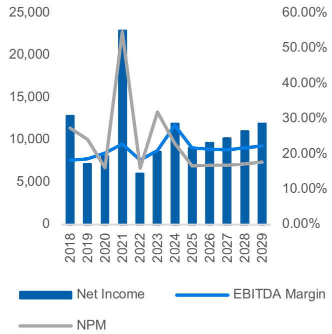

Figure 40: Profitability Margins
Source: Author's Analysis

Maintaining Liquidity for Flexibility

Liquidity ratios evaluate the ability of a company to meet its short-term obligations, ensuring financial stability. Over the historical period, Novartis **cash ratio** is very unstable. For the forecasted years it's expected that this ratio achieves an average of 0.47, with a high of 0.56 in 2027E. **Current ratio** grows from 1.04 in 2024 to 1.27 in 2029E, achieving higher values in the forecasted period. **Quick ratio** grows from 0.84 in 2024 to 0.97 in 2029E (Figure 41).

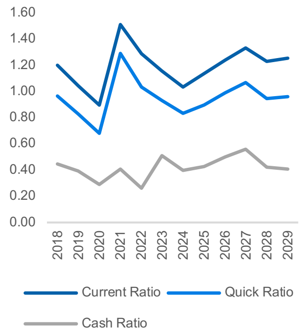

Figure 41: Liquidity Ratios
Source: Author's Analysis

Consistent Efficiency in a Capital-Intensive Industry

Novartis presents itself with stable efficiency. It is expected that these levels are maintained over time. The **Total Asset Turnover** of the company grew from 0.49 in 2024 to 0.63 in 2029E, and the **Cash Conversion Cycle** is constant, presenting with 103 days in 2024 and 104 in 2029E. This happens because the number of days of payables, days of inventory on hand and days of sales outstanding are kept constant over the forecasted period.

Robust Financial Position to Support R&D Investment

Novartis is expected to maintain a healthy capital structure over time.
The company has a **debt-to-equity ratio** of 0.71 in 2024, and it decreases to 0.55 in 2029F, signalling a conservative use of leverage. **Debt-to-assets** remain relatively stable over the forecasted period, with an average of 0.25 (Figure 42).

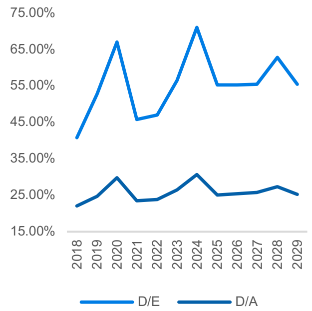

Figure 42: Debt Ratios
Source: Author's Analysis

Net Debt/EBITDA is a ratio that measures the company's ability to pay off its debt using its earnings. In 2024, this ratio was 1.04, and it decreases to 0.67 in 2029E (Figure 43).

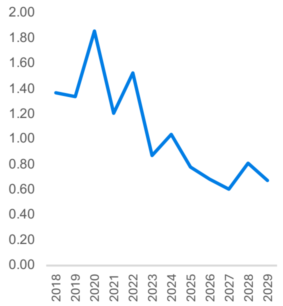

Figure 43: Net Debt/EBITDA
Source: Author's Analysis

8. Investment Risks

As a global healthcare company, Novartis is exposed to a variety of risks that could significantly impact its financial performance, operations and reputation. A thorough understanding of these is essential to evaluate the company. Some of the risks factors identified are categorized into market risks, political, legal, and regulatory risks, operational risks, and environmental risks.

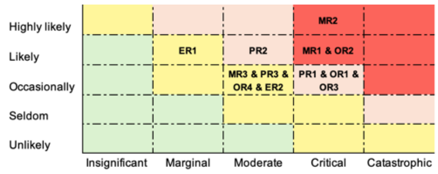

Figure 44: Risk Matrix
Source: Author's Analysis

Market Risks

Pricing Pressure and Market Access (MR1)

Pricing policies in this sector are subject to considerable scrutiny. Novartis is exposed to pricing pressures from governments, insurers, and other healthcare providers. Gaining market access depends on obtaining favourable reimbursement agreements, which are subject to regional regulatory and economic conditions. This risk can be mitigated by demonstrating the cost-effectiveness and value of the company's products.

Patent Expiration and Generic Competition (MR2)

The expiration of patents for key drugs, such as Entresto and Cosentyx, exposes Novartis to generic competition, which could lead to a decline in revenues. The company's strategy focuses on the development of a robust pipeline and launching next-generation therapies and biosimilars to mitigate this risk. This is a strategy that emphasises innovation and life cycle management in order to protect market share and revenue streams.

Foreign Exchange Volatility (MR3)

Novartis operates on a global scale, with revenues and costs spread across multiple currencies. Currency fluctuations in major currency pairs like USD/CHF and USD/EUR have the capacity to significantly impact financial results. The company uses natural hedging and financial instruments such as forward contracts and thus mitigate the currency risks.

Political, Legal, and Regulatory Risks

Regulatory Changes and Compliance (PR1)

This industry is governed by strict regulations concerning drug development and pricing. Changes in laws, pricing controls, or approval processes can significantly affect Novartis. To mitigate this risk there is a need to ensure compliance with global standards, including data privacy regulations like General Data Protection Regulation. Failing to obtain approvals could have serious effects on the revenues and the competitiveness of the company.

Litigation and Intellectual Property Challenges (PR2)

Novartis faces litigation risks, including product liability claims and disputes over IP. Competitors and generic manufacturers can undermine the exclusivity of key products. The company actively defends its patents while allocating resources to ensure regulatory compliance and monitor potential legal disputes.

Political Instability (PR3)

Geopolitical tensions and macroeconomic instability, such as the ones arising from the shifting USA political situation and the enduring effects of the Russia-Ukraine conflict, could lead to disruptions in the supply chains and market access of Novartis, as sanctions or trade restrictions could provoke delays delivering critical raw material or products. The threat of additional commercial tariffs by the USA Administration might lead to higher import duties, increased production costs and regulatory fragmentation as the USA are diverging from global organizations like the WHO. To mitigate this risk, Novartis should diversify its supply chain.

Operational Risks

Supply Chain Disruptions (OR1)

By relying on a global supply chain for raw materials and manufacturing, Novartis might be affected by disruptions. Some vulnerabilities include the reliance on suppliers for a specific product being from a single place, shortages of key inputs, logistics delays, and increasing costs. The company mitigates these risks through supplier diversification and vertical integration.

Research & Development Uncertainty (OR2)

The pharmaceutical industry is fundamentally dependent on successful R&D. high development costs linked with uncertain outcomes represent a significant risk. Novartis invests heavily in R&D and uses data-driven decision-making to optimise its innovation process.

Information Technology and Cybersecurity Risks (OR3)

As a data-intensive organisation, Novartis faces significant cybersecurity risks. A breach could expose sensitive patient and IP data, leading to damage in the company’s reputation. Novartis continuously upgrades its Information Technology systems and employs third-party audits to strengthen security to mitigate this risk.

Integration of Acquisitions (OR4)

M&A are a cornerstone in the industry’s growth strategy. However, integrating acquired companies has risks, including some operational inefficiencies or failure to achieve expected synergies. Novartis employs due diligences processes in order to maximize the value of its acquisitions.

Environmental Risks

Climate Change and Sustainability (ER1)

Environmental risks, including rising temperatures, water scarcity or extreme weather events, threaten Novartis's supply chain and manufacturing operations. The company addresses these challenges by incorporating sustainability into its operations, aligning with global Environmental, Social, and Governance (ESG) goals, and reporting progress to its stakeholders.

Regulatory Scrutiny on Sustainability Practices (ER2)

Increasing regulatory requirements for environmental practices, such as water consumption reduction and carbon footprint management, add to the company’s operational costs. Compliance with regulations is essential to avoid fines and maintain the trust of the stakeholders. Novartis invests in green technologies and sustainable practices to mitigate these risks and reports the progress of the company through ESG disclosures.

Sensitivity Analysis

As previously stated, Novartis is exposed to a multitude of risks that could potentially undermine the rationale used for the investment recommendation. Therefore, a sensitivity analysis was conducted to evaluate the possible impact that variations in different variables could have on the share price.

Weighted Average Cost of Capital vs terminal growth rate (*g*)

The WACC and the terminal growth rate are pivotal variables in valuing a company. Variations in these parameters can significantly influence valuation outcomes and investment recommendations. The variables should be carefully estimated, incorporating macroeconomic trends and company-specific risk factors in order to derive accurate conclusions.

The base case is a WACC of 6.21% and a 1.88% *g*. Each WACC decrease (increase) by 5 basis points (bps) will lead to an increase (decrease) of ~2$/share. Each terminal growth rate decrease (increase) by 5bps leads to a decrease (increase) of ~2$/share.

	Target Price	**Terminal Growth Rate**										
	USD 139.48	1.63%	1.68%	1.73%	1.78%	1.83%	**1.88%**	1.93%	1.98%	2.03%	2.08%	2.13%
WACC	5.96%	$ 140.18	$ 141.76	$ 143.38	$ 145.03	$ 146.73	$ 148.47	$ 150.25	$ 152.07	$ 153.94	$ 155.86	$ 157.83
	6.01%	$ 138.47	$ 140.02	$ 141.59	$ 143.21	$ 144.86	$ 146.56	$ 148.29	$ 150.07	$ 151.89	$ 153.76	$ 155.68
	6.06%	$ 136.84	$ 138.34	$ 139.88	$ 141.46	$ 143.07	$ 144.72	$ 146.42	$ 148.15	$ 149.93	$ 151.75	$ 153.61
	6.11%	$ 135.23	$ 136.70	$ 138.21	$ 139.75	$ 141.32	$ 142.93	$ 144.58	$ 146.27	$ 148.01	$ 149.78	$ 151.60
	6.16%	$ 133.67	$ 135.10	$ 136.57	$ 138.07	$ 139.61	$ 141.18	$ 142.80	$ 144.44	$ 146.13	$ 147.86	$ 149.64
	6.21%	$ 132.13	$ 133.54	$ 134.97	$ 136.44	$ 137.94	**$ 139.48**	$ 141.05	$ 142.66	$ 144.30	$ 145.99	$ 147.72
	6.26%	$ 130.63	$ 132.00	$ 133.41	$ 134.84	$ 136.31	$ 137.81	$ 139.34	$ 140.91	$ 142.52	$ 144.17	$ 145.85
	6.31%	$ 129.16	$ 130.51	$ 131.88	$ 133.28	$ 134.71	$ 136.18	$ 137.67	$ 139.21	$ 140.78	$ 142.38	$ 144.03
	6.36%	$ 127.73	$ 129.04	$ 130.38	$ 131.75	$ 133.15	$ 134.58	$ 136.05	$ 137.54	$ 139.07	$ 140.64	$ 142.25
	6.41%	$ 126.32	$ 127.60	$ 128.91	$ 130.25	$ 131.62	$ 133.02	$ 134.45	$ 135.91	$ 137.41	$ 138.94	$ 140.51
	6.46%	$ 124.94	$ 126.20	$ 127.48	$ 128.79	$ 130.13	$ 131.50	$ 132.89	$ 134.32	$ 135.78	$ 137.28	$ 138.81

Figure 45: Sensitivity Analysis, WACC, g
Source: Author's Analysis

Revenue growth vs terminal growth rate (*g*)

The company's ability to sustain revenue growth plays a critical role in valuation. In the case of Novartis, one of the key risks identified is the **expiration of IP**, which can significantly affect future revenue streams due to increased competition from generics and biosimilars. To reflect this operational risk in the valuation, a sensitivity analysis was conducted on **revenue growth rate** and the **terminal growth rate**.

The base case assumes a **revenue growth rate of 5.59%** over the forecast horizon. To stress-test the impact of patent cliffs, revenue growth was reduced incrementally. A decrease (increase) of 5bps in annual revenue growth leads to a reduction (increase) in the share price of ~$1/share. Simultaneously, the **terminal growth rate** was also adjusted downward, as weaker revenue trajectories during the forecast period could imply structurally lower growth potential in perpetuity. As shown in the earlier financial sensitivity, each 5bps reduction in *g* lowers the valuation by ~$2/share.

	Target Price	**Terminal Growth Rate**										
	USD 139.48	1.63%	1.68%	1.73%	1.78%	1.83%	**1.88%**	1.93%	1.98%	2.03%	2.08%	2.13%
Revenue Growth	5.34%	$ 128.05	$ 129.41	$ 130.80	$ 132.22	$ 133.68	$ 135.17	$ 136.69	$ 138.25	$ 139.85	$ 141.48	$ 143.16
	5.39%	$ 128.86	$ 130.23	$ 131.63	$ 133.06	$ 134.53	$ 136.03	$ 137.56	$ 139.13	$ 140.74	$ 142.38	$ 144.07
	5.44%	$ 129.68	$ 131.06	$ 132.47	$ 133.91	$ 135.38	$ 136.89	$ 138.43	$ 140.01	$ 141.63	$ 143.28	$ 144.98
	5.49%	$ 130.50	$ 131.88	$ 133.30	$ 134.75	$ 136.23	$ 137.75	$ 139.30	$ 140.89	$ 142.52	$ 144.19	$ 145.89
	5.54%	$ 131.31	$ 132.71	$ 134.14	$ 135.59	$ 137.09	$ 138.61	$ 140.18	$ 141.77	$ 143.41	$ 145.09	$ 146.81
	5.59%	$ 132.13	$ 133.54	$ 134.97	$ 136.44	$ 137.94	**$ 139.48**	$ 141.05	$ 142.66	$ 144.30	$ 145.99	$ 147.72
	5.64%	$ 132.95	$ 134.36	$ 135.81	$ 137.29	$ 138.80	$ 140.34	$ 141.92	$ 143.54	$ 145.20	$ 146.90	$ 148.64
	5.69%	$ 133.77	$ 135.19	$ 136.65	$ 138.13	$ 139.65	$ 141.21	$ 142.80	$ 144.43	$ 146.09	$ 147.80	$ 149.55
	5.74%	$ 134.59	$ 136.02	$ 137.48	$ 138.98	$ 140.51	$ 142.07	$ 143.67	$ 145.31	$ 146.99	$ 148.71	$ 150.47
	5.79%	$ 135.41	$ 136.85	$ 138.32	$ 139.83	$ 141.37	$ 142.94	$ 144.55	$ 146.20	$ 147.89	$ 149.62	$ 151.39
	5.84%	$ 136.24	$ 137.68	$ 139.16	$ 140.68	$ 142.22	$ 143.81	$ 145.43	$ 147.09	$ 148.78	$ 150.52	$ 152.31

Figure 46: Sensitivity Analysis, g, Revenue Growth
Source: Author's Analysis

Monte Carlo Simulation

A Monte Carlo simulation was conducted through Crystal Ball, in addition to the sensitivity analysis presented above. This is a quantitative method used to model uncertainty and assess risk by simulating a wide range of possible outcomes based on random sampling. In finance, a Monte Carlo simulation is particularly useful since it helps analysts and investors understand the probability of achieving a certain value, assess the downside risk, and make more informed decisions.

For this simulation, the assumptions were made regarding key variables used to compute the PT: WACC (6.21%) and *g* (1.88%). 100,000 trials were performed, leading to an **average PT** of **$144.66/share**, which reflects an **upside potential** of **13.22%**, and a **median PT** of **$139.41/share**, reflecting an upside potential of **12.13%.** Both values support the **HOLD** recommendation.

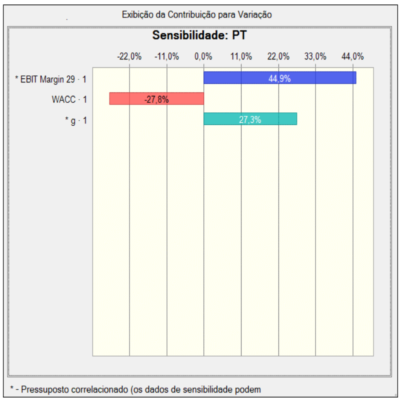

Figure 47: Sensitivity to Monte Carlo Assumptions
Source: Author's Analysis

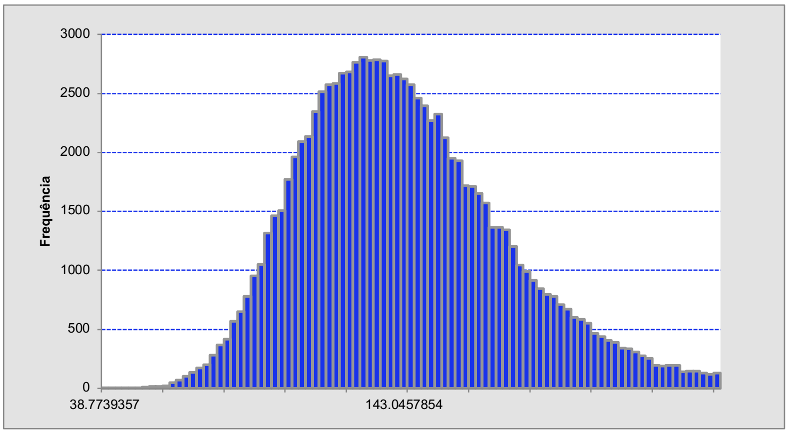

Figure 48: Monte Carlo Simulation
Source: Author's Analysis

Appendices

Appendix 1: Statement of Financial Position

BALANCE SHEET													
(USD millions unless indicated otherwise)	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E	CAGR 2025E-2029E
Assets													
Non-current assets													
Property, plant and equipment	15,696	12,069	12,263	11,545	10,764	9,514	9,458	9,486	9,532	9,629	9,825	10,031	1.12%
Right-of-use assets	0	1,677	1,676	1,561	1,431	1,410	1,415	1,513	1,619	1,730	1,873	2,008	5.82%
Financial assets	2,345	2,518	2,901	3,036	2,411	2,607	2,015	2,015	2,015	2,015	2,015	2,015	0.00%
Other LT Assets	**91,959**	**72,602**	**81,265**	**69,935**	**65,937**	**55,933**	**59,654**	**56,352**	**55,323**	**54,436**	**53,574**	**52,856**	**-1.27%**
Total Intangible Assets	**74,013**	**55,311**	**66,808**	**63,777**	**60,945**	**50,220**	**51,671**	**50,556**	**49,497**	**48,616**	**47,761**	**47,031**	-1.44%
Goodwill	35,294	26,524	29,999	29,595	29,301	23,341	24,756	24,756	24,756	24,756	24,756	24,756	0.00%
Intangible assets other than goodwilll	38,719	28,787	36,809	34,182	31,644	26,879	26,915	25,800	24,741	23,860	23,005	22,275	-2.90%
Investments in associated companies	8,352	8,644	9,632	205	143	205	119	119	147	147	133	136	2.78%
Deferred tax assets	8,699	7,909	3,933	3,743	3,739	4,309	4,359	4,354	4,350	4,345	4,340	4,336	-0.09%
Other non-current assets	895	738	892	2,210	1,110	1,199	3,505	1,323	1,330	1,327	1,340	1,353	0.45%
Total non-current assets	**110,000**	**88,866**	**98,105**	**86,077**	**80,543**	**69,464**	**72,542**	**69,367**	**68,489**	**67,810**	**67,287**	**66,910**	**-0.72%**
Current assets													
Inventories	6,956	5,982	7,131	6,666	7,175	5,913	5,723	6,673	7,150	7,702	8,229	8,787	5.66%
Trade receivables	8,727	8,301	8,217	8,005	8,066	7,107	7,423	7,827	8,257	8,713	9,169	9,704	4.39%
Marketable securities, commodities, time deposities and derivative financial instruments	2,693	334	1,905	15,922	11,413	1,035	1,998	2,101	2,216	2,339	2,468	2,605	4.39%
Cash and cash equivalents	13,271	11,112	9,658	12,407	7,517	13,393	11,459	11,997	14,288	16,236	12,479	12,122	0.21%
Other ST Assets	**3,109**	**2,934**	**2,762**	**2,718**	**2,739**	**3,033**	**3,101**	**3,429**	**3,568**	**3,704**	**3,831**	**3,962**	**2.93%**
Income tax receivables	248	254	239	278	268	426	133	300	315	333	351	370	4.31%
Other current assets	2,861	2,680	2,523	2,440	2,471	2,607	2,968	3,129	3,252	3,372	3,480	3,592	2.80%
Total current assets without disposal group	**34,756**	**28,663**	**29,673**	**45,718**	**36,910**	**30,481**	**29,704**	**32,028**	**35,479**	**38,694**	**36,175**	**37,180**	**3.03%**
Assets of disposal group held for sale	807	841	0	0	0	0	0	0	0	0	0	0	0.00%
Total current assets	**35,563**	**29,504**	**29,673**	**45,718**	**36,910**	**30,481**	**29,704**	**32,028**	**35,479**	**38,694**	**36,175**	**37,180**	**3.03%**
Total assets	**145,563**	**118,370**	**127,778**	**131,795**	**117,453**	**99,945**	**102,246**	**101,395**	**103,968**	**106,504**	**103,462**	**104,090**	**0.53%**
Equity and Liabilities													
Equity													
Share capital	944	936	913	901	890	825	793	793	793	793	793	793	0.00%
Treasury shares	-69	-80	-53	-48	-92	-41	-53	-53	-53	-53	-53	-53	0.00%
Reserves	77,739	54,618	55,738	66,802	58,544	45,883	43,306	45,072	46,822	48,531	44,359	46,419	0.59%
Equity attributable to Novartis AG shareholders	**78,614**	**55,474**	**56,598**	**67,665**	**59,342**	**46,667**	**44,046**	**45,812**	**47,562**	**49,271**	**45,099**	**47,159**	**0.58%**
Non-controlling interests	78	77	68	167	81	83	80	79	82	85	78	81	0.58%
Total equity	**78,692**	**55,551**	**56,666**	**67,822**	**59,423**	**46,750**	**44,126**	**45,891**	**47,644**	**49,356**	**45,177**	**47,241**	**0.58%**
Liabilities													
Non-current liabilities													
LT Debt	**22,470**	**22,056**	**27,978**	**24,523**	**21,782**	**20,034**	**22,934**	**19,321**	**20,094**	**20,862**	**21,611**	**19,955**	**0.65%**
Financial debts	22,470	20,353	26,259	22,902	20,244	18,436	21,366	17,788	18,584	19,374	20,145	18,510	0.80%
Lease liabilities	0	1,703	1,719	1,621	1,538	1,598	1,568	1,533	1,511	1,488	1,466	1,445	-1.18%
Other LT Liabilities	**14,794**	**12,499**	**10,075**	**9,242**	**7,592**	**6,771**	**6,494**	**8,035**	**7,627**	**7,304**	**7,246**	**7,341**	**-1.79%**
Deferred tax liabilities	7,475	5,867	3,141	3,070	2,686	2,248	2,419	2,713	2,627	2,539	2,509	2,561	-1.14%
Provisions and other non-current liabilities	7,319	6,632	6,934	6,172	4,906	4,523	4,075	5,322	5,000	4,765	4,737	4,780	-2.13%
Total non-current liabilities	**37,264**	**34,555**	**38,053**	**33,765**	**29,374**	**26,805**	**29,428**	**27,356**	**27,721**	**28,166**	**28,858**	**27,296**	**-0.04%**
Current liabilities													
Trade payables	5,556	5,424	5,403	5,553	5,146	4,926	4,572	5,331	5,712	6,153	6,574	7,020	5.66%
ST Debt	**9,678**	**7,277**	**10,071**	**6,570**	**6,182**	**6,405**	**8,467**	**6,075**	**6,317**	**6,559**	**6,795**	**6,274**	**0.65%**
Financial debts and derivative financial instruments	9,678	7,031	9,785	6,295	5,931	6,175	8,232	5,831	6,078	6,323	6,562	6,045	0.72%
Lease liabilities	0	246	286	275	251	230	235	243	239	236	232	229	-1.18%
Current income tax liabilities	2,038	2,194	2,458	2,415	2,533	1,893	1,599	2,180	2,124	2,066	1,972	1,988	-1.82%
Provisions and other current liabilities	12,284	13,338	15,127	15,670	14,795	13,166	14,054	14,562	14,449	14,205	14,087	14,272	-0.40%
Total current liabilities without disposal group	**29,556**	**28,233**	**33,059**	**30,208**	**28,656**	**26,390**	**28,692**	**28,148**	**28,603**	**28,983**	**29,428**	**29,553**	**0.98%**
Liabilities of disposal group held for sale	51	31	0	0	0	0	0	0	0	0	0	0	0.00%
Total current liabilities	**29,607**	**28,264**	**33,059**	**30,208**	**28,656**	**26,290**	**28,692**	**28,148**	**28,603**	**28,983**	**29,428**	**29,553**	**0.98%**
Total liabilities	**66,871**	**62,819**	**71,112**	**63,973**	**58,030**	**53,195**	**58,120**	**55,504**	**56,324**	**57,148**	**58,285**	**56,849**	**0.48%**
Total equity and liabilities	**145,563**	**118,370**	**127,778**	**131,795**	**117,453**	**99,945**	**102,246**	**101,395**	**103,968**	**106,504**	**103,462**	**104,090**	**0.53%**

Appendix 2: Income Statement

INCOME STATEMENT													
(USD millions unless indicated otherwise)	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E	CAGR 2025E-2029E
Net sales to third parties from continuing operations	**44,751**	**47,445**	**48,659**										
Sales to discontinued segment	82	53											
Net sales from continuing operations	**44,833**	**47,498**	**48,659**	**42,781**	**42,206**	**45,440**	**50,317**	**53,127**	**56,095**	**59,228**	**62,536**	**66,029**	**4.44%**
Other revenues	1,266	1,179	1,239	1,193	1,255	1,220	1,405	1,262	1,278	1,314	1,349	1,402	2.12%
Total Revenues	**46,099**	**48,677**	**49,898**	**43,974**	**43,461**	**46,660**	**51,722**	**54,390**	**57,373**	**60,542**	**63,886**	**67,431**	**4.39%**
Cost of goods sold*	-9,154	-9,939	-10,011	-6,306	-6,137	-7,337	-8,228	-9,568	-10,252	-11,043	-11,830	-12,598	5.66%
Gross profit from continuing operations	**36,945**	**38,738**	**39,887**	**37,668**	**37,324**	**39,323**	**43,494**	**44,822**	**47,120**	**49,499**	**52,055**	**54,833**	**4.11%**
Gross profit margin	*80.14%*	*79.58%*	*79.94%*	*85.66%*	*85.88%*	*84.28%*	*84.09%*	*82.41%*	*82.13%*	*81.76%*	*81.48%*	*81.32%*	
Selling, general and administration	-13,717	-14,369	-14,197	-12,827	-12,193	-12,517	-12,566	-14,881	-15,572	-16,186	-16,911	-17,802	3.65%
Research and development	-8,489	-9,402	-8,980	-8,641	-9,172	-11,371	-10,022	-11,150	-12,048	-12,877	-13,610	-13,951	4.59%
Other income	1,629	2,031	1,742	1,620	696	1,772	1,175	1,615	1,644	1,635	1,866	1,851	2.77%
Other expense	-2,609	-3,426	-3,190	-2,335	-3,264	-2,303	-2,938	-3,245	-3,423	-3,612	-3,811	-4,023	4.39%
EBITDA	**13,759**	**13,572**	**15,262**	**15,485**	**13,391**	**14,904**	**19,143**	**17,161**	**17,721**	**18,459**	**19,589**	**20,908**	**4.03%**
D&A	5,356	4,486	5,110	5,429	5,445	5,135	4,599	5,371	5,506	5,586	5,717	5,923	1.98%
Operating income from continuing operations	**8,403**	**9,086**	**10,152**	**10,056**	**7,946**	**9,769**	**14,544**	**11,790**	**12,215**	**12,873**	**13,872**	**14,985**	**4.91%**
Operating profit margin	*18.23%*	*18.67%*	*20.35%*	*22.87%*	*18.28%*	*20.94%*	*28.12%*	*21.68%*	*21.29%*	*21.26%*	*21.71%*	*22.22%*	
(Loss)/income from associated companies	6,438	659	673	15,337	-11	-13	-38	-21	-24	-28	-24	-25	4.00%
Interest expense	-932	-850	-869	-787	-800	-855	-1,006	-1,195	-966	-1,005	-1,043	-1,081	-1.98%
Other financial income and expense	186	45	-78	-76	42	222	140	50	76	106	119	98	14.42%
Income before taxes from continuing operations	**14,095**	**8,940**	**9,878**	**24,530**	**7,177**	**9,123**	**13,640**	**10,625**	**11,300**	**11,946**	**12,923**	**13,977**	**5.64%**
Income taxes	-1,295	-1,793	-1,807	-1,625	-1,128	-551	-1,701	-1,551	-1,650	-1,744	-1,887	-2,041	5.64%
Net income from continuing operations	**12,800**	**7,147**	**8,071**	**22,905**	**6,049**	**8,572**	**11,939**	**9,073**	**9,651**	**10,202**	**11,036**	**11,936**	**5.64%**
Net income from discontinued operations before gain on distribution of Sandoz Group AG to Novartis AG shareholders	-186	-101	0	1,113	906	422	0	0	0	0	0	0	0.00%
Gain on distribution of Sandoz Group AG to Novartis AG	0	4,691	0	0	0	5,860	0	0	0	0	0	0	0.00%
Net income from discontinued operations	**-186**	**4,590**	**0**	**1,113**	**906**	**6,282**	**0**	**0**	**0**	**0**	**0**	**0**	0.00%
Net income	**12,614**	**11,737**	**8,071**	**24,018**	**6,955**	**14,854**	**11,939**	**9,073**	**9,651**	**10,202**	**11,036**	**11,936**	**5.64%**
Net profit margin	*27.36%*	*24.11%*	*16.17%*	*54.62%*	*16.00%*	*31.83%*	*23.08%*	*16.68%*	*16.82%*	*16.85%*	*17.27%*	*17.70%*	

*The value of D&A was excluded from COGS

Appendix 3: Cash Flow Statement

CASH FLOW STATEMENT												
(USD millions unless indicated otherwise)	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E
Net Income from continuing operations	**12,800**	**7,147**	**8,071**	**22,905**	**6,049**	**8,572**	**11,939**	**9,073**	**9,651**	**10,202**	**11,036**	**11,936**
Adjustments to reconcile net income to net cash flows from operating activities from continuing operations												
Reversal of non-cash items and other adjustments	1,486	9,122	9,881	-6,430	10,631	10,369	10,232	7,923	5,753	5,903	6,493	7,241
Dividends received from associated companies and others	719	463	490	523	1	2	1	0	0	0	0	0
Interest received	241	214	47	11	252	645	489	0	0	0	0	0
Interest paid	-816	-793	-703	-643	-667	-751	-855	0	0	0	0	0
Other financial receipts	218	28	464	0	71	90	0	0	0	0	0	0
Other financial payments	-31	-33	-39	-297	-26	-17	-116	0	0	0	0	0
Income taxes paid	-1,506	-1,876	-1,833	-1,856	-1,702	-2,787	-2,258	414	-71	-76	-112	-4
Net cash flows from operating activities from continuing operations before working capital and provision changes	**13,111**	**14,272**	**16,378**	**14,213**	**14,609**	**16,123**	**19,432**	**17,410**	**15,333**	**16,029**	**17,418**	**19,173**
Payments out of provisions and other net cash movements in non-current liabilities	-638	-924	-2,437	-775	-774	-1,534	-1,107	0	0	0	0	0
Change in net current assets and other operating cash flow items	576	199	-291	-73	-796	-369	-706	-757	-648	-686	-670	-760
Net cash flows from operating activities from continuing operations	**13,049**	**13,547**	**13,650**	**13,365**	**13,039**	**14,220**	**17,619**	**16,653**	**14,684**	**15,343**	**16,748**	**18,414**
Net cash flows from operating activities from discontinued operations	1,223	78	0	1,706	1,197	238	0	0	0	0	0	0
Total net cash flows from operating activities	**14,272**	**13,625**	**13,650**	**15,071**	**14,236**	**14,458**	**17,619**	**16,653**	**14,684**	**15,343**	**16,748**	**18,414**
Purchase of property, plant and equipment	-1,254	-1,379	-1,275	-1,066	-916	-1,060	-1,366	-1,305	-1,359	-1,428	-1,538	-1,642
Proceeds from sales of property, plant and equipment	102	857	88	211	158	237	86	0	0	0	0	0
Purchase of intangible assets	-1,394	-878	-1,310	-1,490	-1,323	-1,693	-2,448	-3,197	-3,603	-3,947	-4,153	-4,469
Proceeds from sales of intangible assets	823	973	380	686	170	1,955	80	0	0	0	0	0
Purchase of financial assets	-205	-302	-230	-188	-115	-106	-193	0	0	0	0	0
Proceeds from sales of financial assets	165	1,152	723	440	133	348	957	0	0	0	0	0
Purchase of other non-current assets	-39	-60	-61	-59	-1	0	0	0	-407	-416	-469	-469
Proceeds from sales of other non-current assets	9	3	2	4	0	0	3	1,804	0	0	0	0
Divestments and acquisitions of interests in associated companies, net	12,854	-6	-7	20,669	-24	-11	-10	0	-28	-1	14	-3
Acquisitions and divestments of businesses, net	-13,683	-3,760	-9,957	-205	-840	-4,558	-3,911	0	0	0	0	0
Purchase of marketable securities, commodities and time deposits	-2,440	-228	-1,900	-16,403	-34,695	-641	-3,455	-103	-115	-122	-129	-137
Proceeds from sales of marketable securities, commodities and time deposits	472	2,561	492	2,298	39,357	11,248	2,744	0	0	0	0	0
Net cash flows from investing activities from continuing operations	**-4,590**	**-1,067**	**-13,055**	**4,897**	**1,904**	**6,719**	**-7,513**	**-2,802**	**-5,511**	**-5,913**	**-6,275**	**-6,721**
Net cash flows used in investing activities from discontinued operations	-1,001	-1,159	-127	-689	-436	-1,123	0	0	0	0	0	0
Total net cash flows from investing activities	**-5,591**	**-2,226**	**-13,182**	**4,208**	**1,468**	**5,596**	**-7,513**	**-2,802**	**-5,511**	**-5,913**	**-6,275**	**-6,721**
Dividends paid to shareholders of Novartis AG	-6,966	-6,645	-6,987	-7,368	-7,506	-7,255	-7,624	-7,308	-7,900	-8,493	-15,208	-9,876
Acquisition of treasury shares	-2,036	-5,533	-2,842	-3,057	-10,652	-8,719	-8,331	0	0	0	0	0
Proceeds from exercised options and other treasury share transactions, net	700	201	748	53	100	153	30	0	0	0	0	0
Increase in non-current financial debts	2,856	93	7,126	0	0	0	6,143	-3,578	795	790	772	-1,635
Repayments of the current portion of non-current financial debts	-366	-3,915	-2,003	-2,162	-2,575	-2,223	-2,160	0	0	0	0	0
Change in current financial debts	1,687	-1,582	2,261	-3,547	252	546	958	-2,401	247	245	239	-517
Repayments of other current financial debts	0	0	0	0	0	0	-289	0	0	0	0	0
Payments of lease liabilities	0	-273	-312	-278	-262	-258	-262	-27	-26	-26	-25	-25
Impact of change in ownership of consolidated entities	-19	-6	-2	-3	0	0	-293	0	0	0	0	0
Other financing cash flows, net	67	56	-147	72	-38	192	86	-1	3	3	-7	4
Net cash flows used in financing activities from continuing operations	**-4,077**	**-16,884**	**-2,158**	**-16,290**	**-20,681**	**-17,564**	**-11,742**	**-13,314**	**-6,882**	**-7,481**	**-14,230**	**-12,050**
Net cash flows from financing activities from discontinued operations	-167	3,257	-50	26	119	3,286	0	0	0	0	0	0
Net cash flows used in financing activities	**-4,244**	**-13,627**	**-2,208**	**-16,264**	**-20,562**	**-14,278**	**-11,742**	**-13,314**	**-6,882**	**-7,481**	**-14,230**	**-12,050**
Net change in cash and cash equivalents before effect of exchange rate changes	**4,437**	**-2,228**	**-1,740**	**3,015**	**-4,858**	**5,776**	**-1,636**	**538**	**2,291**	**1,948**	**-3,757**	**-357**
Effect of exchange rate changes on cash and cash equivalents	-26	69	286	-266	-32	100	-298	0	0	0	0	0
Net change in cash and cash equivalents	**4,441**	**-2,159**	**-1,454**	**2,749**	**-4,890**	**5,876**	**-1,934**	**538**	**2,291**	**1,948**	**-3,757**	**-357**
Cash and cash equivalents at January 1	8,860	13,271	11,112	9,658	12,407	7,517	13,393	11,459	11,997	14,288	16,236	12,479
Cash and cash equivalents at December 31	**13,271**	**11,112**	**9,658**	**12,407**	**7,517**	**13,393**	**11,459**	**11,997**	**14,288**	**16,236**	**12,479**	**12,122**

Appendix 4: Key Financial Ratios

Financial Ratios	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E
Efficiency Ratios												
Inventory Turnover (x)	1.32	1.66	1.40	0.95	0.86	1.24	1.44	1.43	1.43	1.43	1.44	1.43
Total Asset Turnover (x)	0.31	0.40	0.38	0.32	0.36	0.45	0.49	0.52	0.54	0.56	0.60	0.63
Working Capital Turnover (x)	4.55	5.49	5.02	4.82	4.31	5.76	6.03	5.93	5.92	5.90	5.90	5.88
Payables Turnover (x)	1.65	1.83	1.85	1.14	1.19	1.49	1.80	1.79	1.79	1.79	1.80	1.79
Receivables Turnover (x)	5.28	5.86	6.07	5.49	5.39	6.57	6.97	6.95	6.95	6.95	6.97	6.95
Days of Inventory on Hand (days)	277	220	260	386	427	294	254	255	255	255	255	255
Number of days of payables (days)	222	199	197	321	306	245	203	203	203	203	203	203
Days of sales outstanding (days)	69	62	60	66	68	56	52	53	53	53	53	53
Cash Conversion Cycle (days)	125	83	123	131	188	105	103	104	104	104	104	104
Liquidity Ratios												
Current Ratio (x)	1.20	1.04	0.90	1.51	1.29	1.16	1.04	1.14	1.24	1.34	1.23	1.26
Quick Ratio (x)	0.97	0.83	0.68	1.29	1.04	0.93	0.84	0.90	0.99	1.07	0.95	0.96
Cash Ratio (x)	0.45	0.39	0.29	0.41	0.26	0.51	0.40	0.43	0.50	0.56	0.42	0.41
Solvency Ratios												
Debt-to-Equity (%)	40.85%	52.80%	67.15%	45.85%	47.06%	56.55%	71.16%	55.34%	55.44%	55.56%	62.88%	55.52%
Interest Coverage (x)	9.02	10.69	11.68	12.78	9.93	11.43	14.46	9.87	12.64	12.81	13.30	13.86
Debt-to-Assets (%)	22.09%	24.78%	29.78%	23.59%	23.81%	26.45%	30.71%	25.05%	25.40%	25.75%	27.46%	25.20%
Debt-to-Capital (%)	29.00%	34.56%	40.17%	31.43%	32.00%	36.12%	41.58%	35.63%	35.66%	35.71%	38.60%	35.70%
Net Debt/EBITDA (x)	1.37	1.34	1.86	1.21	1.53	0.88	1.04	0.78	0.68	0.61	0.81	0.67
Equity Multiplier (x)	1.85	2.13	2.25	1.94	1.98	2.14	2.32	2.21	2.18	2.16	2.29	2.20
Profitability Ratios												
Gross Profit Margin (%)	80.14%	79.58%	79.94%	85.66%	85.88%	84.28%	84.09%	82.41%	82.13%	81.76%	81.48%	81.32%
Operating Profit Margin (%)	18.23%	18.67%	20.35%	22.87%	18.28%	20.94%	28.12%	21.68%	21.29%	21.26%	21.71%	22.22%
ROA (%)	8.67%	9.92%	6.32%	18.22%	5.92%	14.86%	11.68%	8.95%	9.28%	9.58%	10.67%	11.47%
ROE (%)	16.03%	21.13%	14.24%	35.41%	11.70%	31.77%	27.06%	19.77%	20.26%	20.67%	24.43%	25.27%
ROE - DuPont Analysis (%)	16.03%	21.13%	14.24%	35.41%	11.70%	31.77%	27.06%	19.77%	20.26%	20.67%	24.43%	25.27%
Net Profit Margin (%)	27.36%	24.11%	16.17%	54.62%	16.00%	31.83%	23.08%	16.68%	16.82%	16.85%	17.27%	17.70%
Asset Turnover (%)	31.67%	41.12%	39.05%	33.37%	37.00%	46.69%	50.59%	53.64%	55.18%	56.84%	61.75%	64.78%
Financial Leverage (%)	184.98%	213.08%	225.49%	194.32%	197.66%	213.79%	231.71%	220.95%	218.22%	215.79%	229.02%	220.34%
Pretax Margin (%)	30.58%	18.37%	19.80%	55.78%	16.51%	19.55%	26.37%	19.53%	19.70%	19.73%	20.23%	20.73%
ROIC (%)	6.47%	9.14%	9.15%	8.68%	7.77%	11.40%	16.45%	14.12%	14.09%	14.32%	16.10%	17.42%
SG&A/Revenues (%)	29.76%	29.52%	28.45%	29.17%	28.06%	26.83%	24.30%	27.36%	27.14%	26.74%	26.47%	26.40%
R&D/Revenues (%)	18.41%	19.32%	18.00%	19.65%	21.10%	24.37%	19.38%	20.50%	21.00%	21.27%	21.30%	20.69%
EPS ($/unit)	5.46	5.18	3.58	9.74	3.28	7.27	6.04	4.59	4.89	5.17	5.59	6.04

Appendix 5: Common-Size Statement of Financial Position

BALANCE SHEET												
(USD millions unless indicated otherwise)	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E
Assets												
Non-current assets												
Property, plant and equipment	10.78%	10.20%	9.60%	8.76%	9.16%	9.52%	9.25%	9.36%	9.17%	9.04%	9.50%	9.64%
Right-of-use assets	0.00%	1.42%	1.31%	1.18%	1.22%	1.41%	1.38%	1.49%	1.56%	1.62%	1.81%	1.93%
Financial assets	1.61%	2.13%	2.27%	2.30%	2.05%	2.61%	1.97%	1.99%	1.94%	1.89%	1.95%	1.94%
Other LT Assets	**63.17%**	**61.33%**	**63.60%**	**53.06%**	**56.14%**	**55.96%**	**58.34%**	**55.58%**	**53.21%**	**51.11%**	**51.78%**	**50.78%**
Total Intangible Assets	50.85%	46.73%	52.28%	48.39%	51.89%	50.25%	50.54%	49.86%	47.61%	45.65%	46.16%	45.18%
Goodwill	24.25%	22.41%	23.48%	22.46%	24.95%	23.35%	24.21%	24.42%	23.81%	23.24%	23.93%	23.78%
Intangible assets other than goodwilll	26.60%	24.32%	28.81%	25.94%	26.94%	26.89%	26.32%	25.45%	23.80%	22.40%	22.23%	21.40%
Investments in associated companies	5.74%	7.30%	7.54%	0.16%	0.12%	0.21%	0.12%	0.12%	0.14%	0.14%	0.13%	0.13%
Deferred tax assets	5.98%	6.68%	3.08%	2.84%	3.18%	4.31%	4.26%	4.29%	4.18%	4.08%	4.20%	4.17%
Other non-current assets	0.61%	0.62%	0.70%	1.68%	0.95%	1.20%	3.43%	1.30%	1.28%	1.25%	1.30%	1.30%
Total non-current assets	**75.57%**	**75.07%**	**76.78%**	**65.31%**	**68.57%**	**69.50%**	**70.95%**	**68.41%**	**65.88%**	**63.67%**	**65.04%**	**64.28%**
Current assets												
Inventories	4.78%	5.05%	5.58%	5.06%	6.11%	5.92%	5.60%	6.58%	6.88%	7.23%	7.95%	8.44%
Trade receivables	6.00%	7.01%	6.43%	6.07%	6.87%	7.11%	7.26%	7.72%	7.94%	8.18%	8.86%	9.32%
Marketable securities, commodities, time deposities and derivative financial instruments	1.85%	0.28%	1.49%	12.08%	9.72%	1.04%	1.95%	2.07%	2.13%	2.20%	2.39%	2.50%
Cash and cash equivalents	9.12%	9.39%	7.56%	9.41%	6.40%	13.40%	11.21%	11.83%	13.74%	15.24%	12.06%	11.65%
Other ST Assets	**2.14%**	**2.48%**	**2.16%**	**2.06%**	**2.33%**	**3.03%**	**3.03%**	**3.38%**	**3.43%**	**3.48%**	**3.70%**	**3.81%**
Income tax receivables	0.17%	0.21%	0.19%	0.21%	0.23%	0.43%	0.13%	0.30%	0.30%	0.31%	0.34%	0.36%
Other current assets	1.97%	2.26%	1.97%	1.85%	2.10%	2.61%	2.90%	3.09%	3.13%	3.17%	3.36%	3.45%
Total current assets without disposal group	**23.88%**	**24.21%**	**23.22%**	**34.69%**	**31.43%**	**30.50%**	**29.05%**	**31.59%**	**34.12%**	**36.33%**	**34.96%**	**35.72%**
Assets of disposal group held for sale	0.55%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total current assets	**24.43%**	**24.93%**	**23.22%**	**34.69%**	**31.43%**	**30.50%**	**29.05%**	**31.59%**	**34.12%**	**36.33%**	**34.96%**	**35.72%**
Total assets	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Equity and Liabilities												
Equity												
Share capital	0.65%	0.79%	0.71%	0.68%	0.76%	0.83%	0.78%	0.78%	0.76%	0.74%	0.77%	0.76%
Treasury shares	-0.05%	-0.07%	-0.04%	-0.04%	-0.08%	-0.04%	-0.05%	-0.05%	-0.05%	-0.05%	-0.05%	-0.05%
Reserves	53.41%	46.14%	43.62%	50.69%	49.84%	45.91%	42.35%	44.45%	45.03%	45.57%	42.87%	44.60%
Equity attributable to Novartis AG shareholders	**54.01%**	**46.86%**	**44.29%**	**51.34%**	**50.52%**	**46.69%**	**43.08%**	**45.18%**	**45.75%**	**46.26%**	**43.59%**	**45.31%**
Non-controlling interests	0.05%	0.07%	0.05%	0.13%	0.07%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%
Total equity	**54.06%**	**46.93%**	**44.35%**	**51.46%**	**50.59%**	**46.78%**	**43.16%**	**45.26%**	**45.83%**	**46.34%**	**43.67%**	**45.38%**
Liabilities												
Non-current liabilities												
LT Debt	**15.44%**	**18.63%**	**21.90%**	**18.61%**	**18.55%**	**20.05%**	**22.43%**	**19.06%**	**19.33%**	**19.59%**	**20.89%**	**19.17%**
Financial debts	15.44%	17.19%	20.55%	17.38%	17.24%	18.45%	20.90%	17.54%	17.87%	18.19%	19.47%	17.78%
Lease liabilities	0.00%	1.44%	1.35%	1.23%	1.31%	1.60%	1.53%	1.51%	1.45%	1.40%	1.42%	1.39%
Other LT Liabilities	**10.16%**	**10.56%**	**7.88%**	**7.01%**	**6.46%**	**6.77%**	**6.35%**	**7.92%**	**7.34%**	**6.86%**	**7.00%**	**7.05%**
Deferred tax liabilities	5.14%	4.96%	2.46%	2.33%	2.29%	2.25%	2.37%	2.68%	2.53%	2.38%	2.43%	2.46%
Provisions and other non-current liabilities	5.03%	5.60%	5.43%	4.68%	4.18%	4.53%	3.99%	5.25%	4.81%	4.47%	4.58%	4.59%
Total non-current liabilities	**25.60%**	**29.19%**	**29.78%**	**25.62%**	**25.01%**	**26.82%**	**28.78%**	**26.98%**	**26.66%**	**26.45%**	**27.89%**	**26.22%**
Current liabilities	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Trade payables	3.82%	4.58%	4.23%	4.21%	4.38%	4.93%	4.47%	5.26%	5.49%	5.78%	6.35%	6.74%
ST Debt	**6.65%**	**6.15%**	**7.88%**	**4.99%**	**5.26%**	**6.41%**	**8.28%**	**5.99%**	**6.08%**	**6.16%**	**6.57%**	**6.03%**
Financial debts and derivative financial instruments	6.65%	5.94%	7.66%	4.78%	5.05%	6.18%	8.05%	5.75%	5.85%	5.94%	6.34%	5.81%
Lease liabilities	0.00%	0.21%	0.22%	0.21%	0.21%	0.23%	0.23%	0.24%	0.23%	0.22%	0.22%	0.22%
Current income tax liabilities	1.40%	1.85%	1.92%	1.83%	2.16%	1.89%	1.56%	2.15%	2.04%	1.94%	1.91%	1.91%
Provisions and other current liabilities	8.44%	11.27%	11.84%	11.89%	12.60%	13.17%	13.75%	14.36%	13.90%	13.34%	13.62%	13.71%
Total current liabilities without disposal group	**20.30%**	**23.85%**	**25.87%**	**22.92%**	**24.40%**	**26.40%**	**28.06%**	**27.76%**	**27.51%**	**27.21%**	**28.44%**	**28.39%**
Liabilities of disposal group held for sale	0.04%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total current liabilities	**20.34%**	**23.88%**	**25.87%**	**22.92%**	**24.40%**	**26.30%**	**28.06%**	**27.76%**	**27.51%**	**27.21%**	**28.44%**	**28.39%**
Total liabilities	**45.94%**	**53.07%**	**55.65%**	**48.54%**	**49.41%**	**53.22%**	**56.84%**	**54.74%**	**54.17%**	**53.66%**	**56.33%**	**54.62%**
Total equity and liabilities	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Appendix 6: Common-Size Income Statement

INCOME STATEMENT												
(USD millions unless indicated otherwise)	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E
Net sales to third parties from continuing operations	**97.08%**	**97.47%**	**97.52%**									
Sales to discontinued segment	0.18%	0.11%	0.00%									
Net sales from continuing operations	**97.25%**	**97.58%**	**97.52%**	**97.29%**	**97.11%**	**97.39%**	**97.28%**	**97.68%**	**97.77%**	**97.83%**	**97.89%**	**97.92%**
Other revenues	2.75%	2.42%	2.48%	2.71%	2.89%	2.61%	2.72%	2.32%	2.23%	2.17%	2.11%	2.08%
Total Revenues	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Cost of goods sold	-19.86%	-20.42%	-20.06%	-14.34%	-14.12%	-15.72%	-15.91%	-17.59%	-17.87%	-18.24%	-18.52%	-18.68%
Gross profit from continuing operations	**80.14%**	**79.58%**	**79.94%**	**85.66%**	**85.88%**	**84.28%**	**84.09%**	**82.41%**	**82.13%**	**81.76%**	**81.48%**	**81.32%**
Selling, general and administration	-29.76%	-29.52%	-28.45%	-29.17%	-28.06%	-26.83%	-24.30%	-27.36%	-27.14%	-26.74%	-26.47%	-26.40%
Research and development	-18.41%	-19.32%	-18.00%	-19.65%	-21.10%	-24.37%	-19.38%	-20.50%	-21.00%	-21.27%	-21.30%	-20.69%
Other income	3.53%	4.17%	3.49%	3.68%	1.60%	3.80%	2.27%	2.97%	2.86%	2.70%	2.92%	2.75%
Other expense	-5.66%	-7.04%	-6.39%	-5.31%	-7.51%	-4.94%	-5.68%	-5.97%	-5.97%	-5.97%	-5.97%	-5.97%
EBITDA	**29.85%**	**27.88%**	**30.59%**	**35.21%**	**30.81%**	**31.94%**	**37.01%**	**31.55%**	**30.89%**	**30.49%**	**30.66%**	**31.01%**
D&A	11.62%	9.22%	10.24%	12.35%	12.53%	11.01%	8.89%	9.88%	9.60%	9.23%	8.95%	8.78%
Operating income from continuing operations	**18.23%**	**18.67%**	**20.35%**	**22.87%**	**18.28%**	**20.94%**	**28.12%**	**21.68%**	**21.29%**	**21.26%**	**21.71%**	**22.22%**
(Loss)/income from associated companies	13.97%	1.35%	1.35%	34.88%	-0.03%	-0.03%	-0.07%	-0.04%	-0.04%	-0.05%	-0.04%	-0.04%
Interest expense	-2.02%	-1.75%	-1.74%	-1.79%	-1.84%	-1.83%	-1.95%	-2.20%	-1.68%	-1.66%	-1.63%	-1.60%
Other financial income and expense	0.40%	0.09%	-0.16%	-0.17%	0.10%	0.48%	0.27%	0.09%	0.13%	0.17%	0.19%	0.15%
Income before taxes from continuing operations	**30.58%**	**18.37%**	**19.80%**	**55.78%**	**16.51%**	**19.55%**	**26.37%**	**19.53%**	**19.70%**	**19.73%**	**20.23%**	**20.73%**
Income taxes	-2.81%	-3.68%	-3.62%	-3.70%	-2.60%	-1.18%	-3.29%	-2.85%	-2.88%	-2.88%	-2.95%	-3.03%
Net income from continuing operations	**27.77%**	**14.68%**	**16.17%**	**52.09%**	**13.92%**	**18.37%**	**23.08%**	**16.68%**	**16.82%**	**16.85%**	**17.27%**	**17.70%**
Net income from discontinued operations before gain on distribution of Sandoz Group AG to Novartis AG shareholders	-0.40%	-0.21%	0.00%	2.53%	2.08%	0.90%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gain on distribution of Sandoz Group AG to Novartis AG shareholders	0.00%	9.64%	0.00%	0.00%	0.00%	12.56%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net income from discontinued operations	**-0.40%**	**9.43%**	**0.00%**	**2.53%**	**2.08%**	**13.46%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**
Net income	**27.36%**	**24.11%**	**16.17%**	**54.62%**	**16.00%**	**31.83%**	**23.08%**	**16.68%**	**16.82%**	**16.85%**	**17.27%**	**17.70%**

Appendix 7: Assumption Statement of Financial Position

ASSUMPTIONS BALANCE SHEET	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E	Assumption
Working Capital													
Inventory	6,956	5,982	7,131	6,666	7,175	5,913	5,723	6,673	7,150	7,702	8,229	8,787	Assumed inventory days equal to 2024. COGS
Inventory Days	277	220	261	386	427	294	255	**255**	**255**	**255**	**255**	**255**	
Trade Receivables	8,727	8,301	8,217	8,005	8,066	7,107	7,423	7,827	8,257	8,713	9,169	9,704	Assumed receivable days equal to 2024. Revenues
Trade Receivables Days	69	62	60	66	68	56	53	**53**	**53**	**53**	**53**	**53**	
Trade Payables	5,556	5,424	5,403	5,553	5,146	4,926	4,572	5,331	5,712	6,153	6,574	7,020	Assumed payable days equal to 2024. COGS
Trade Payables Days	222	199	198	321	306	245	203	**203**	**203**	**203**	**203**	**203**	
Non-current Assets													
PP&E	15,696	12,069	12,263	11,545	10,764	9,514	9,458	9,486	9,532	9,629	9,825	10,031	PP&Et = PP&Et-1+CAPEX-D&A CAPEX and D&A were computed as the average % of Revenues of the last 5Y
CAPEX PP&E	-1,254	-1,379	-1,275	-1,066	-916	-1,060	-1,366	-1,305	-1,359	-1,428	-1,538	-1,642	
% REV	*-2.7%*	*-2.8%*	*-2.6%*	*-2.4%*	*-2.1%*	*-2.3%*	*-2.6%*	***-2.4%***	***-2.4%***	***-2.4%***	***-2.4%***	***-2.4%***	
Depreciation	-1,717	-1,345	-1,318	-1,208	-1,163	-916	-885	-1,277	-1,313	-1,330	-1,343	-1,436	
% REV	*-3.7%*	*-2.8%*	*-2.6%*	*-2.7%*	*-2.7%*	*-2.0%*	*-1.7%*	***-2.3%***	***-2.3%***	***-2.2%***	***-2.1%***	***-2.1%***	
Right-of-use assets	*0*	*1,677*	*1,676*	*1,561*	*1,431*	*1,410*	*1,415*	*1,513*	*1,619*	*1,730*	*1,873*	*2,008*	RoUt = RoUt-1+Additions-D&A Additions and D&A were computed as the average % of Revenues of the last 5Y
Additions	0	-537	-346	-321	-247	-421	-304	-379	-400	-418	-457	-457	
% REV		*-1.1%*	*-0.7%*	*-0.7%*	*-0.6%*	*-0.9%*	*-0.6%*	***-0.7%***	***-0.7%***	***-0.7%***	***-0.7%***	***-0.7%***	
Depreciation	0	-305	-330	-318	-300	-259	-257	-280	-295	-307	-313	-322	
% REV		*-0.6%*	*-0.7%*	*-0.7%*	*-0.7%*	*-0.6%*	*-0.5%*	***-0.5%***	***-0.5%***	***-0.5%***	***-0.5%***	***-0.5%***	
Financial assets	2,345	2,518	2,901	3,036	2,411	2,607	2,015	2,015	2,015	2,015	2,015	2,015	Kept constant
Goodwill	35,294	26,524	29,999	29,595	29,301	23,341	24,756	24,756	24,756	24,756	24,756	24,756	Kept constant
Other intangible assets	38,719	28,787	36,809	34,182	31,644	26,879	26,915	25,800	24,741	23,860	23,005	22,275	IAt = IAt-1 + Additions - D&A Additions and D&A were computed as the average % of Revenues of the last 5Y
Additions	1,592	767	1,425	1,736	2,093	1,576	2,143	3,197	3,603	3,947	4,153	4,469	
% REV	*3.5%*	*1.6%*	*2.9%*	*3.9%*	*4.8%*	*3.4%*	*4.1%*	***5.9%***	***6.3%***	***6.5%***	***6.5%***	***6.6%***	
Amortization	-3,639	-2,836	-3,462	-3,903	-3,760	-3,960	-3,457	-4,312	-4,662	-4,828	-5,008	-5,199	
% REV	*-7.9%*	*-5.8%*	*-6.9%*	*-8.9%*	*-8.7%*	*-8.5%*	*-6.7%*	***-7.9%***	***-8.1%***	***-8.0%***	***-7.8%***	***-7.7%***	
Investment in associated companies	8,352	8,644	9,632	205	143	205	119	119	147	147	133	136	Moving average of the last 5Y
Deferred tax assets	8,699	7,909	3,933	3,743	3,739	4,309	4,359	4,354	4,350	4,345	4,340	4,336	Median % growth of last 5Y
Other non-current assets	895	738	892	2,210	1,110	1,199	3,505	1,323	1,330	1,327	1,340	1,353	Related to deferred compensation plans and prepaid post-emploment benefits. Computed based on the number of employees and cost per employee
Current Assets													
ST Investments	2,693	334	1,905	15,922	11,413	1,035	1,998	2,101	2,216	2,339	2,468	2,605	Median % Revenues of the last 5Y
Income tax receivables	248	254	239	278	268	426	133	300	315	333	351	370	Average % Revenues of the last 5Y
Other current assets	2,861	2,680	2,523	2,440	2,471	2,607	2,968	3,129	3,252	3,372	3,480	3,592	Computed based on the different components, as % Revenues, % Operating Costs, % YoY
Non-current Liabilities													
LT Debt	22,470	22,056	27,978	24,523	21,782	20,034	22,934	20,826	20,315	20,612	21,234	21,783	
Financial Debt	22,470	20,353	26,259	22,902	20,244	18,436	21,366	19,293	18,804	19,124	19,768	20,338	Adjusted to keep D/E
Lease Liabilties	0	1,703	1,719	1,621	1,538	1,598	1,568	1,533	1,511	1,488	1,466	1,445	Average % growth of last 5Y - Current portion
% YoY			*0.9%*	*-5.7%*	*-5.1%*	*3.9%*	*-1.9%*	***-2.2%***	***-1.5%***	***-1.5%***	***-1.5%***	***-1.5%***	
Deferred tax liabilities	7,475	5,867	3,141	3,070	2,686	2,248	2,419	2,713	2,627	2,539	2,509	2,561	Moving average of the last 5Y
Provisions and other non-current liabilities	7,319	6,632	6,934	6,172	4,906	4,523	4,075	5,322	5,000	4,765	4,737	4,780	Moving average of the last 5Y
Current Liabilities													
ST Debt	9,678	7,277	10,071	6,570	6,182	6,405	8,467	6,548	6,387	6,480	6,676	6,848	
Financial Debt	9,678	7,031	9,785	6,295	5,931	6,175	8,232	6,305	6,147	6,244	6,443	6,619	Adjusted to keep D/E
Lease Liabilties	0	246	286	275	251	230	235	243	239	236	232	229	Average % of Total Lease Liabilities
Current income tax liabilities	2,038	2,194	2,458	2,415	2,533	1,893	1,599	2,180	2,124	2,066	1,972	1,988	Moving average of the last 5Y
Provisions and other current liabilities	12,284	13,338	15,127	15,670	14,795	13,166	14,054	14,562	14,449	14,205	14,087	14,272	Moving average of the last 5Y

Appendix 8: Assumptions Income Statement

ASSUMPTIONS INCOME STATEMENT	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E	Assumption
Revenues	44,833	47,498	48,659	42,781	42,206	45,440	50,317	53,127	56,095	59,228	62,536	66,029	Revenues correspond to the average growth % of the Innovative Medicines segment in the last 5Y
YoY (%)		*5.9%*	*2.4%*	*-12.1%*	*-1.3%*	*7.7%*	*10.7%*	***5.6%***	***5.6%***	***5.6%***	***5.6%***	***5.6%***	
Other Revenues	1,266	1,179	1,239	1,193	1,255	1,220	1,405	1,262	1,278	1,314	1,349	1,402	Related to profit-sharing income, royalty income, milestone income and others. Assumed to be the moving average of the last 5Y
YoY (%)		*-6.9%*	*5.1%*	*-3.7%*	*5.2%*	*-2.8%*	*15.2%*	***-10.1%***	***1.2%***	***2.9%***	***2.7%***	***3.9%***	
Operating Expenses													
COGS	-9,154	-9,939	-10,011	-6,306	-6,137	-7,337	-8,228	-9,568	-10,252	-11,043	-11,830	-12,598	Average % of Revenues of the last 5Y - D&A values
% REV	*-19.9%*	*-20.4%*	*-20.1%*	*-14.3%*	*-14.1%*	*-15.7%*	*-15.9%*	***-17.6%***	***-17.9%***	***-18.2%***	***-18.5%***	***-18.7%***	
SG&A	-13,717	-14,369	-14,197	-12,827	-12,193	-12,517	-12,566	-14,881	-15,572	-16,186	-16,911	-17,802	Moving Average % of Revenues of the last 5Y
% REV	*-29.8%*	*-29.5%*	*-28.5%*	*-29.2%*	*-28.1%*	*-26.8%*	*-24.3%*	***-27.4%***	***-27.1%***	***-26.7%***	***-26.5%***	***-26.4%***	
R&D	-8,489	-9,402	-8,980	-8,641	-9,172	-11,371	-10,022	-11,150	-12,048	-12,877	-13,610	-13,951	Moving Average % of Revenues of the last 5Y
% REV	*-18.4%*	*-19.3%*	*-18.0%*	*-19.7%*	*-21.1%*	*-24.4%*	*-19.4%*	***-20.5%***	***-21.0%***	***-21.3%***	***-21.3%***	***-20.7%***	
Other income	1,629	2,031	1,742	1,620	696	1,772	1,175	1,615	1,644	1,635	1,866	1,851	Moving Average % of Revenues of the last 5Y
% REV	*3.5%*	*4.2%*	*3.5%*	*3.7%*	*1.6%*	*3.8%*	*2.3%*	***3.0%***	***2.9%***	***2.7%***	***2.9%***	***2.7%***	
Other expenses	-2,609	-3,426	-3,190	-2,335	-3,264	-2,303	-2,938	-3,245	-3,423	-3,612	-3,811	-4,023	Median % of Revenues of the last 5Y
% REV	*-5.7%*	*-7.0%*	*-6.4%*	*-5.3%*	*-7.5%*	*-4.9%*	*-5.7%*	***-6.0%***	***-6.0%***	***-6.0%***	***-6.0%***	***-6.0%***	
D&A													
D&A	**5,356**	**4,486**	**5,110**	**5,429**	**5,445**	**5,135**	**4,599**	**5,371**	**5,506**	**5,586**	**5,717**	**5,923**	Moving average of % of Revenues of the last 5Y
PP&E	1,717	1,345	1,318	1,208	1,163	916	885	1,175	1,160	1,156	1,158	1,229	
Right-of-use assets	0	305	330	318	300	259	257	227	230	236	241	246	
Intangible assets	3,639	2,836	3,462	3,903	3,982	3,960	3,457	3,969	4,117	4,194	4,319	4,449	
Other Items													
Loss from associated companies	6,438	659	673	15,337	-11	-13	-38	-21	-24	-28	-24	-25	Moving average of the last 5Y
Other financial income and expense	186	45	-78	-76	42	222	140	50	76	106	119	98	Moving average of the last 5Y
Non-Controlling Interest	3	5	-1	-3	0	4	-2	1	1	1	1	1	Average % of Net Income
% NI	*0.02%*	*0.04%*	*-0.01%*	*-0.01%*	*0.00%*	*0.03%*	*-0.02%*	***0.01%***	***0.01%***	***0.01%***	***0.01%***	***0.01%***	
Corporate Tax Rate													
Corporate Tax Rate	9.20%	20.10%	18.30%	6.60%	15.70%	6.00%	12.50%	14.60%	14.60%	14.60%	14.60%	14.60%	Expected corporate rate in Switzerland for 2025 and kept constant for the forecasted period

Appendix 9: SARD Model

Company	Proxies					Proxies Rank							
Company	**ROIC**	**Net Debt/EBITDA**	**Revenue Growth**	**R&D/Revenue**	**Market Cap**	**Profitability**	**Risk**	**Growth**	**Op. Characteristics**	**Size**	**SARD**	**SARD Rank**	**Peer?**
NOVARTIS AG	**18.91%**	**0.80**	**10.85%**	**19.38%**	**233,926.57**	**7**	**15**	**5**	**11**	**6**	**0**		
SANOFI	8.15%	0.93	6.41%	16.70%	135,230.34	13	14	10	15	11	19	14	NO
ASTRAZENECA PLC	14.49%	1.28	18.03%	25.12%	223,926.22	9	12	4	3	7	9	9	NO
MERCK & CO. INC.	4.76%	2.66	6.74%	27.95%	217,289.88	17	3	9	1	8	6	6	NO
ABBVIE INC	24.33%	1.79	3.71%	22.71%	335,579.95	6	8	13	7	4	6	6	NO
BRISTOL-MYERS SQUIBB CO	**11.69%**	**1.52**	**7.32%**	**23.10%**	**112,685.50**	**10**	**9**	**7**	**6**	**13**	**1**	**1**	YES
NOVO NORDISK A/S-B	**59.35%**	**0.52**	**25.03%**	**16.55%**	**371,634.64**	**1**	**17**	**2**	**16**	**3**	**5**	**4**	YES
ASTELLAS PHARMA INC	6.62%	1.86	5.60%	18.35%	17,235.45	16	7	11	12	18	20	15	NO
ELI LILLY & CO	28.53%	1.88	32.00%	24.40%	818,988.89	3	6	1	5	1	28	16	NO
GSK PLC	27.14%	1.18	3.46%	20.40%	74,301.49	4	13	14	9	14	10	10	NO
ROCHE HOLDING AG-GENUSSCHEIN	**31.66%**	**0.78**	**3.03%**	**25.30%**	**258,458.09**	**2**	**16**	**15**	**2**	**5**	**4**	**3**	YES
PFIZER INC	**3.87%**	**5.28**	**8.77%**	**17.01%**	**145,273.29**	**18**	**1**	**6**	**14**	**10**	**5**	**4**	YES
JOHNSON & JOHNSON	**24.43%**	**0.20**	**4.30%**	**19.40%**	**372,555.58**	**5**	**18**	**12**	**10**	**2**	**3**	**2**	YES
AMGEN INC	10.74%	3.95	18.57%	17.84%	156,677.35	11	2	3	13	9	6	6	NO
GILEAD SCIENCES INC	16.67%	1.41	-0.60%	21.09%	118,569.73	8	11	16	8	12	11	12	NO
MERCK KGAA	8.11%	1.48	-5.57%	11.65%	60,004.70	14	10	18	17	15	30	17	NO
SANDOZ GROUP AG	7.09%	1.97	7.23%	9.17%	21,547.28	15	5	8	18	16	18	13	NO
BIOGEN INC	9.25%	2.48	-3.32%	25.03%	20,438.59	12	4	17	4	17	10	10	NO

Appendix 10: WACC Assumptions

Company	Gross Margin	Operating Margin	Cash Holdings	FC	VC	Beta Raw	D/E	Tax
Novartis AG	**75.20%**	**28.12%**	**13.06%**	**47.08%**	**24.80%**	**0.85**	**70.84%**	**15.72%**
Bristol-Myers	71.08%	12.19%	11.73%	58.89%	28.92%	0.45	140.63%	19.90%
Novo Nordisk	84.67%	44.19%	5.65%	40.48%	15.33%	1.00	71.64%	20.60%
Roche Holding	73.90%	21.50%	17.01%	52.40%	26.10%	0.90	100.53%	22.10%
Pfizer Inc	71.94%	23.48%	9.60%	48.47%	28.06%	0.54	84.04%	13.00%
Johnson & Johnson	69.07%	24.94%	13.62%	44.13%	30.93%	0.48	44.25%	15.71%
Average	74.13%	25.26%	11.52%	48.87%	25.87%	0.674	88.22%	18.26%
Median	71.94%	23.48%	11.73%	48.47%	28.06%	0.537	84.04%	19.90%

Beta	
Beta Unlevered Peers	0.39
Beta Unlevered Cash Adjusted	0.44
Beta Unlevered Peers Adjusted	0.15
Beta Levered Damodaran	1.01
Beta Unlevered Damodaran	0.92
Beta Pure Play Levered	0.71
Beta Pure Play Unlevered	0.44
Beta Levered Novartis	**0.86**
Beta Unlevered Novartis	**0.68**

WACC	
RFR	2.65%
Beta Levered	0.86
MRP	4.33%
CRP	0.36%
Re	6.68%
Rd	3.20%
Tc	14.60%
WACC	**6.21%**
Unlevered Cost of Equity	**5.85%**

CRP DAMODARAN		% Rev	0.36%
USA	0.53%	42%	
Switzerland	0.94%	3%	
China	0.94%	8%	
Germany	0.00%	7%	
France	0.80%	4%	
EU Average	1.34%	36%	

Appendix 11: Stable Growth Model

g = RR*ROIC

	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E
CAPEX	2,648.00	2,257.00	2,585.00	2,556.00	2,239.00	2,753.00	3,814.00	4,502.33	4,961.67	5,374.47	5,691.12	6,111.22
D&A	5,356.00	4,486.00	5,110.00	5,429.00	5,445.00	5,135.00	4,599.00	5,371.01	5,506.47	5,586.33	5,717.35	5,923.20
ΔNWC		-1,268.00	1,086.00	-827.00	977.00	-2,001.00	480.00	595.43	525.16	567.08	561.93	647.58
EBIT*(1-t)	7,176.16	7,759.44	8,669.81	8,587.82	6,785.88	8,342.73	12,420.58	10,068.80	10,431.62	10,993.41	11,846.36	12,796.82
RR		**-45.07%**	**-16.60%**	**-43.08%**	**-32.85%**	**-52.54%**	**-2.46%**	**-2.71%**	**-0.19%**	**3.23%**	**4.52%**	**6.53%**
Invested Capital	159,885.00	133,902.00	145,363.00	149,880.00	134,781.00	115,004.00	117,899.00	118,136.78	120,541.35	122,775.42	119,917.49	120,745.20
ROIC	4.49%	5.79%	5.96%	5.73%	5.03%	7.25%	10.53%	8.52%	8.65%	8.95%	9.88%	10.60%
g		**-2.61%**	**-0.99%**	**-2.47%**	**-1.65%**	**-3.81%**	**-0.26%**	**-0.23%**	**-0.02%**	**0.29%**	**0.45%**	**0.69%**
								0.24%				

Appendix 12: PRAT Model

PRAT Model	2018	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E	2028E	2029E	
Net Income	12,614.00	11,737.00	8,071.00	24,018.00	6,955.00	14,854.00	11,939.00	9,073.49	9,650.55	10,202.13	11,036.20	11,936.03	
Dividends	6,586.35	6,681.75	6,771.00	7,647.70	6,782.72	6,745.20	6,912.85	7,307.87	7,900.40	8,492.93	15,208.27	9,875.50	
Equity	78,692.00	55,551.00	56,666.00	67,822.00	59,423.00	46,750.00	44,126.00	45,890.69	47,643.86	49,356.01	45,176.73	47,240.82	
NI/Sales	27.36%	24.11%	16.17%	54.62%	16.00%	31.83%	23.08%	16.68%	16.82%	16.85%	17.27%	17.70%	
Sales/Assets	31.67%	41.12%	39.05%	33.37%	37.00%	46.69%	50.59%	53.64%	55.18%	56.84%	61.75%	64.78%	
Assets/Equity	1.85	2.13	2.25	1.94	1.98	2.14	2.32	2.21	2.18	2.16	2.29	2.20	
ROE	16.03%	21.13%	14.24%	35.41%	11.70%	31.77%	27.06%	19.77%	20.26%	20.67%	24.43%	25.27%	
Retained Earnings	47.79%	43.07%	16.11%	68.16%	2.48%	54.59%	42.10%	19.46%	18.14%	16.75%	-37.80%	17.26%	
(NI-D)/NI*ROE	**7.66%**	**9.10%**	**2.29%**	**24.14%**	**0.29%**	**17.35%**	**11.39%**	**3.85%**	**3.67%**	**3.46%**	**-9.23%**	**4.36%**	1.22%

Appendix 13: Fisher Formula

Fisher Formula	US	Other Countries		Inflation	GDP Growth
% Revenues	42%	58%	US	1.90%	1.90%
Average inflation rate (r)	1.90%		Switzerland	1.00%	1.40%
Average GDP growth	1.90%		China	1.70%	4.50%
Average revenues growth	5.59%		Germany	2.00%	1.30%
GDP Growth*Revenues	0.80%	1.23%	France	1.60%	1.30%
Inflation Rate*Revenues	0.80%	0.91%		**1.58%**	**2.13%**
g*	**1.88%**				

Appendix 14: DCF Method

DCF Approach	2026E	2027E	2028E	2029E
EBIT(1-Tc)		10,993.41	11,846.36	12,796.82
+ D&A		6,465.10	6,664.44	6,956.92
- CAPEX		5,374.47	5,691.12	6,111.22
- Δ NWC		567.08	561.93	647.58
FCFF		**11,516.97**	**12,257.75**	**12,994.94**
DCF		10,843.38	10,865.85	10,845.60
TV	255,049.00			
EV	**287,603.83**			
Debt	26,411.60			
Cash	14,288.10			
Equity Value	**275,480.33**			
Shares Outstanding	1,975.10			
Price Target	**139.48**			
Current Price	116.33			
Upside/Downside Potential	**19.90%**			
Annualized Return	**12.16%**			

g	**1.88%**
WACC	**6.21%**

Appendix 15: APV Method

APV Approach	2026E	2027E	2028E	2029E	TV
FCFF		11,516.97	12,257.75	12,994.94	
Tax Shield		146.72	152.33	157.80	
Interest Expense		1,004.96	1,043.35	1,080.84	
t		14.60%	14.60%	14.60%	
PV Tax Shield		142.17	143.02	143.56	4,076.52
PV FCFF Unlevered		10,880.81	10,940.99	10,958.30	281,434.54
EV	**285,511.06**				
Debt	26,411.60				
Cash	14,288.10				
Equity Value	**273,387.56**				
Shares Outstanding	1,975.10				
Price Target	**138.42**				
Current Price	116.33				
Upside/Downside Potential	**18.99%**				
Annualized Return	**11.62%**				

g	**1.88%**
Cost of Debt	**3.20%**
Unlevered Cost of Equity	**5.85%**

Appendix 16: FTE Method

FTE Approach	2026E	2027E	2028E	2029E
FCFF		11,516.97	12,257.75	12,994.94
Interest Expense*(1-t)		858.23	891.02	923.04
Δ Debt		391.16	817.58	721.25
FCFE		**11,049.89**	**12,184.30**	**12,793.14**
DCF		10,358.12	10,706.47	10,537.69
TV	223,713.51			
Equity Value	**255,315.78**			
Shares Outstanding	1,975.10			
Price	**129.27**			
Current Price	116.33			
Upside/Downside Potential	**11.12%**			
Annualized Return	**6.90%**			

Cost of Equity	**6.68%**
g	**1.88%**

Appendix 17: DDM

	DPS	Re	PV Dividends
2027E	4.30	6.68%	4.03
2028E	7.70	6.68%	6.77
2029E	5.00	6.68%	4.12
Sum PV	14.92		
TV	137.01		
PV TV	112.85		
PV DPS + TV	**127.77**		
Current Price	116.33		
Upside/Downside Potential	**9.83%**		
Annualized Return	**6.11%**		

gL	**1.88%**
Cost of Equity	**6.68%**
gS	**6.11%**
H	**14**

Appendix 18: Relative Valuation

Peer	Market Capitalization	EV/Revenue	EV/EBIT	P/E	P/S	EV / EBITDA	P/B
NOVARTIS AG	**233,926,566,062.76**	**4.50**	**12.96**	**21.73**	**4.65**	**9.45**	**3.75**
BRISTOL-MYERS SQUIBB CO	112,685,496,007.44	3.18	15.78	16.86	2.33	6.91	3.69
NOVO NORDISK A/S-B	371,634,637,267.16	9.81	20.50	32.44	1.28	19.32	22.58
ROCHE HOLDING AG-GENUSSCHEIN	258,458,085,066.32	3.75	10.82	20.38	4.27	9.30	8.20
PFIZER INC	145,273,289,547.23	3.10	46.93	15.55	2.28	19.07	3.16
JOHNSON & JOHNSON	372,555,578,687.28	4.08	12.63	20.52	4.19	10.08	6.11
	Average	**4.78**	**21.33**	**21.15**	**2.87**	**12.94**	**8.75**
	Median	**3.75**	**15.78**	**20.38**	**2.33**	**10.08**	**6.11**

	EV/Sales	EV/EBIT
Peers Average	4.78	21.33
Denominator	59,227.96	12,873
Enterprise Value	**283,249.46**	**274,624.69**
- Debt	25,395.96	25,395.96
- Non-controlling Interest	79.07	79.07
+ Cash and Cash Equivalents	11,996.80	11,996.80
Equity Value	**269,771.23**	**261,146.46**
Shares Outstanding	1,975.10	1,975.10
Price Target	**136.59**	**132.22**

	P/E
Peers Average	21.15
Net Income	10,201.38
Shares Outstanding	1,975.10
Price Target	**109.25**

Price Target	**126.02**
Current Price	116.33
Upside/Downside Potential	**8.33%**
Annualized Return	**5.19%**

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Ana Leonor Mira da Cruz Rafael
June 2025

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Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	0%≤	>0% & ≤10%	>10% & ≤20%	>20% & ≤45%	>45%
Medium Risk	-5%≤	>-5% & ≤5%	>5% & ≤15%	>15% & ≤30%	>30%
Low Risk	-10%≤	>-10% & ≤0%	>0% & ≤10%	>10% & ≤20%	>20%