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AstraZeneca Equity Research Report –
Innovation at the Forefront, Balancing
Growth with Uncertainty

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A Project carried out on the Master in Finance Program, under the supervision of:

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This master's thesis offers a thorough examination of AstraZeneca's financial performance in addition to analyzing the company's business model and competitive positioning in the dynamic pharmaceutical industry. By examining their strategy, competitive advantageous and growth prospectives, future achievements and challenges were projected. This equity research report provides investors with an in-depth analysis of AstraZeneca in order to arrive at the fair value of its stock, making potential investments more tangible.

Keywords: Corporate Finance, Pharmaceuticals, Corporate Valuation, Equity Research

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This report is part of the AstraZeneca Equity Research Report – Well Positioned for Long-Term Sustainable Growth (annexed), developed by Noah Alexander Montoya Rodriguez and Timur Iakimov and should be read as an integral part of it.

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Introduction

The equity research report on AstraZeneca offers a thorough analysis of the company's financial performance, strategy, market positioning and growth potential in terms of valuation. The aim of this report is to assist investors in making informed investment decisions through objective and well-analysed insights. This report is structured in multiple sections, thoroughly analysing AstraZeneca in all dimensions. The first section includes a microeconomic analysis of the company, offering insights into their business model, strategy, capital structure as well as their positioning in the industry. Followed by a macroanalysis of the pharmaceutical industry, providing consolidated insights on an intensely dynamic industry, focusing on industry trends and the competitive landscape. After getting an in-depth insight of the economics, the financial performance of AstraZeneca was investigated to assess the operations viability and potential for long-term sustainable growth. This section is divided into forecasts and key value drivers and the financial analysis. In the first part, methodologies of forecasting is explained as well as covering insights into key value and cost driver of AstraZeneca. The second part offers a detailed ratio analysis as well as a financial health analysis, diving into key financial concepts such as net debt and net working capital. The aim of this section is to assess the company's long-term liquidity and profitability. This section is followed by the valuation of AstraZeneca. Here, the fair value was derived by taking detailed forecasts as well as market data into account. Multiple valuation methods were conducted to ensure a robust and conservative target price, giving investors a robust valuation analysis. Lastly, this report includes multiple scenario and sensitivity analyses, with the aim of making sure that future uncertainty in this dynamic landscape is accounted for, giving investors insights into possible risks that might lead to fluctuations in the valuation. In this individual part of the joint report, the company overview as well as a swot analysis, porter's five forces, the ESG outlook and the capital- and shareholder structure is covered as part of the microeconomic analysis. This report also includes the full financial analysis and the complete valuation section. Lastly, a monte carlo simulation was conducted and are part of this individual report. The other part of the joint report includes the analysis of the business model, business strategy as well as the therapeutical areas. Furthermore, it includes the overall macroeconomic analysis followed by the forecasting and key value drivers. Lastly, it includes a scenario- & sensitivity analysis as well as the section focusing on risks involved with an investment into AstraZeneca stock. Overall, this equity research report provides investors with a detailed analysis of AstraZeneca, ensuring a comprehensive understanding of AstraZeneca's positioning for the future.

Company Overview

Figure 1: Operating Countries Map



Source: Analyst Drawing based on AstraZeneca.com, 2024

Figure 2: Market Capitalization (\$b)

Rank	Company	Market Cap (\$b)
1	Eli Lilly	772.67
2	Novo Nordisk	495.25
3	Johnson & Johnson	360.18
4	Abbvie	312.02
5	Merck & Co	262.55
6	Roche	235.43
7	AstraZeneca	208.85
8	Novartis	203.34
9	Amgen	149.23
10	Pfizer	147.90

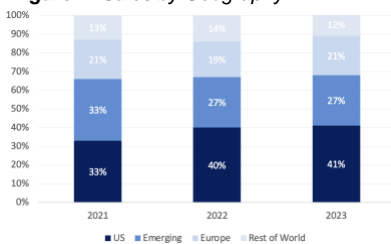
Source: Companiesmarketcap.com, 2024

Figure 3: Revenue Comparison (\$m)

Rank	Company	Revenue (\$m)	CAGR
1	Pfizer	58.50	2%
2	Johnson & Johnson	54.76	-7%
3	Abbvie	54.32	11%
4	Merck & Co	53.60	5%
5	Roche	49.90	-5%
6	Sanofi	46.16	6%
7	AstraZeneca	45.80	16%
8	Novartis	45.40	-3%
9	Bristol-Myers Scrubb	45.00	17%
10	GSK	38.40	-1%

Source: Bloomberg.com, 2024

Figure 4: Sales by Geography



Source: AstraZeneca Annual Report, 2023

Global biopharmaceutical business AstraZeneca is committed to finding, creating, and distributing cutting-edge medications. With a strong portfolio covering several therapeutic categories, such as oncology, cardiology, renal, metabolic disorders, respiratory, and immunology, AstraZeneca is one of the biggest pharmaceutical companies in the world, with operations in more than 100 countries (Figure 1). The dedication to transparency and long-term value generation is evident in AstraZeneca's corporate governance. Institutional investors like BlackRock and Vanguard have sizable shares in the company, which guarantees strong monitoring due to its diverse stakeholder base. The board's balanced composition of independent directors and industry professionals promotes accountability and strategic alignment. Managing patent expirations and pricing scrutiny, especially in the US, has required effective governance. Ambition Zero Carbon and other recent ESG-focused programs demonstrate a progressive mindset that is in line with investor priorities and global sustainability trends. With a **market capitalization of 208.85b USD** as of December 2024, AstraZeneca is considered a well-established competitor in the global pharmaceutical industry and positioned seventh when compared to its competitors (Figure 2). As of December 2024, AstraZeneca employees roughly 89,900 professionals worldwide, which implicates a 7.66% growth compared to the previous year¹. In 2023, **total revenue** amounted to **45.811 billion USD** which implies a 3.3% increase to the previous fiscal year. Product sales of 43.789 billion USD made up 96% of total revenue and increased by 1.84% over the last year. While alliance revenue only made up 3% of total revenue, it increased by roughly 89% compared to 2022. Based on total revenue in 2023, AstraZeneca is considered the seventh largest pharmaceutical company in the world. Furthermore, **total sales** have increased by an impressive **107%** over the last five years, signalling strong growth and making them one of the largest growing pharmaceutical companies over the last five years. (Figure 3) As a globally operating company, AstraZeneca generates most of its product sales in the US (41%), followed by Emerging Markets (27%), Europe (21%) and rest of world (12%). The five-year CAGR of product sales amounted to 21% in the US, compared to 15% for Europe, 12% for Rest of World and 11% for Emerging Markets, exhibiting the importance of the US market². (Figure 4) Steady growing revenue showcases the consistence over time as well as highlighting AstraZeneca's ability to scale operations, capture market share and adapt to industry trends, which will be further examined throughout this report.

¹ <https://stockanalysis.com/stocks/azn/employees/>

² <https://www.astrazeneca.com/investor-relations.html>

SWOT Analysis

- Strengths

With a **strong pipeline of drugs** in various stages of development, particularly in the fields of immunology, oncology and cardiovascular disease AstraZeneca is poised for future expansion. Additionally, a **strong focus on R&D**, investing 24% of its revenue in 2023, leads to increased innovation. Furthermore, AstraZeneca has a **diversified product portfolio**, which cater to multiple diseases, increasing its resilience to uncertain events.

- Weaknesses

A majority of revenue generation stems from its oncology business line, thus making it vulnerable to competition, regulatory changes and increasingly **dependent on oncology revenue**. In addition, AstraZeneca faces heavy **price pressures** due to regulatory nature of the pharmaceutical sector, directly affecting profit margins. Last but not least, AstraZeneca experienced a **huge setback in innovation**, only placing seventh in the pharmaceutical innovation index in 2024, down four spots compared to 2023. (Figure 5)

- Opportunities

By further **penetrating emerging markets**, AstraZeneca can increase its customer base, particularly in areas where the need for healthcare services is rising rapidly. The use of **personalized medicine** is becoming increasingly popular. AstraZeneca can make investments in this area to develop customized therapies that will improve patient outcomes and drug efficacy. (Figure 6) AstraZeneca can rapidly penetrate new markets or technologies by expanding its product range and R&D skills through **further acquisitions** or the creation of **strategic collaborations**. (Grandviewresearch.com, 2024)

- Threats

The biggest threat is the **intense competition**. AstraZeneca's market share and pricing power may be impacted by the fierce competition in the pharmaceutical sector. Moreover, **regulatory changes** like pricing restrictions, drug approval procedures, and healthcare legislation in key markets might affect profitability. Lastly **reputation risks** like the investigation of the Chinese operations president or other negative press about drug side effects, recalls, or legal troubles can harm the company's reputation and undermine client trust.

Porter's Five Forces Analysis (Figure 6)

- Threat of New Entrants = "Low"

"Diversified product portfolio and strong pipeline position AstraZeneca for long-term sustainable growth"

Figure 5: Innovation Index

Rank	Company	Change
1	Novo Nordisk	+18
2	GSK	+6
3	Pfizer	-2
4	Eli Lilly	+2
5	Bristol-Myers Scribb	-
6	Johnson & Johnson	-4
7	AstraZeneca	-4
8	Roche	-4
9	Daiichi Sankyo	+8
10	Merck & Co	+6

Source: IDEA Pharma, 2024

"Drive growth by leveraging emerging markets and expanding market size through partnerships and acquisition"

The pharmaceutical industry faces challenges from new entrants due to pricing pressures and competition, but high barriers such as stringent regulations, intellectual property protection, and capital intensity limit market entry. Established firms benefit from economies of scale and customer loyalty, **making market entry difficult** despite attractive returns.

- Threat of Substitutes = “Medium”

Substitutes in the pharmaceutical industry pose a low threat due to limited price-performance advantages of alternatives like herbal treatments or therapeutic methods. Innovations, such as substitutes for blood transfusions, show the industry’s adaptability. Continuous vigilance is needed to address potential replacements from emerging developments in other sectors.

- Bargaining Power of Supplier = “High”

The pharmaceutical industry faces **high supplier bargaining power** due to the concentration of specialized suppliers, unique resources, and high switching costs. Suppliers can influence costs and quality, while integration into their space is challenging due to patents and regulations. This interdependence often limits industry participants' leverage over suppliers.

- Bargaining Power of Buyer = “Low”

Buyers in the pharmaceutical industry generally have **low bargaining power** due to the uniqueness of patented drugs, high regulation, and capital barriers. Quality and medical efficacy often outweigh price considerations, further reducing buyer influence, except in cases involving collective buyers like governments or healthcare organizations.

- Rivalry from Existing Competition = “High”

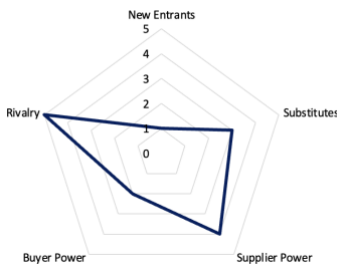
Competition in the pharmaceutical industry varies by product type. Patented drugs enjoy temporary monopolies due to intellectual property, delaying rivalry. However, generic drug manufacturing is **highly competitive**, driven by equal-sized rivals, price sensitivity, and low switching costs, which intensifies the fight for market share in slower growth periods.

Summarizing, AstraZeneca can gain competitive advantage by strengthening resources to withstand high forces or minimizing low forces' impact through innovation, diversification, cost leadership, or differentiation. (Olatoye, 2024)

Environmental, Social & Governance (ESG)

With an emphasis on three main areas, access to healthcare, environmental protection, and ethics and transparency, AstraZeneca's Environmental, Social, and Governance (ESG) strategy demonstrates the company's dedication to

Figure 6: Porter's Five Forces Analysis



Source: Analysts Estimations, 2024

sustainability

Figure 7: Progress against 100% renewable goals

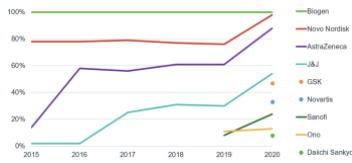
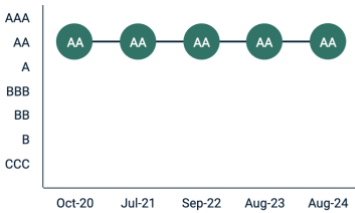


Figure 8: Corporate Governance Structure



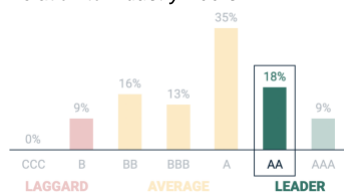
Source: Astrazeneca.com, 2024

Figure 9: AZN's ESG Rating Development



Source: MSCI ESG Ratings, 2024

Figure 10: ESG Rating Distribution in Relation to Industry Peers



Source: MSCI ESG Ratings, 2024

Figure 37: Top Ten Shareholders

Shareholder	Equities (\$m)	Ownership
BlackRock Investment Management (UK)	68,513	4.42%
Wellington Management Co. LLP	65,121	4.20%
The Vanguard Group, Inc.	56,762	3.66%
Investor AB	51,587	3.33%
Norges Bank	32,107	2.07%
BlackRock Fund Advisors (US)	30,361	1.96%
Capital Research & Management Co.	23,340	1.51%
Capital Institutional Co.	21,545	1.39%
SSgA Funds Management, Inc.	16,750	1.08%
BlackRock Advisors LLC	15,493	0.99%

Source: MarketScreener.com, 2024

Environmental

AstraZeneca aspires to reduce greenhouse gas (GHG) emissions throughout its supply chain and activities in order to reach net-zero healthcare. A key component of this objective is their "Ambition Zero Carbon" campaign, which emphasizes biodiversity investment, sustainable packaging, and renewable energy. In a number of locations, the company has already made the transition to 100% renewable electricity. (Arias, 2023)

Social

Under the banner of "Access to Healthcare," AstraZeneca is striving to improve healthcare systems around the world and provide access to life-saving medications. Among the initiatives are, expanding healthcare in neglected areas by collaborating with international organisations as well as enhancing preventative care by means of community education initiatives. Their overarching goal of creating robust health systems and enhancing outcomes for marginalised groups is in line with these initiatives. (AstraZeneca.com, 2024)

Governance

Transparency and ethics are prioritized in AstraZeneca's governance structure. This comprises ensuring moral behavior throughout its international businesses, preserving inclusive and varied leadership (31% of board members are members of ethnic minorities, and 46% of board members are women), as well as matching CEO rewards to ESG goals, such as cutting emissions and enhancing sustainability. AstraZeneca's corporate governance structure includes an audit committee, sustainability committee and a remuneration committee. With an MSCI ESG risk rating of AA AstraZeneca is classified as a leader in ESG. (Figure 9) Even if it shows a lot of sustainability work, there are still some obstacles to overcome until ESG practices are completely integrated into all aspects of business operations. (Figure 10) (MSCI.com, 2024)

Shareholder Structure

AstraZeneca currently has roughly 3.100 billion shares outstanding, which has been constant over the last three years and is assumed to stay constant over the valuation period. Shareholder equity amounted to \$39.166 billion, signalling a 5.69% increase from 2022, while non-controlling interest amounted to \$23 million. Shareholder equity is forecasted to decrease short-term, however stabilizing long-term. This is due to AstraZeneca's shareholder-friendly actions, such as buy backs and increasing dividends. While these reduce equity, we believe it can be seen as a positive factor, since AstraZeneca continues to efficiently deploy their excess

cash, as seen in strong revenue growth and stable profit margins. Currently, BlackRock Investment Management (UK) is the biggest institutional shareholder, owning roughly 4.42%. Consolidated, BlackRock as a group owns approximately 7.37% (Figure 37). (Marketscreener.com, 2024)

Capital Structure

Figure 38: Capital Structure

	EV (\$b)	Net Debt (\$b)	D/EV	E/EV
Novartis	243,597	18,139	7,45%	92,55%
GSK	129,007	28,367	21,99%	78,01%
Roche	262,803	28,522	10,85%	89,15%
Bayer	59,270	38,821	65,50%	34,50%
Sandoz	138,678	11,886	8,57%	91,43%
Novo Nordisk	482,936	-2,679	-0,58%	100,58%
AstraZeneca	208.780	22.510	10,78%	89,22%
High			65,50%	100,18%
Median			9,71%	90,29%
Low			-0,58%	34,50%

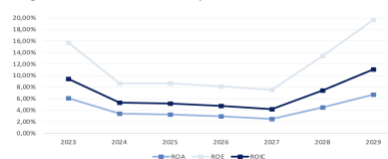
Source: Bloomberg.com, 2024

Over the last five years, AstraZeneca has kept a relative stable capital structure of 12% D/EV and 88% E/EV. In 2023, which is the final year of actuals, **D/EV** amounted to **10.78%** and **E/EV** to **89.22%**, which is assumed to stay constant over the forecasting period for valuation purposes. Looking at competitors, the median D/EV transpires to 9.71%, leading to the assumption that AstraZeneca aligns with industry standards and is not operating in a unique strategic position (Figure 38). A conservative capital structure with relatively little leverage is implied by a D/EV ratio of 10.78%, which is frequently regarded as a positive indicator in the pharmaceutical sector. This implies that the business has enough cash on hand and isn't depending as much on debt to fund operations or expansion. We believe that this type of position is beneficial because it lowers financial risk during volatile times or when new drug development expenditure is high. Regarding, the dividend policy, AstraZeneca applies a progressive policy of maintaining or increasing the dividend payout each year. In 2023, AstraZeneca paid out a \$2.90 per share, which aligns with their policy. (Bloomberg.com, 2024)

Financial Analysis

Profitability

Figure 39: Profitability Ratio



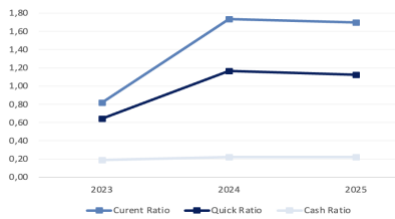
Source: Analysts Estimations, 2024

In 2023, return on equity (“ROE”) amounted to 15.69%, which implies a significant increase from 7.61% in 2022. However, **ROE** is expected to decrease to **8.64%** in 2025, suggesting shareholder equity is not being used efficiently in the short-term. This suggests moderate profitability below industry averages of 10% to 20%. The decrease can be explained by increased expenditures into R&D and PP&E, aligned with the company’s digital transformation strategy. However, ROE is expected to stabilize and increase in the long-term. Furthermore, return on assets (“ROA”) amounted to 6.08% in 2023, implying a major increase from 2.92% in 2022. **ROA** is expected to decrease to **3.28%** in 2025, stabilizing at their historical average. This lied below industry averages of 5% to 10% and suggests moderate efficiency in asset utilization and could potentially raise concerns about operational efficiency. However, it is estimated that ROA will increase to 16% after heavy R&D expenditures in the short-term. **Return on invested capital** is forecasted at **5.19%** in 2025, which is lower than the WACC, suggesting no value creation in the short-term. Overall, these profitability ratios show moderate profitability over the next few

years, whilst implying long-term profitability (Figure 39). (Csimarket.com, 2024)

Liquidity

Figure 40: Liquidity Ratio Development

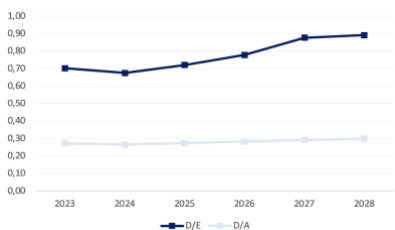


Source: Analysts Estimations, 2024

In 2023, the **cash ratio** amounted to 0.19 and is forecasted to increase to **0.22** by 2025. Long-term, the cash ratio is forecasted to 0.33 by 2034. A cash ratio of 0.22 implies that AstraZeneca is lacking money to cover short-term obligations and relies on current assets or additional financing to cover current liabilities. However, this should not raise concerns since excess cash is mostly invested in research and development, capital investments and acquisitions and contributes to overall growth, which is undermined by their strong cash flow generation. Still, low cash ratios increase financial risks and dependency on current assets if cash flows suddenly decrease. The **current ratio** added up to 0.82 in 2023 and is estimated to total **1.70** in 2025, averaging around 1.58 over the ten-year forecasting period. This implies strong liquidity in the future and the ability to meet short term liabilities. This aligns with industry norms, since liquidity needs to be maintained for operational costs like R&D and drug manufacturing. Concluding, a current ratio of 1.70 implies a robust safety margin against financial pressures and suggests a healthy liquidity. Lastly, the **quick ratio** in 2023 was calculated at 0.64. Estimates show that the quick ratio will increase to **1.16** by 2025, whilst averaging at around 1.00 over the forecasted period. This is a more conservative liquidity measures, since it excludes inventory, thus analysing the quality of assets. A quick ratio implies healthy asset structuring as well as good balance between maintaining financial health and deploying assets for growth. When considering the pharmaceutical industry, where inventory is crucial, a quick ratio of 1.16 indicates that the business is in a steady and sound liquidity position. It implies that the business can pay its short-term debts using its most liquid assets, which is advantageous for preserving both investor trust and operational stability (Figure 40).

Leverage

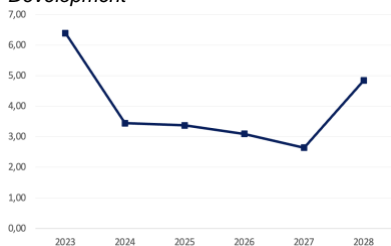
Figure 41: Leverage Ratio Development



Source: Analysts Estimations, 2024

The **debt-to-equity ratio** (“D/E”) has been decreasing over the last five years and is estimated to reach **0.72** in 2025. A D/E ratio of 0.72 indicates a moderate level of leverage, reducing the financial risk that come with high levels of leverage. The D/E is forecasted to slightly increase to 0.86 over the next ten years, advocating that AstraZeneca continues to maintain **manageable financial risk**, preserving the industry standard between 0.50 and 1.00. A balanced financing strategy that involves little leverage can be determined by a D/E ratio of 0.72. It displays a sound capital structure that promotes expansion while controlling financial risk in the pharmaceutical industry. The **debt-to-asset ratio** (“D/A”) is estimated at **0.27** in 2025, marking a stable three-year period. In the long-term, D/A is expected to

Figure 42: Interest Coverage Ratio Development

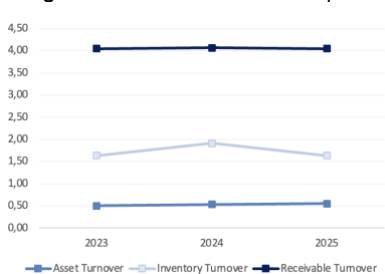


Source: Analysts Estimations, 2024

slightly increase to 0.30 in 2034, proposing that the AstraZeneca's debt levels, and asset base will not change significantly, and that it will continue to finance its operations and investments in a consistent way. A D/A ratio of 0.27, in norm with an industry standard of 0.30, indicates a cautious and efficient financial structure. In an industry that is prone to high R&D costs and market instability, this is **favorable for long-term investment**. The long-term stability displays sound financial management and resilience to risks related to the economy or the pharmaceutical industry. The **interest coverage ratio** is expected to decrease from 6.39 in 2023 to **3.38** in 2025, which signals growing financial strains and implies increased financial risks due to increasing interest. However, analyst's estimations advise that after a period of increased financial risk, the interest coverage ratio will significantly increase in the long-term, mainly due to increased profitability. Even though it is sufficient, an interest coverage ratio of 3.38 is below what is considered comfortable for businesses with good liquidity. Its decrease over the previous five years suggests mounting economic stress, brought on by volatile profitability. The anticipated future improvement, however, points to a possible recovery and indicates that AstraZeneca is making efforts to improve its financial health (Figures 41 & 42). (Csimarket.com, 2024)

Activity

Figure 43: Turnover Ratio Development



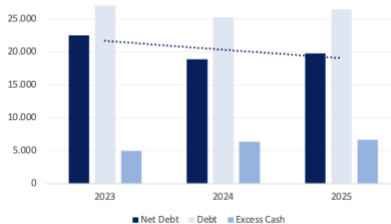
Source: Analysts Estimations, 2024

Asset turnover has been slightly increasing over the last years and is forecasted to reach **0.55** in 2025, continuing to grow to 0.97 over the valuation period, also reflecting **moderate efficiency** in utilizing assets for returns. Nevertheless, established companies in the pharmaceutical tend to have an asset turnover ratio between 0.30 and 0.80 due to capital intensive operations, such as R&D investments, and large amounts of intangibles, such as patents, which drive future sales but not current revenues. **Receivable turnover** has been slightly decreasing, estimated to amount to **4.07** in 2025, expected to be stable in the future. Again, signaling **moderate efficiency** in collecting credit sales, yet it is rather typical for the pharmaceutical industry since they deal with large contracts and longer payment cycles. This stability suggests consistency in relationships but could lead to falling behind competitors if not improved. Lastly **inventory turnover** is estimated to **1.63**, keeping stable over the next ten years, implying moderate ability to convert inventory into sales. This is largely due to the nature of the pharmaceutical sector and respective longer product lifecycles. While not forecasted to grow, stable inventory turnovers indicate production efficiency assuming predictable sales growth (Figure 43). (Readyratios.com, 2024)

Net Debt

Net debt is forecasted to decrease from \$22.510 billion in 2023 to **\$19.793 billion**

Figure 44: Net Debt Development

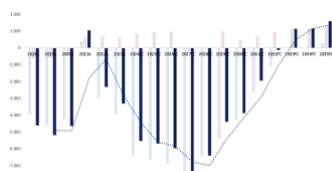


in 2025, mainly due to increased revenue and thus higher cash levels. However, after 2025 until 2034, net debt is estimated to increase to \$22.654 billion, signalling a vastly stable strategy regarding debt burdens. The implicated net debt-to-enterprise value ratio of 10.78% is only slightly above the peer average, suggesting a balanced approach to financing with enough debt to leverage growth and innovation but not so much as to overburden leverage. The decrease and forecasted stabilization indicate slightly improved financial health and steady performance, keeping **risks** associated with leverage **moderate** (Figure 44).

Net Working Capital

Net working capital (“NWC”) has been negating over the last years and is estimated to decline to **-\$5.691 billion** in 2025. NWC is expected to reach positive levels by 2033, indicating an extended period of current liabilities exceeding current assets. This could indicate financial strains. However, analyst’s evaluation advises that, due to predictable and stable cash inflows as well as long-term supplier contracts, operations are not at high risk. NWC is expected to further decrease until 2028, mainly driven by growing payables, suggesting reliance on supplier credit. Since NWC is negative and continues to decrease over the next four years, analysts consider the liquidity **risks** associated with NWC as **moderately high**, due to decreased ability to finance its operations and reliance on borrowings or stock issuance. However, predictable and growing cash inflows as well as long-term supplier contracts mitigate those risks (Figure 45).

Figure 45: Net Working Capital Development



Source: Analysts Estimations, 2024

Source: Analysts Estimations, 2024

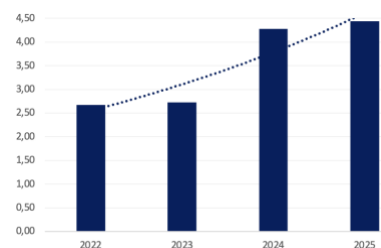
Net Asset Value

Net assets were forecasted to total **\$60.937 billion** in 2025, slightly decreasing until 2028 before entering a growth phase until 2034 with a **CAGR of 1.46%**. The positive value of net assets indicates solvency and financial stability, while the long-term stability implies consistency in asset management. Yet, short-term decreases in ROA lead to the assumption that, although net assets are stable, assets are not perfectly utilized to foster growth and generate returns.

Financial Health

In order to examine the broader financial health of AstraZeneca, the Altman Z-score was computed. The Altman Z-score takes multiple ratios into account and thus measures the company’s financial health by predicting the likelihood of bankruptcy. In 2023, the Altman Z-score was 2.72, which implies moderate risk. However, analyst’s forecasts predict the **Altman Z-score** to increase to **4.38** in 2025, which implies very **low risk of bankruptcy**. The increase suggests improved financial management and better financial stability, solidifying long-term viability of an investment into AstraZeneca (Figure 46). (Xie et al., 2024)

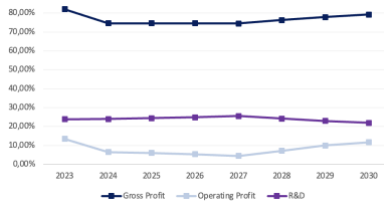
Figure 46: Altman Z-Score Development



Source: Analysts Estimations, 2024

Margin Development

Figure 47: Profit- & R&D Margin Development



Source: Analysts Estimations, 2024

Figure 48: Profit- & R&D Margin Development

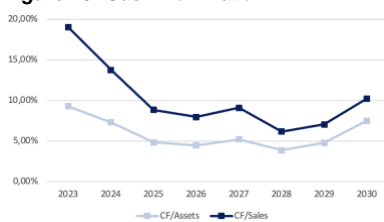


Source: Analysts Estimations, 2024

Gross profit margin has slightly decreased over the last five years and is forecasted at **74.61%** in 2025. After a couple of years of stable margins, it is estimated to increase to 82.63% by 2034 due to operating efficiencies. A margin of 74.61% seems **typical** in the pharmaceutical industries, due to high pricing power, lower production costs and high operating expenses such as R&D. The forecasted increase can be explained by increasing revenue through strong pipelines and continuous demand, which implicates a solid business model and growth potential. **Operating margin** is estimated at **6.02%**, a strong decline from 2023, however stabilizing and increasing to roughly 10% by 2029. The low margin phase can be attributed mainly to increased R&D expenditures, which will stabilize in the long-term through increased efficiency. Yet, the low operating margins suggest **inefficiencies in operations** in the short-term. **Net income margin** has been relatively volatile due to the uncertain nature of this sector. In 2025 it is estimated to decrease to **5.25%**, however increasing to roughly 10% by 2029. The net income margin in the short-term is **relatively low** regarding the pharmaceutical industry, where NI margins tend to be higher due to high pricing power. The forecasted increase show improvements in operating efficiencies and increased revenue growth. Looking at specific cost drivers, the **R&D margin** is estimated at **24%** in 2025, slightly decreasing to 20% over the forecasted period, although total R&D expenses will continue to incline, suggesting R&D expenses being efficiently used to foster growth. The 24% margin is in the larger quantile of the industry, picturing the focus on innovation. Although decreasing margins can implicate financial trade-offs, strong pipelines and steady revenue growth imply **efficiency gains** (Figures 47 & 48). (Trombetta, 2023, May et al., 2024)

Cash Flows

Figure 49: Cash Flow Ratio



Source: Analysts Estimations, 2024

To assess long-term viability and sustainability of operations, the free cash flows were analysed. The **Free Cash Flow to Assets** ("FCF/A") ratio was approximated at **4.83%** in 2025, signalling a decrease over the past few years. By 2024 FCF/A is expected to increase to 12.91%. **Free Cash Flow to Sales** ("FCF/S") has been decreasing as well and is expected to be **8.85%** in 2025. Equally, it will stabilize and increase in the long-term to 13.90% in 2034. The decrease over the past few years signals decreased efficiency or poor asset utilization. However, analysts advise that this can be explained by the short-term transitioning phase before optimizing efficiency in the long run, as implied by increasing cash flow ratios (Figure 49).

Despite certain risks, AstraZeneca's financial analysis displays a solid and stable financial position. With a quick ratio of 1.16 and a current ratio of 1.70, the company

“Robust capital structure, solid liquidity, and sound financial stability; Yet reliance on R&D, possible pricing pressures, and short-term margin issues highlight the necessity of careful risk management.”

maintains a sound liquidity profile, indicating its capacity to fulfil short-term obligations. A cash ratio of 0.22, however, suggests a preference for operating cash flows over cash reserves, which could be dangerous in the event of cash flow disruptions. Furthermore, decreasing profitability margins in the short-term put increased pressure on operations, although long-term forecasts predict a stabilization of profitability margins. AstraZeneca's balanced capital structure, stable margin outlook, and prudent liquidity management all contribute to its robust overall financial health. However, dependence on R&D and innovation, as well as vulnerability to risks associated with debt and pricing pressures, draw attention to certain deficiencies. Even though AstraZeneca is in a solid position to grow, financial and balance sheet risks must be mitigated through closely monitoring cash flows, debt levels, and operational effectiveness.

Valuation

In this section the company's weighted average cost of capital ("WACC") will be derived through the Capital Asset Pricing Model as well as its perpetuity growth rate. Second, in order to determine AstraZeneca's target price for December 2025, a Discounted Cashflow ("DCF") and an Adjusted Present Value ("APV") valuation will be examined, which are most commonly used in the pharmaceutical sector. Lastly, we will analyze the market by conducting a Comparable Company Analysis ("CCA").

Cost of Capital

In order to arrive at the WACC, the cost of debt was derived by calculating the weighted yield to maturity ("YTM") of eleven outstanding bonds denominated in US dollar of AstraZeneca. The YTM was calculated by considering each coupon rate, frequency, par value, last price and the time to maturity based on November 20th, 2024. These yields were then weighted based on the market value of the respective bond, giving us a weighted YTM of 4.67%. According to Bloomberg, the recovery rate is 40%, which results in a Loss Given Default of 60%, and the probability of default lies at 0.0001%. By applying the **CAPM** formula for the cost of debt ($r_d = YTM - P(D) * LGD$) we arrived at a pre-tax **cost of debt of 4.67%** (Figure 50).

Following the cost of debt, the CAPM was used to derive the **cost of equity** for AstraZeneca. First, a regression model was established by regressing the five-year weekly returns of AstraZeneca's stock with the 5-year weekly returns of the S&P 500. The S&P 500 index was used for the regression, as AstraZeneca relies on the US market for a majority of their total revenue. The regression model's outcome was an **equity beta of 0.555**. It was decided to adjust the equity beta with the "Blume method" to account for the tendency of betas regressing towards the

Figure 50: Cost of Debt Calculation

Cost of Debt	Metrics
Bonds Weighted YTM	4.67%
Recovery Rate	40.00%
Loss Given Default	60.00%
Probability of Default	0.0001%
Pre-Tax Cost of Debt	4.67%

Source: Bloomberg.com, 2024

Figure 51: Cost of Equity Calculation

Cost of Equity	Values
Risk-free Rate	4.51%
Market Risk Premium	4.03%
Tax Rate	25.00%
Equity Beta	0.56
Blume Adjusted Equity Beta	0.70
Unlevered Beta	0.62
Cost of Unlevered Equity (Ru)	7.03%
Relevered Beta	0.65
Cost of Levered Equity (Re)	7.12%

Source: Analysts Estimates, 2024

Figure 52: Weighted Average Cost of Capital Calculation

WACC	Values
UK Tax Rate	25.00%
Target D/EV	10.78%
Target E/EV	89.22%
Cost of Debt	4.67%
Cost of Levered Equity	7.12%
WACC	6.73%

Source: Analysts Estimates, 2024

market average of one over time. This is justified, because we believe a levered beta of 0.555 potentially underestimates future systemic risks. Furthermore, this adjustment aids in mitigating over-reliance on historical data and provides a more conservative, potentially realistic, estimate of AstraZeneca’s market sensitivity. Through the Blume adjustment formula ($\text{Adjusted Beta} = 0.555 * 2/3 + 1 * 1/3$) we arrived at an **adjusted equity beta of 0.70**. The adjusted equity beta was then unlevered based on the historical capital structure through the CAPM formula ($B_u = B_e * E/EV + B_d * D/EV$) resulting in an **unlevered beta of 0.62**, reflecting the risk of its core operations regardless of the financing structure. The next step included the re-levering process, by taking into account the target capital structure in order to arrive at a beta that reflects the financial risk of AstraZeneca’s leverage. The target D/EV is roughly 10.78%, resulting in a target E/EV of 89.22%, which is assumed to stay constant over the valuation period. Based on this target capital structure a **re-levered beta of 0.65** was derived. For the purpose of calculating the unlevered – and levered cost of equity, a **risk-free rate of 4.51%** was assumed, which is the ten-year rate of UK government bonds. The market risk premium was obtained by subtracting the risk-free rate from the market return, where the all-time return of the MSCI World index of 8.54% was applied, resulting in a **market risk premium of 4.03%**. By applying the CAPM ($R_u = R_f + B_u * MRP$), the **unlevered cost of equity** was derived at **7.03%**. Following, the **levered cost of equity** of **7.12%** was obtained by taking leverage into account with the CAPM formula ($R_e = R_u + MRP * (R_u - R_d)$). Having extracted the levered cost of equity, the WACC was calculated with the CAPM formula ($\text{WACC} = R_e * E/EV + R_d * D/EV * (1 - t)$), resulting in a **weighted average cost of capital of 6.73%** (Figures 51 & 52).

Perpetuity Growth

The long-term perpetuity growth rate was derived through multiple key metrics. First, the UK GDP growth between 1956 and 2024 of 2.32% and the UK long-term inflation target of 2.00% were taken into consideration. Furthermore, we obtained a long-term growth rate by multiplying the average return on invested capital (“ROIC”) by the re-investment rate, resulting in an average perpetuity growth rate of 1.53%. Taking all metrics into consideration, the median of **2.00%** was applied as the **long-term perpetuity growth rate**. This gives us a stable and conservative perpetuity growth rate for the terminal value, aligned with the United Kingdom’s long-term inflation target. The **operating ROIC** average over the forecasting period of ten years was forecasted at **14.9%**, exceeding the WACC, which suggests that AstraZeneca will create value with its existing investments in the long-term. In 2025 however, the operating **ROIC** of **5.17%** and the operating **RONIC** of **2.03%**, leading to the assumption that AstraZeneca is not able to generate short-term value for shareholders over the next year, but rather long-term (Figure 53).

Figure 53: Perpetuity Growth Rate Assumptions

Perpetuity Growth	Values
ROIC (2024)	5.00%
Avg. Forward Growth Rate	1.53%
UK Long-term Inflation Target	2.00%
UK Historical GDP Growth	2.32%
Perpetuity Growth Rate (g)	2.00%

Source: Analysts Estimates, 2024

Discounted Cash-Flow Method (“DCF”)

AstraZeneca's forecasted operating free cash flows (“FCF”) were discounted at the company's WACC of 6.73% over a valuation period of ten years in order to carry out the DCF valuation using the perpetuity approach. The projected non-core invested capital in 2025 of \$4.956 billion was then added to the present value of the discounted operating FCF in 2025. As a result, an **Enterprise Value of \$245.539 billion** in 2025 was derived. Furthermore, the **equity value of \$225.721 billion** in 2025 was obtained by subtracting the forecasted net debt book value of \$19.793 billion and non-controlling interest of \$25 million. According to the analyst's calculations, the **target price** for December 2025 is **\$72.81**, based on the 3.100 billion fully diluted outstanding shares. As of December 2, 2023, the **upside potential** for AstraZeneca's share price over the following year is estimated to be **9.49%**.

Adjusted Present Value Method (“APV”)

In addition to the conducted DCF, an APV valuation was underdone, since this gives a second reliable approach, detailing the unlevered operating business and the value of debt separately. For this approach, the unlevered operating FCF was forecasted over ten years and discounted at the unlevered cost of equity at 7.03% instead of discounting with the WACC. After arriving at the unlevered enterprise value of \$224.390 billion in 2025, the forecasted tax shield was discounted at the unlevered cost of equity, since the D/EV ratio is assumed to stay constant over the valuation period. The present value of tax shields was derived to be \$5.513 billion in 2025. This separate approach gives us a more detailed look into the value of the unlevered business and the debt. Adding the unlevered enterprise value and the present value of tax shield together, the levered equity value of \$229.903 billion was obtained. After adding the non-core invested capital of \$4.956 billion and deducting net debt of \$19.793 billion as well as non-controlling interest of \$25 million, we estimate an equity value of \$215.041 billion. According to the analyst's calculations, the **target price** for December 2025 is **\$69.37**, based on the 3.100 billion fully diluted outstanding shares. As of December 2, 2023, the **upside potential** for AstraZeneca's share price over the following year is estimated to be **4.31%**.

Comparable Company Analysis (“CCA”)

The relative valuation, capturing market sentiments and industry dynamics, was implemented using a comparable company analysis extracting a variety of multiples. Multiples used for this valuation were selected to industry specifics in order to provide the most accurate market-based valuation. When it comes to the peer selection, a range of six companies with similar capital structure, but as well

Figure 54: Market Multiples Overview

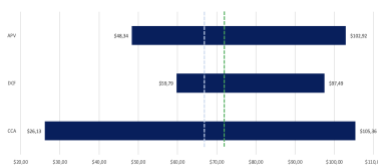
CCA	Multiple	Target Price (\$)
P/E	16.44x	63.21
EV/EBITDA	12.77x	49.54
EV/Revenue	5.30x	83.82
P/B	9.18x	111.21
Mean		76.95

Source: Bloomberg.com, 2024

with different stages were selected. These companies include GlaxoSmithKline PLC, Novartis AG, Sanofi SA, Roche Holding AG, Bayer AG and Novo Nordisk A/S, which supplies this analysis with a solid range of competitors. The first multiple examined is the price to earnings (P/E) ratio. The average **P/E multiple** of competitors came out at **16.44x**, resulting in a **target share price** of **\$63.21**. Additionally, the forward enterprise value to EBITDA (EV/EBITDA) ratio was analysed. The peer average resulted in a forward **EV/EBITDA** multiple of **12.77x**, leading to a **target share price** of **\$49.54**. Moreover, the forward enterprise value to revenue (EV/Revenue) multiple of the peer selection was examined. The average **EV/Revenue multiple** of selected competitors is **5.30x**, resulting in a **target share price** of **\$83.82**. Lastly, the **price to book** (P/B) multiple was derived at **9.18x**, resulting in a **target share price** of **\$111.32**. After a thorough analysis of comparable companies, the average of respective multiples resulted in a **CCA target share price** of **\$76.97** (Figure 54).

Valuation Summary

Figure 55: Valuation Football Field



Source: Analysts Estimates, 2024

As a means to derive a final target share price, multiple valuation methods were used to mitigate the risk of relying solely on one specific method and ensure a robust target share price. The **DCF** target share price of **\$72.81** and the **APV** target share price of **\$69.37** were averaged out and weighted at 80%. The multiple approach through the **CCA** resulted in an average share price of **\$76.96**, which was weighted at 20%. By evaluating the company's capacity to produce future cash flows, cash flow methods emphasize on the intrinsic value of its operations. Because of its thoroughness and accuracy in absorbing company-specific information as well as reflecting the time value of money and firm-specific dynamics, this bears 80% of the weight. On the other hand, the lower weighting of the CCA reflects its reliance on external factors, such as market conditions and peer selection, which may not fully capture the company's unique characteristics. Multiples can also fluctuate based on short-term market sentiment, making them less reliable for standalone valuation. While taking market dynamics into account to ensure practical applicability in a competitive context, the weighting demonstrates a significant emphasis on intrinsic value. We believe that a strong and defensible target share price is ensured by this hybrid approach, which reduces the risks associated with depending only on one strategy. Based on this risk-mitigating approach, and the cash-flow valuation weighted at 80%, we arrived at a **target share price** of **\$72.27**, suggesting a **7.33% upside potential** over the following year (Figures 55 & 56).

Figure 56: Valuation Methods Overview

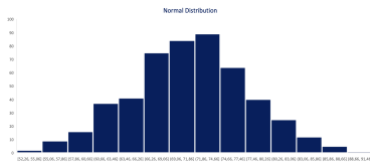
Valuation Overview (No Weights)	Equity Value (\$b)	Share Price (\$)
DCF	225.721	72,81
APV	215.041	69,37
CCA	206.701	76,95
Mean	215.821	73,04
Median	215.041	72,81

Source: Analysts Estimates, 2024

Monte Carlo Simulation

This analysis was conducted to mitigate the risk of uncertainty related to future

Figure 59: Share Price Distribution



Source: Analysts Estimates, 2024

share prices. 500 simulations of potential outcomes were modeled to analyze the variability in stock prices. The target share price of \$71.27 was used as a mean and the **standard deviation** of **6.19** was calculated by taking pessimistic and optimistic target share prices of the sensitivity analysis into account. The **mean** of 500 simulations was derived at **\$72.05**, suggesting that the **probability of profit**, or that the share price being higher than as of Dec 2nd, 2024, is **82.20%**, which is a strong indicator that the stock will generate positive returns over the following year. Based on historical research, the pharmaceutical industry's likelihood of generating positive returns over a one-year period is generally between 70% and 80%, which is consistent with broader equities market tendencies. This range represents overall market performance and is impacted by market conditions, innovation cycles, and regulatory approvals. Thin in turn, indicates moderate upside potential for AstraZeneca. For risk averse investors the 82.20% probability of positive returns and a mean simulated target share price of \$72.10 might align more with their strategy than for growth focused investors (Figure 59).

Investment Recommendation

AstraZeneca's strong innovation-driven growth strategy and robust pipeline continue to make it a draw for investors. Yet, moderate profitability and short-term value limits limit enthusiasm, which results in a recommendation to hold. Using the hybrid valuation approach of an 80% weighted cash flow valuation and 20% weighted market valuation, AstraZeneca's intrinsic value exceeds the share price as of Dec 10th, 2024, which is \$67.33, with a **target price** of **\$72.27** for December 2025. This points to a modest **7.33% upside potential**. Although the company's potential is highlighted by the value, the comparatively small margin suggests modest short-term price growth, justifying a neutral stance. The debt-to-equity (D/E) ratio of 0.72 for AstraZeneca indicates a sustainable debt-to-equity ratio, which is characteristic of an innovative pharmaceutical company. Given that the net debt level is constant and manageable, it appears that the business uses debt to fund key R&D and acquisition expenditures without excessively straining its financial resources. After years of deterioration, the interest coverage ratio is predicted to recover, putting AstraZeneca in a strong position to preserve its financial stability while seizing expansion prospects. With a 24% R&D margin, AstraZeneca demonstrates its dedication to innovation and supports a broad and exciting pharmacological portfolio, especially in the areas of immunology, cardiology, and oncology treatments. Despite competitive pressures and patent issues continuing to be challenges, the pharmaceutical industry's prognosis is nevertheless positive due to the growing need for advanced therapies worldwide. AstraZeneca's robust cost management and product pricing power are demonstrated by its 74.61% gross margin. Its solid product mix and pipeline-driven

Figure 61: Investment Recommendation Overview

Recommendation (2025)	
AstraZeneca	
Closing share price	\$ 67,33
52 Week Low	\$ 60,47
52 Week High	\$ 87,68
Average CCA	\$ 76,97
Average DCF & APV	\$ 71,09
Weight CCA	20%
Weight DCF & APV	80%
Market Cap (\$ m)	\$ 224.028
Target Share Price	\$ 72,27
Upside Potential	7,33%
Recommendation	Hold

Source: Analysts Estimates, 2024

revenue potential are reflected in the expected growth in this figure. Even at only 5.25%, it is anticipated to rise over the ensuing years, indicating a steady improvement in bottom-line profitability. With a quick ratio of 1.16 and a current ratio of 1.70, AstraZeneca has good liquidity ratios that guarantee the firm can easily fulfil short-term obligations. However, as is typical in R&D-intensive industries, the cash ratio of 0.22 indicates a reliance on operational cash flow rather than reserves. NWC is expected to stay negative, suggesting that short-term funds are being used for long-term purposes, resulting in increased risk. Any changes in the turnover of inventories or receivables need to be monitored closely to guarantee ongoing effectiveness. AstraZeneca's asset base utilization efficiency is moderate at 0.55, which is typical of capital-intensive pharmaceutical companies. Future increases in asset turnover would further bolster operational metrics. Despite significant R&D expenditures, turnover ratios of 4.07 show solid inventory and receivables management, which sustains cash flow. Reliance on an income-generating pipeline, possible delays in regulatory approvals, and generic competition are some of the main risks. Furthermore, a declining cash flow-to-assets ratio indicates possible inefficiencies or rising capital requirements, which call for close observation. AstraZeneca's strategy of innovation-led growth positions it as a long-term contender in the pharmaceutical sector. Its strong capital structure, manageable net debt, and improving profitability metrics support its resilience. AstraZeneca is a solid, innovation-driven company with a **bright long-term outlook**. However, near-term valuation, competitive pressures, and modest profitability **constrain immediate upside**. Investors are advised to **hold the stock**, with the potential to revisit the recommendation based on pipeline performance and margin improvements. The monitoring of liquidity margins, profitability margins and turnover cycles is strongly advised. (Kaplan, 2024)