MASTERS IN
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PROJECT

EQUITY RESEARCH:
AKZONOBEL N.V

JULIANA AGUILAR SARRIA

JUNE 2024

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SUPERVISOR:
JOSÉ ALMEIDA

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Abstract

This Equity Research project provides a valuation of AkzoNobel N.V following the guidelines recommended by the Chartered Financial Analyst (CFA) Institute.

Its position in the global Paints and Coatings industry as well as its focus on sustainability and innovation, was the main motivation to choose AkzoNobel as subject of study, highlighting its potential for long-term growth in the industry.

In order to determine the value of the company, the Discounted Cash Flow (DCF) method was performed, focusing on the Free Cash Flow to the Firm (FCFF) model. Additionally, to complement this methodology, other valuation methods were applied, including the Free Cash Flow to Equity (FCFE), Dividend Discount Model (DDM), as well as the relative valuation using multiples such as EV/Revenue, EV/EBITDA, P/E and P/B.

The valuation analysis resulted in a price target of €85.18 per share for Akzo Nobel NV by the end of 2028, indicating a potential upside of 47.56% from the current share price of €57.72 per share as of 25 June 2024. While the company shows growth potential, some risks that could impact on the target price were taken into consideration, such as changes in raw material prices, economic uncertainties and climate change regulations. Based on these results, the final recommendation for AkzoNobel is a **BUY**.

JEL classification: G10; G32; G34

Keywords: Equity Research; Valuation; Paints and Coatings Industry; Akzo Nobel NV; Sustainability; Innovation; Market Expansion

Resumo

Este projeto de Pesquisa de Equidade fornece uma avaliação da AkzoNobel N.V seguindo as diretrizes recomendadas pelo Instituto Chartered Financial Analyst (CFA). Sua posição na indústria global de Tintas e Revestimentos, bem como seu foco em sustentabilidade e inovação, foi a principal motivação para escolher a AkzoNobel como objeto de estudo, destacando seu potencial de crescimento a longo prazo na indústria.

Para determinar o valor da empresa, foi utilizado o método de Fluxo de Caixa Descontado (DCF), focando no modelo de Fluxo de Caixa Livre para a Firma (FCFF). Além disso, para complementar essa metodologia, outros métodos de avaliação foram aplicados, incluindo o Fluxo de Caixa Livre para o Acionista (FCFE), Modelo de Desconto de Dividendos (DDM), bem como a avaliação relativa utilizando múltiplos como EV/Receita, EV/EBITDA, P/E e P/B.

A análise de avaliação resultou em um preço-alvo de €85,18 por ação da Akzo Nobel NV até o final de 2028, indicando um potencial de valorização de 47,56% em relação ao preço atual da ação de €57,72 em 25 de junho de 2024. Embora a empresa mostre potencial de crescimento, alguns riscos que podem impactar o preço-alvo foram considerados, como mudanças nos preços das matérias-primas, incertezas econômicas e regulamentações sobre mudanças climáticas. Com base nesses resultados, a recomendação final para a AkzoNobel é de **COMPRA.**

Classificação JEL: G10; G32; G34

Palavras-chave: Pesquisa de Equidade; Avaliação; Indústria de Tintas e Revestimentos; Akzo Nobel NV; Sustentabilidade; Inovação; Expansão de Mercado

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Glosary

AKZA - Akzo Nobel N.V.

CAPEX - Capital Expenditures

CAGR - Compound Annual Growth Rate

DCF - Discounted Cash Flow

DDM - Dividend Discount Model

EBIT - Earnings Before Interest and Taxes

EPS - Earnings Per Share

ESG Scores - Environmental, Social, and Governance Scores

FCFF - Free Cash Flow to the Firm

FCFE - Free Cash Flow to Equity

FY - Fiscal Year

GDP - Gross Domestic Product

CAPM - Capital Asset Pricing Model

TP - Target Price

Market Cap - Market Capitalization

ROE - Return on Equity

R&D - Research and Development

VOCs - Volatile Organic Compounds

WACC - Weighted Average Cost of Capital

YE - Year End

g - Growth Rate

SARD - Sum of Absolute Rank Differences

RV - Relative Valuation

YOY - Year Over Year

ERP - Equity Risk Premium

MRP - Market Risk Premium

CRP - Country Risk Premium

CEO - Chief Executive Officer

D/E - Debt-to-Equity Ratio

DPS - Dividends Per Share

PP&E - Property, Plant, and Equipment

D&A - Depreciation and Amortization

BoD - Board of Directors

Ticker:	Current Price:	Target Price:	Recommendation:	Upside Potential:	Level of Risk:
AKZA	€57.72 (25/06/2024)	€85.18 (31/12/2024)	**BUY**	47.56%	High

Akzo Nobel N.V: Driving growth through innovation and sustainability

1. Research Snapshot

Recommendation: **BUY** is my recommendation for Akzo Nobel N.V., with a **2024YE price target of €85.18** using **a Dividend Discount model** (DCF), under the Free Cash Flow to the Firm approach, implying a **47.56% upside potential from the June 25th, 2024 closing price of €57.72** per share (Figure 1 and Table 1). The valuation was performed over a five-year time horizon, from 2024 to 2028. The main drivers for this recommendation are ongoing investment in sustainability and innovation, as well as expansion in emerging markets, mainly offset by potential risks related to market volatility and macroeconomic uncertainty.

The Industrial Transformation Plan

Through cost reductions and increased productivity, Akzo Nobel plans **to unlock €250 million in value by 2027 as part of its "Industrial Transformation" plan**. A **one-time investment of €130–150 million** as well as an **additional €150 million in capital expenditures** are needed for this. With this, it is expected **EBIT would reach to approximately €1.7 Billion by 2027** (Figure 2**)**, Additionally, it will also include **cost savings of €180–200 million** related to optimizing its production footprint, reducing unit production costs, and optimizing the distribution model within each region, as well as **€50–70 from efficiency gains** related to increasing asset utilization, improving efficiency, and driving differentiation.

Investment in Sustainability

Akzo Nobel has distinguished itself from several peers in the industry by **continuing to engage in initiatives that promote sustainability despite the negative macroeconomic effects of global uncertainty.** The organization made a commitment to decrease its carbon footprint and improve sustainable practices throughout its operations, in line with its long-term goal of sustainable growth.

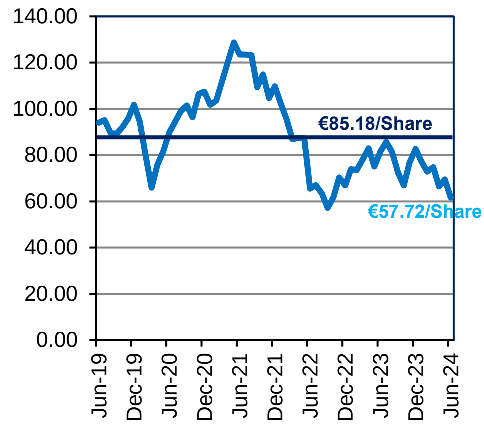
Emerging Markets Expansion

Akzo Nobel is also in the process of acquiring more market share in the emerging markets, particularly in Asia and Latin America where market drivers such as urbanization and rising disposable income are evident. **The company also plans to create local production facilities and strengthen logistics to address the regional market's demand**. Some of the specific markets that are considered important for investment include China, India, Brazil and Mexico.

Key Risks

Financial performance may be impacted by recessions in the economy, changes in the price of raw materials, strong competition, and strict environmental regulations.

Figure 1. Fair Value Range



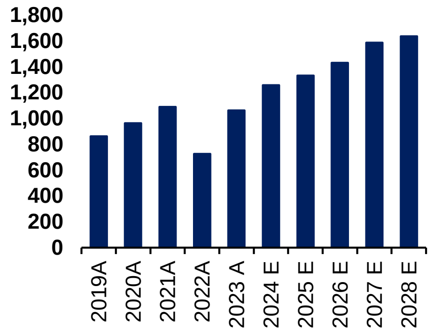
Source: Capital IQ, adapted by the author

Table 1. Key Statistics (25/06/2024)

Last Price	€ 57.72
Market Cap. (Million)	€ 10,518.80
Shares Outstanding	170.6
52 week High	€ 84.72
52 week Low	€ 60.43
Average 3M Daily Volume	469,790
Dividend Yield (%)	3.43

Source: Capital IQ, adapted by the author

Figure 2. EBIT 2019-2028 in €Million



Source: Bloomberg; The author

2. Business Description

Akzo Nobel N.V ("AKZO.AS"), most known as AkzoNobel, is a **multinational company** within the specialty chemicals industry **focusing on paints and coatings** manufacturing, with headquarters in Amsterdam, Netherlands and activities in more than 150 countries around the world. It is the **third global largest paint manufacturer based on revenue, with a market capitalization of €14.10Bn million and total assets of €14.5 Bn in 2023 FY** (Figure 3). The Company is involved in the manufacturing and marketing of: i) **Decorative Paints**, including paints, lacquers, and varnishes; and ii) **Performance Coatings**, including Automotive and Specialty Coatings, Industrial Coatings, Marine, Protective and Yacht Coatings, and Powder Coatings.

The 1994 consolidation of Akzo Nobel was an important event that brought together a century of notable company acquisitions and mergers. Initially focused on synthetic fibers when it was founded in 1899, Akzo eventually expanded into high-margin products including chemicals and paint coatings. In parallel, businesses founded by Alfred Nobel were brought together by Nobel Industries AB, which was incorporated in 1984. In 1994, the two organizations came together in spite of challenges to become Akzo Nobel N.V. with the goal of improving their market position and operational effectiveness. Following expansion, AkzoNobel became into the pharmaceutical firm with the fastest rate of growth in Europe. It divided into two companies in 2007 and continued to grow by acquiring companies like ICI in 2008. The company's 2020 strategic division is a reflection of its continuous adjustment to the dynamic coatings and chemical industries.

Geographic and Business Segments

The company operates in two main segments which are: i) Decorative Paints and ii) Performance Coatings. Performance Coatings represent approximately 60% of FY2023 total revenues, amounting to € 6,368 million, whereas Decorative Paints represents about 40% of it, with € 4,300 million (Figure 5). Both have experienced significant growth historically from 2019 to 2023, as observed in Figure 4.

The company sells its products all around the world. Geographically, the Company organizes its operations into five regions: i) EMEA; ii) North Asia; iii) South Asia Pacific; iv) North America; and v) Latin America (Appendix xx). Approximately **47% of the FY2023 revenue came from the EMEA region**, followed by North Asia, with 16%, North America, with 13%, and South Asia Pacific and South America, both with around 12% each approximately (Figure 6).

Decorative Paints

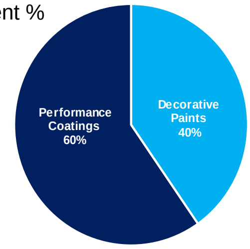
The **Decorative Paints** segment focuses on the **manufacturing and marketing of a full range of interior and exterior decoration and protection products**, such as paints, lacquers and varnishes, to both professional and do-it-yourself channels. These materials are used for both indoor and exterior applications, and they come in a variety of colors and finishes that improve and protect surfaces in both residential and commercial establishments. Additionally, this segment **offers specialty coatings for wood, metal and other building materials, as well as a range of mixing machines and color concepts for the renovation and building industry.** The business units in this segment are organized

Figure 3. AkzoNobel Financial Highlights

3rd global largest paint manufacturer	Market Cap €9,938 M
Revenue €10,668 M (- 2% vs FY22)	
Net income €442 M	Earnings €1,386 M
People 35,200 employees	> 150 countries around the world

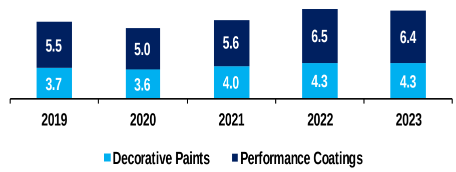
Source: Company's reports, adapted by the author

Figure 5. FY2023 Revenue per business segment %



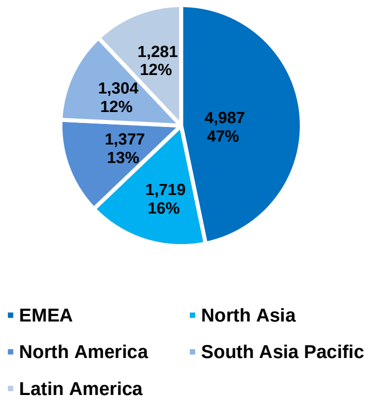
Source: Company's reports, adapted by the author

Figure 4. Revenues by segment historically in € Millions



Source: Company's reports, adapted by the author

Figure 6. FY 2023 overall revenue by region



Source: Company's reports, adapted by the Author

regionally, as the **paints business is managed per region: EMEA (23%), Asia (10%) and South America (7%)** (Figure 7).

This segment reported a **FY2023 EBITDA of €645 Million**, resulting in a **2.7% CAGR**, in the **FY2019-2023 period**, mainly driven by the Company's geographical expansion initiatives and strong innovation in sustainable products and services. Specifically, in 2021 the Company increased the availability of Dulux to an additional 11,200 stores across 96 cities in North Asia, contributing to significant growth in the premium paint market. Moreover, 5,000 new stores were added. Specifically, in **FY2023 EBITDA performance increased due to cost management and operational efficiencies**, despite the challenging economic situation. Regardless of flat volumes, lower raw material costs and strategic price initiatives helped maintain profitability. Additionally, this growth was driven by the **recovery of demand in Asian countries due to the growth in the renovation sector**, especially China.

With an **Operating Income Margin (OPI) of 11.6% in FY2023**, the segment achieved and **Operating Income of €500 Million, a 29% increase in comparison with FY2022** (Figure 8). It is worth to mention that, historically, strategic acquisitions like Huarun Company in China contributed to the profitability of the Decoratives Paints segment. On the other hand, in **FY2023 the Return on Investment (ROI) increased to 13.3%**, showing improved profitability and capital utilization.

In general, revenue and results in **Decorative Paints are impacted by seasonal changes**. Revenue and profitability tend to be higher in the second and third quarters of the year as the weather conditions determine whether paints and coatings can be applied.

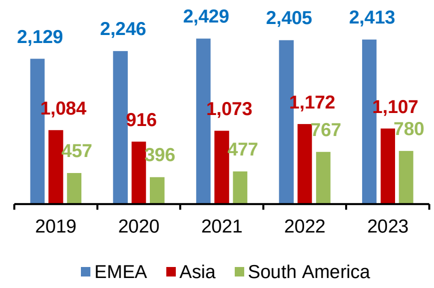
Performance Coatings

The Performance Coatings segment focuses on the manufacturing and marketing of coatings and finishes for a wide range of industries and applications. The segment is organized into four main categories: i) Powder Coatings; ii) Marine and Protective Coatings; iii) Automotive and Specialty Coatings; and iv) Industrial coatings. Along with esthetic appearance, these products provide fire protection, anti-scratch, fouling resistance and corrosion prevention for surfaces such as ships, cars, aircraft, yachts and architectural components.

The segment had improvements in FY 2023 across a few industries, which enhanced financial results. Despite overall static volumes in comparison with FY2022, lower-volume markets reported revenue growth, such as **Automotive and Specialty Coatings (+1% vs FY2022)** and **Marine Protective Coatings (+7% vs FY2022)**. Nevertheless, **demand in some higher-volume markets remained soft**, such as **Industrial Coatings (-10% vs FY2022)**, as show in Figure 9. This was mainly driven by the decline in residential housing construction in Europe and North America. The overall volume was still lower than in 2019.

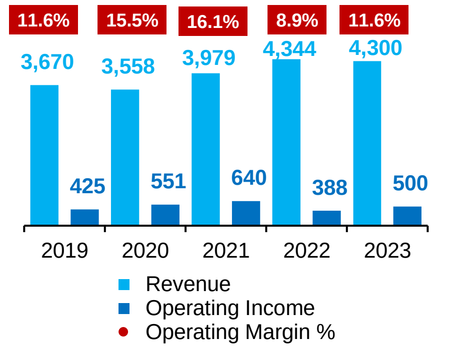
Regarding **Operating Income Margin (OPI)**, the segment achieved an **11% in FY2023** (Figure 10), which accounted for an Operating Income of **€698 Million (+56% vs FY2022)**. Like the Decorative Paints segment, pricing strategies to offset rising raw material costs, margin control measures and improved

Figure 7. Decorative Paints Historical Revenues by region in € Million



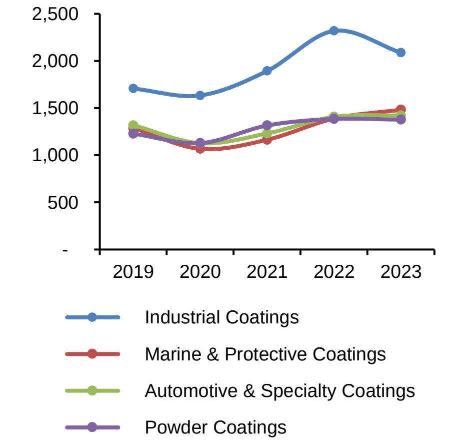
Source: Bloomberg, adapted by the Author

Figure 8. Decorative Paints Revenue & Operating Income



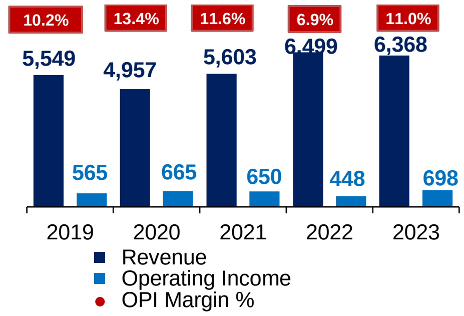
Source: Bloomberg, adapted by the Author

Figure 9. Performance Coatings Historical Revenue by End Market



Source: Bloomberg, adapted by the Author

Figure 10. Performance Coatings Revenue & Operating Income



Source: Bloomberg, adapted by the Author productivity obtained through cost reductions and process optimization were the key divers of profitability increases. These actions led to a **Return on Investment (ROI)** of 18.4%.

In Performance Coatings, changes in building patterns may impact revenue and profitability by determining the type and quantity of coatings needed.

Key drivers of profitability

As a company within the specialty chemicals segment, and as its peers in the paints and coatings industry, AkzoNobel shares key drivers of profitability that impact i) Revenue growth; ii) Cost management; iii) Product innovation; and iv) Market expansion. The main factors that are strongly related to the profitability include:

- **Raw materials and energy prices**: The costs of basic raw materials, such as brent crude oil, have a **direct effect on the production costs and consequently on profit margins of the industry** (Figure 11). Similarly, **energy prices, including electricity and petrol, have a strong relationship to revenues**. Because of the high energy consumption in manufacturing processes of the specialty chemicals industry, the business is also very sensitive to changes in energy costs.
- **Innovation in sustainable products:** Investments in Research and Development (**R&D**) has a strong impact on the Company's **potential revenue** by providing innovation in sustainable products (Figure 12). Developing **low -VOCs** (Volatile Organic Compounds) **paints** and using **renewable materials** increases the demand for environmentally friendly solutions as well as aligning with regulations. By this, besides **increasing sales and market share**, it maintains the Company's position as a **leader in green innovation**.
- **Expansion and Market Penetration:** Global expansion as well as market penetration are key factors to value creation. AkzoNobel enhances its market expansion by expanding operations in high-growth markets, such as Asia and North America, improving product availability, along with opening new stores and investing in strategic acquisitions.
- **Efficiency and Cost Management**: The optimization of production processes is a fundamental key value driver factor of the Company. The use of advanced technology in production, the development of waste management systems, and the improvement of supply chains using digital platforms contributes to the overall profitability, by decreasing production costs and improving operational efficiency.

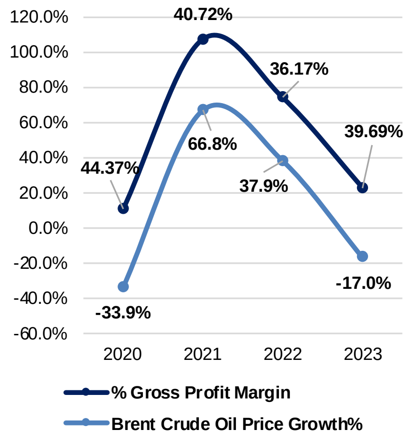
Company Strategies

AkzoNobel is guided by its **commitment to "People, Planet, and Paint"**. The company's operations are guided by its core values of safety, integrity, and sustainability, emphasizing passion for paint, precise processes, powerful performance, and proud people (Figure 13). The main purpose is **maintaining its position** as the leader in the industry through **innovation, capital management, sustainable investments** and **value chain integration**.

Sustainability-driven innovation

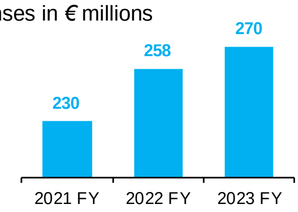
Sustainability is an important factor in AkzoNobel's strategy, As seen in Figure 12, R&D expenses have risen steadily, from €230 million in 2021 to €270 million in 2023, supporting the Company achieve its **2030 target of having over 50% of**

Figure 11. Relationship between Brent Crude Oil prices and Gross Profit Margins of Akzo Nobel 2020-2023



Source: Yahoo Finance and Company's reports, adapted by the author

Figure 12. Research and Development expenses in € millions



Source: Company's reports, adapted by the author

Figure 13. AkzoNobel Core Values

Source: Company's reports, adapted by the author

Table 2. Third-Party Scores for AkzoNobel

ESG rating agency	Key achievement
EcoVadis	Platinum rating, positioning the company in the top 1 % of the industry.
MISCI	AAA for seven consecutive years.
Sustainalytics	"Low risk" and ESG top rated in the industry.

Source: Company's reports, adapted by the author

its revenue derived from sustainable solutions. Additionally, the is well-known by rating agencies like Eco Vadis, MSCI, and Sustainalytics, reaching top positions in the industry (Table 2). With 70 laboratories worldwide and 3,000 R&D specialists, the company has created 2,825 patents (Figure 14), which have contributed to **sustainable solutions accounting for 40% of the company's revenue**. Through the entire value chain, the company is committed to increasing efficiency, minimizing its carbon footprint to achieve its carbon reduction goals as well as adapt to market trends.

Figure 14. Innovation in numbers

~3,000 R&D professionals worldwide
€1.25 bln spent on R&D (last five years)
2,825 patents/patent applications
70 laboratories worldwide

Source: Company's reports

Industrial excellence

Simplifying processes and maximizing the use of available resources provide an increase in productivity and cost reduction. The Company started implementing an **Industry Excellence Program** in 2023, with expected full benefits by 2027, with the objective of **modernizing its locations**, **increasing its capacity utilization** and **reducing complexity in its production processes**.

Growth in focus segments and markets

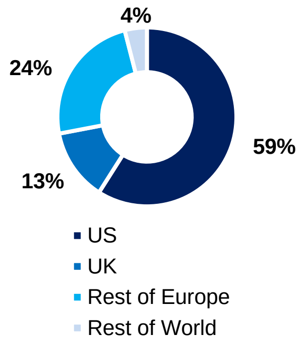
High-growth segments such as Powder Coatings, Marine and Protective Coatings, as well as **emerging markets for Decorative Paints** have been the focus of the Company. The investments in these areas **strengths its leadership in premium segments** as well as **maintain its position in the mid-market segments**, which promotes growth. This strategy **focuses on existing brands**, while **improving asset utilization throughout the supply chain**.

Ownership Structure

The company has **170.6 Million common shares outstanding**, representing one vote each, with a free float of 100%. Its shareholder base is composed of a diverse group of international investors, including institutional and private investors as well as ESG-focused shareholders. With almost **72% of the shares**, **institutional investors** are the **largest owners**. On the other hand, **North American owners represent 59% of institutional investor base**, followed by British and rest of European owners (Figure 15).

It is worth to mention that approximately 7% of the Company's share capital is owned by private investors and the top shareholders are Dodge & Cox (8.4%), followed by MFS Investment Trust Company N.A. (5.6%), as shown in Table 3.

Figure 15. Distribution of institutional shares in 2023 in %



Source: Company's reports, adapted by the author

Table 3. AkzoNobel Top Shareholders

Top 5 Shareholders		
#	Shareholder	Out.(%)
1	Dodge & Cox	8.41%
2	MFS Investment Management	5.59%
3	BlackRock Institutional Trust Company, N.A.	4.90%
4	Elliott Management Corporation	3.60%
5	Capital Research Global Investors	3.40%
Total		25.90%

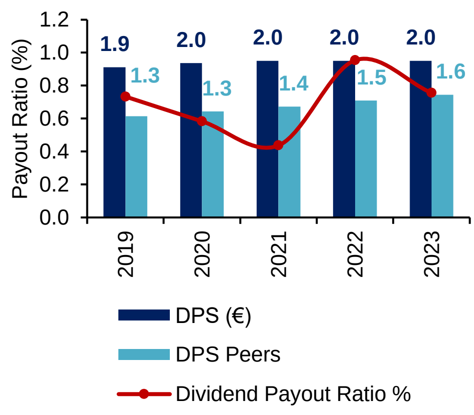
Source: Refinitiv, adapted by the author

Dividend Policy

AkzoNobel's dividend policy reflects the company's **commitment to providing steady income to shareholders**. The **dividend per share** (DPS) increased from €1.90 in 2019 to €1.98 in 2021 and has **remained steady** since then, at a **1% CAGR 2019FY-2023** (Figure 16). Also, the company has maintained **higher dividend payouts in comparison with its peers**, according to the Capital IQ median, making it an attractive option for investors.

Nevertheless, **over the same period EPS had a 0.6% CAGR**, starting at €2.53 in 2019 and rising to €4.48 in 2021, then decreased to €2.01 in 2022 and finally increased to €2.59. As a result, the dividend payout ratio has fluctuated between 43,7% and 95.4%. To be **sustainable in the long term**, it is expected that the Company eventually **balances its average earnings growth with the dividends growth**.

Figure 16. AkzoNobel DPS & Payout Ratio



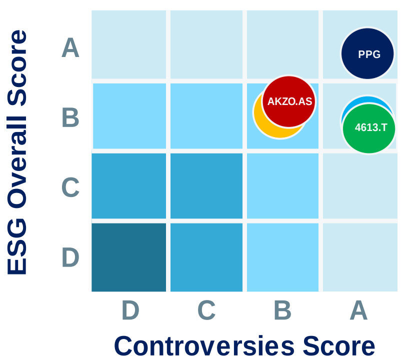
Source: Bloomberg; Capital IQ & Author analysis

3. Management and ESG

In absolute terms, **Akzo Nobel has positive performance regarding ESG, slightly behind one of its peers** (Figure 17), with an ESG overall score of B+ (Figure 18), and Controversies score of B+, leading to an ESG combined score of B+[1]. The company's ESG score changed from 76.46 to 73.69 based on the previous year, driven by changes in 10 of the 10 ESG subcategories. Improvements in categories such as Product Responsibility, Human Rights and Environment Innovation were offset by the decrease in Emissions, CSR Strategy and Workforce categories.

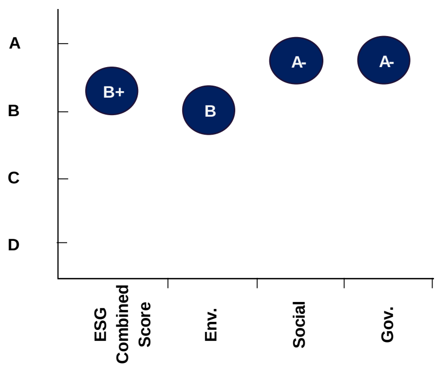
It is important to mention that in 2021 the company stated several ambitions to achieve by 2030, comprising its three main areas of focus: i) climate change, ii) circularity, and iii) health and well-being, shown in Figure 19. Furthermore, Akzo Nobel focuses on innovation of sustainable products, continuously expanding its portfolio, which is driven by five key drivers: i) reduced energy and carbon; ii) less waste; iii) reduce, reuse and renew; iv) health and well-being; and v) longer lasting.

Figure 17. Refinitiv ESG Score Matrix



Source: Refinitiv, adapted by Author

Figure 18. Akzo's Refinitiv ESG Pillars Scores



Source: Refinitiv, adapted by Author

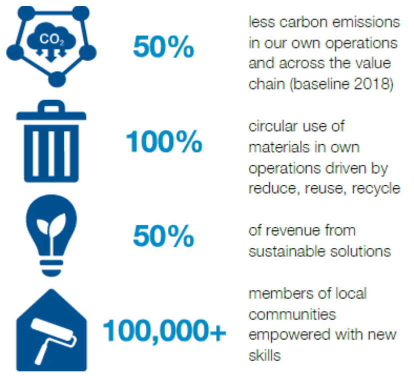
Environment

Regarding the Environmental Pillar, it is the lowest score among the pillars. In the year-over-year change, a decline has been evidenced with and 5-year average score of 72.83. Despite this, constant reductions of CO2 emissions have been experienced (Scope 1 and 2), with a -9.1% CAGR in the 2018-23 period (Figure 20), getting closer to the defined ambitions by 2030. Nevertheless, the score related to this pillar was lower in comparison with the others because of the ESG controversies in 2022, which are specifically related to a discharge of dangerous chemicals into the river Yealm in United Kingdom[2].

As mentioned previously, in 2021 the company announced its ambition to **reduce carbon emissions throughout the entire value chain by 50% by 2030**, with 2018 as the baseline year. This commitment includes both its own operations, Scope 1 and 2, and Scope 3, covering upstream and downstream operations. To achieve this, Akzo Nobel is focused on **key strategies** such as:

- Energy efficiency.
- Renewable electricity purchase and production.
- Collaboration with value chain partners.

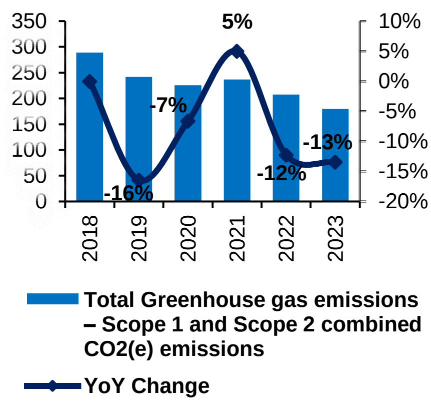
Figure 19. Akzo Nobel's ambitions by 2030.



Source: Company data

Akzo Nobel increased the use of solar energy in 2023. Furthermore, the company decreased its energy use in the same year. Regarding to the Scope 1 and 2, related to its own activities, the absolute energy consumption decreased by 4% from 2018 to the same period last year, and additionally, the relative energy consumption decreased by 7%. Despite stable absolute energy consumption compared to 2022, the relative energy consumption decreased by

Figure 20. Total Greenhouse gas emissions 2018-2023



Source: Company data, adapted by the author

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[1] The Refinitiv ESG methodology scores ranges from D- to A+, being D- the worse score and A+ the best Score. Refinitiv ESG Combined Score combines the weighted average score of ESG Overall Score with ESG Controversies Score. ESG Overall Score combines the weighted average of three pillars, i.e., Environment, Social and Governance.
[2] International Paint spills banned chemical into conservation area-Gov.uk.

6% in 2023 vs 2022, mainly driven by the energy efficiency measures implemented throughout the year (Figure 21).

Additionally, the company continued to increase its use of solar energy in 2023 by installing panels in different locations and acquiring renewable electricity with certificates of origin. With this, **Akzo exceeded its 2025 interim target of 50% and achieved a total renewable electricity percentage of 62% by the end of 2023** (2022: 50%), as shown in Figure 22. Also, **at the beginning of 2023, all manufacturing sites located in North America shifted to 100% renewable electricity**. Currently, the **company produces 3% of the electricity consumed onsite**, which helps to reduce its carbon footprint.

It is worth noting that 31 of the company's locations use solar panels as an alternative source of energy, and 82 of the company's locations currently use only renewable electricity; With about 30% of its solar capacity already installed and projects in development, AkzoNobel makes evident its commitment to accomplish its goal of 100% renewable electricity by 2030.

Social

In FY2022, AkzoNobel obtained a significant A- rating in its Social pillar, due to notable improvements in three out of four categories. **It is the highest in comparison with its peers**. The Human Rights category improved by 1.64 points, resulting in a score of 86.52, indicating the company's commitment to ethical business practices and strong human rights procedures. At the same time, the Community category maintained a strong score of 95.65, showing AkzoNobel's continuous commitment to community engagement initiatives. Additionally, the Product Responsibility category made great progress, with a positive change of 5.53, which achieved a score of 66.45. This progress reflects AkzoNobel's progress in responsible product developments, which address ESG concerns about the impact its products have on the environment and customers.

Management and Corporate Governance

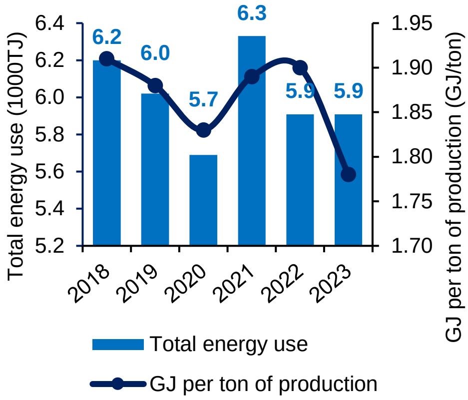
The company received an A- rating in its Governance pillar in FY2022, which corresponds to one of the highest over all the ESG categories. It should be highlighted that AkzoNobel has the Best Governance Score among peers, especially regarding Shareholders.

Despite a slight decrease of -5.03 in comparison with FY2021, the Shareholders category grew significantly, with a change of 1.10 and a score of 97.25, indicating AkzoNobel's commitment to shareholder interests. Furthermore, with a small reduction of -1.41 and a score of 89.04, the CSR Strategy category demonstrates the company's focus on strategic changes to improve its corporate social responsibility structure. These positive changes contribute to AkzoNobel's high A rating in the Governance pillar, indicating the company's commitment to effective management practices, shareholder value, and an optimized CSR strategy.

The Bord of Directors ("BoD")

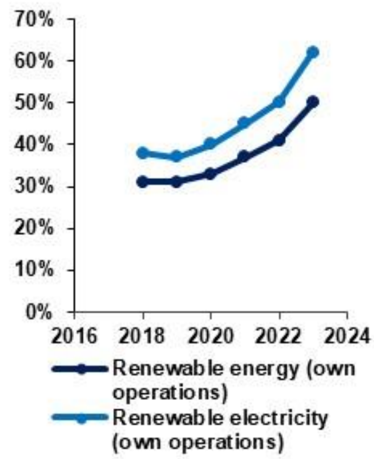
Under Dutch law, the **company's management and supervision follows a structure called two-tier system**, or two levels, with a **Board of Management** (which is exclusively composed of executive directors) and a **Supervisory Board** (all of which are non-executive directors). The Supervisory Board manages and guides the Board of Management, ensuring an external presence in how the

Figure 21. Total energy consumption 2018-2023



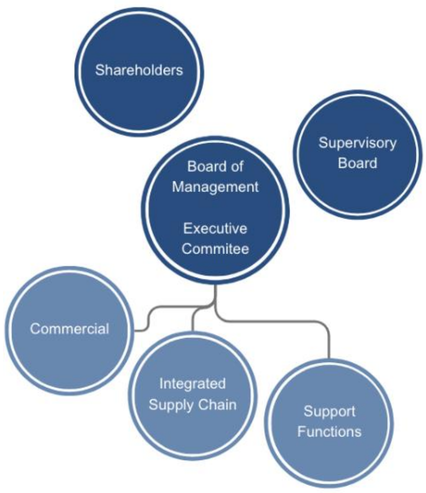
Source: Company data, adapted by the author

Figure 22. Renewable energy and electricity from own operations



Source: Company data, adapted by the author

Figure 23. Corporate Governance Structure



Source: Company's reports, adapted by the author

company is regulated. **Both Boards are independent of one another, and report to the Annual General Meeting (AGM) of Shareholders** (Figure 23).

The business is managed by the Board of Management, working along with an Executive Committee (ExCo), which has day-to-day management responsibility and ensures that the strategies, policies and resources are aligned to achieve the business targets. This committee includes members of the Board of Management, such as the CEO and CFO, as well as individuals in key positions in different areas of the business (Table 4). This guarantees that the business operations and financial matters are represented at the top level of the company. The Executive Committee supports the Board in these activities by aligning with the company's interests and taking into consideration the stakeholders' best interests.

To guarantee that the company's governance and management are balanced, the Supervisory Board has an important role. It involves discussions and approves important decisions and strategies. Then, it discloses a report summarizing its meetings and activities at the end of each fiscal year.

AkzoNobel **encourages diversity and has a Diversity Policy in place for the composition of the Board of Management and Executive Committee**, with an emphasis on nationality, age, gender, education, and work background. The Diversity Policy attempts to introduce new perspectives, boost performance, and fit with the company's objectives. While the company currently differs from the gender target due to the small size of the Board, it is appropriate to guarantee that the best people are selected and approved; on the other hand, the Supervisory Board meets the standards of the Dutch Gender Diversity Bill, with five male and three female members (Figure 24).

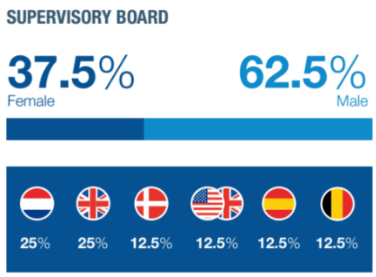
Table 4. Company's Boards and Officers

Supervisory Board	
Nils Smedegaard Anderse	Ester Baiget
Byron Grote	Patrick Thomas
Pamela Kirby	Hans Van Bylen
Dick Sluimers	Jolanda Poots-Bijl

Name	Function
Management Board	
Greg Poux-Guillaume	CEO & Chairman
Maarten de Vries	CFO
Executive Committee	
Karen-Marie Katholm	Chief Integrated Supply Chain Officer
Michael Friede	Chief Commercial Officer - Performance Coatings
Joelle Boxus	Chief Human Resources Officer
Hilka Schneider	General Counsel

Source: Company's reports, adapted by the author

Figure 24**.** Supervisory Board composition



Source: Company's reports

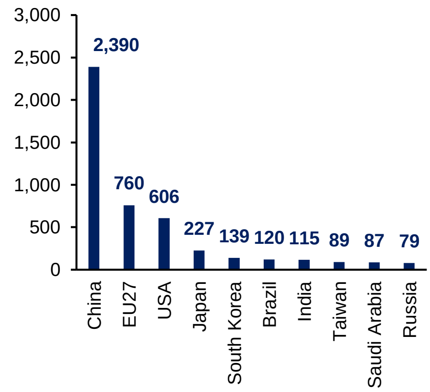
4. Industry overview and competitive positioning

The specialty chemicals sector, a subsegment of the broader chemical industry, is characterized by a diverse range of high-value products made for specific applications in different industries, including construction, automotive, personal care, and industrial manufacturing. Companies within this industry have establishedstrong market positions through innovation, extensive product portfolios, and strategic operations. In 2022, the global chemicals market recorded revenues of €4,612 billion, with Europe contributing significantly to global exports (Figure 25), exhibiting a Compound Annual Growth Rate (CAGR) of 4% between 2017 and 2022. China emerged as the leader in global sales, contributing significantly to the market's growth. Notably, Europe solidified its position as the top leader in global chemical exports in 2022, with Germany playing a key role in this segment (Figure 26).

An oligopoly market structure characterizes the chemical industry in Europe, particularly the Specialty Chemicals sector. This category, which includes crop protection, paints and inks, complementary supplies for industry, dyes, and pigments, accounted for 25% of sales within the EU27 in 2022 (Figure 27).

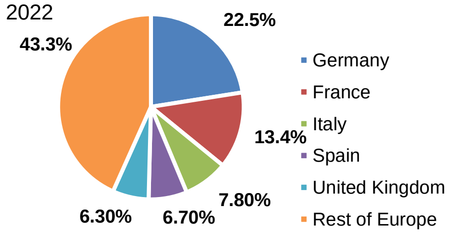
Additionally, it is worth noting that the industry is characterized by its high activity of mergers and acquisitions. According to Deloitte, Despite the decrease in 2023 of mergers and acquisitions activities in the industry due to economic conditions (-16% vs 2022), "the long-term outlook for chemicals remains strong as, when

Figure 25. Global chemicals market in 2022 €



Source: Cefic Chemdata International, adapted by the author

Figure 26. Europe chemicals market, geographic segmentation: % share, by value 2022



Source: MarketLine, adapted by the author surveyed, 86% of chemical executives were at least somewhat likely to undertake a merger or acquisition in 2024, reflecting a hopeful outlook" [3].

Industry Trends

From 2022 to 2027, the specialty chemicals market is projected to grow at a compound annual growth rate (CAGR) of 7.6%, according to MarketLine. Innovations in technology and sustainability strategies are driving this expansion. There has been a noticeable shift toward sustainable practices, with businesses working hard to reduce their impact on the environment and increase the sustainability of what they produce. The increasing application of automation, IoT (Internet of things), and advanced instrumentation systems are enhancing operational efficiencies, reducing expenses, and driving market expansion.

Restraints

The Rusia-Ukraine conflict

The conflict between Russia and Ukraine caused increases in the price of crude oil in 2022 (Figure 28), which in turn caused disruptions in global energy markets and uncertainties in energy flows, which eventually affected pricing dynamics and market stability. In fact, these events disrupt the supply chain, causing shortages of important raw materials for paints and coatings. This may drive up commodity prices and inflation (Figure 29), reducing profit margins. Labor, transportation, and other expenses could also rise. Additionally, political disruption might lead to currency fluctuations and trade interruptions, impacting revenues and costs.

Pandemic disruptions

On the other hand, the COVID-19 pandemic highlighted the need for resilience by exposing weaknesses in the supply chain. Also, changes in interest rates brought on by the central bank's anti-inflationary measures may discourage investment for expansions and research and development.

Interest rates fluctuations

Interest rates changes cause financial challenges, and the inflation-reduction measures imposed by central banks might discourage investment in expansions as well as in R&D.

Regulatory barriers

Regulatory barriers raise operating costs. Companies are subject to strict safety regulations that come with significant financial costs. Complex international laws controlling the chemical sector make compliance expensive and costly in terms of resources, especially for smaller businesses.

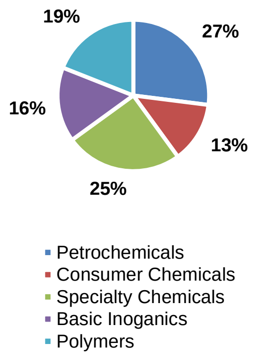
Drivers of profitability

Economic growth, especially in China and India, and a rising global population boost demand for chemicals. Emerging markets' growth creates opportunities for the chemical industry. **The global population is expected to increase from 7.7 Billion in 2020 to 9.7 Billion by 2050 by the United Nations**, with a **CAGR of 0.88%** (Figure 30), driving demand across different industries.

One of the main drivers is the economic expansion of emerging markets, particularly China, whose notable GDP development is increasing the demand for chemicals in industries like consumer goods manufacturing, agriculture, and construction. In addition, there is a growing worldwide population, which means that there will be a longer-term need for chemicals in industries like construction, agriculture and pharmaceuticals.

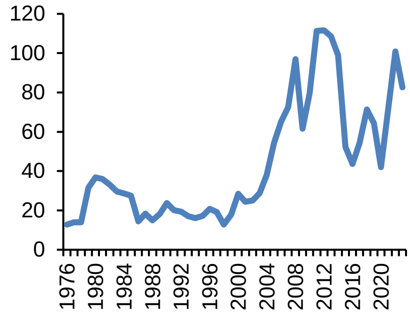
[3] (England & Botterill, 2024)

Figure 27. EU27 chemicals sales by segment %, 2022



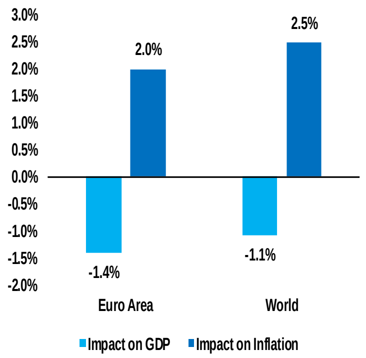
Source: MarketLine, adapted by the author

Figure 28. Brent crude oil price in €



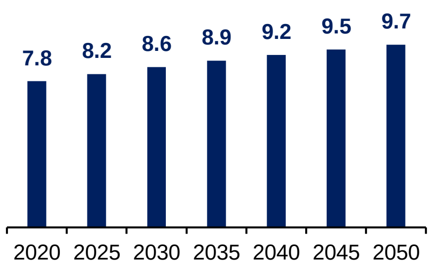
Source: Statista, adapted by the author

Figure 29. Impact of War on GDP and Inflation



Source: OECD Economic Outlook, Interim Report March 2022, adapted by the author

Figure 30. Development of the world population from 2020 to 2050 (in Billions)



Source: United Nations World Prospects, adapted by the author

The market benefits from a steady economic recovery and growth resulting from decreases in commodity prices. For instance, **India's GDP is expected to expand by 12.5%**, indicating plenty of opportunity for investment and market expansion in the chemical industry.

Additionally, the **automotive industry is expected to rise to $3,462.5 Billion by 2026**, indicating an increasing demand for specialty chemicals used in paint and plastic components.

Demand Trends

World population

The demand for specialty chemicals is anticipated to rise in 2024, driven by industrialization, urbanization, consumer spending, and technological advancements. **By 2030, there will be 8.5 Billion people on the planet, and by 2050, there will be 9.7 Billion.** Additionally, the **urban population share is also anticipated to rise from 56% in 2020 to two-thirds by 2040**, with most of the growth occurring in the developing world (Figure 31). As more people live in cities, there will be a higher demand for specialty chemicals across many industries.

World GDP growth and consumer prices

The global economy is recovering from COVID-19, **with GDP growth expected to stabilize around 3% annually from 2023 to 2028**, according to the World Economic Outlook report by IMF (Figure 32). Rising consumer prices and potential inflation adjustments by central banks may impact the industry.

Global consumer **price inflation is expected to rise from 0.34% in 2023 to 6.63% by 2028** (Figure 33). High inflation and more restrictive credit conditions could risk economic recovery, leading central banks to raise interest rates to control inflation.

Construction Index

The construction index, which measures the activity of the building sector, drives demand. **Economic downturns or changes in building activity can impact sales volumes, affecting revenue and profitability**. Companies must follow construction trends and adapt their product offerings to match market changes. For instance, AkzoNobel's decorative paints are widely used in construction and its revenue growth is directly related to the European construction index growth (Figure 34).

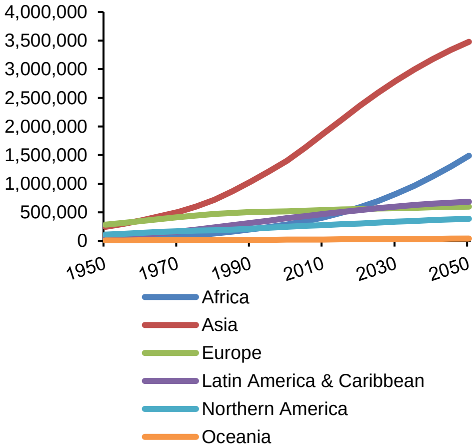
Implications for Specialty chemicals industry demand

Industry demand is expected to rise in 2024, driven by industrialization, urbanization, consumer spending, and technological advancements. The global clean energy transition will further increase demand for specialty chemicals, with mineral requirements for clean energy technologies predicted to double or quadruple by 2040. The **market size is projected to grow from €558.25 Billion in 2023 to €794.55 Billion by 2030, at a CAGR of 5.2%**, according to Gran View Research.

Global Specialty Chemicals Supply

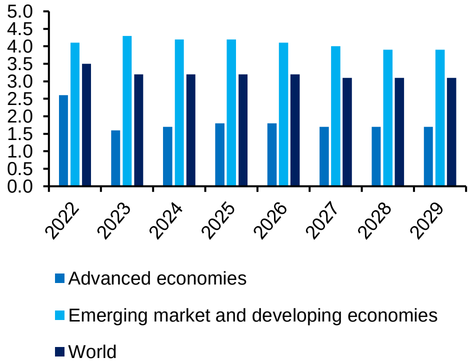
As mentioned in the previous section, the cost and availability of raw materials influence the specialty chemicals industry. High prices for commodities like oil and gas increase production costs. However, recent declines in crude oil, as well as natural gas prices have reduced production costs and the prices of downstream products, affecting market volatility. Lower crude oil prices are expected to continue, potentially reducing overall production costs for specialty chemicals.

Figure 31. Population living in urban areas worldwide from 1950 to 2050, by region (in Millions)



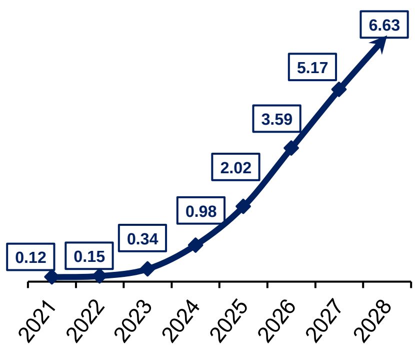
Source: United Nations World Prospects, adapted by the author

Figure 32. Real Gross Domestic Product growth forecast (GDP) from 2022 to 2028, by region %



Source: IMF World Economic Outlook, adapted by the author

Figure 33. The consumer price index (CPI) Forecast



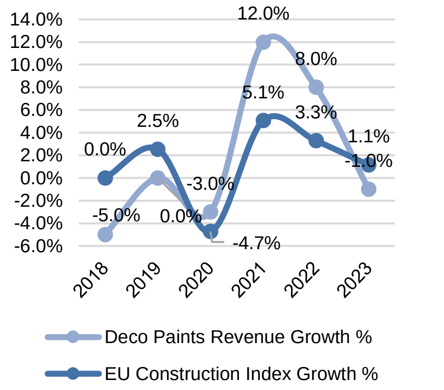
Source: Statista, adapted by the author

Competitive Positioning

Peers identification

For the competitive positioning analysis, all the companies identified as "Specialty Chemicals" according to Bloomberg's BICS were taking into consideration when identifying Akzo Nobel's peers. Then, businesses in the same industrial sector of Paints and Coatings were taken into consideration when identifying peers for competitive position research, with the understanding that peers in the same industry have similar economic characteristics in terms of growth, profitability, and risk. Additionally, the **Sum of Absolute Rank Differences (SARD) approach was used to choose comparable companies**. For this, companies are ranked using this method according to a few characteristics in relation to other companies in the sample. The companies with the lowest total of rank differences are considered the target company's peer group (Figure 35), as indicated in Appendices 5 and 6.

Figure 34. Decorative Paints Revenue growth vs EU Construction Index growth 2018-2023



Source: Eurostat Database, adapted by the author

Figure 35. Akzo Nobel potential peers

SARD Rank	Company	SARD Result
	Akzo Nobel N.V	**0**
1	Axalta Coating Systems Ltd	14
2	RPM International Inc	18
3	Nippon Paint Holdings Co Ltd	18
4	PPG Industries Inc	19
5	Berger Paints India Ltd	19
6	Sherwin-Williams Co	29

Source: Bloomberg, adapted by the author

Porter's 5 Forces

Threat of new entrants | Low (2)

The threat of new entrants into the industry is relatively low, by the following factors:

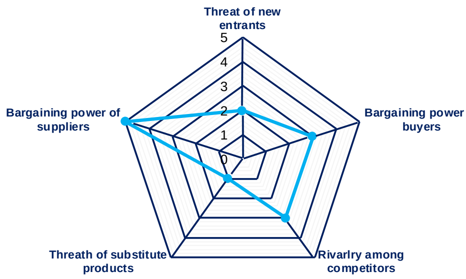
- High entry barriers since the business requires a high amount of capital investing as well as expertise and knowledge of the nature of the industry.
- Economies of scale provide advantages, but strong multinational companies limit new entrants.
- Entry through acquisition is possible but involves time, capital, and political trade conflicts that should be taken into consideration.
- The lack of diversity in commodities facilitates new entries.

Bargaining power of buyers | Moderate (2)

Bargaining power of buyers is moderate, considering:

- Several buyers are available since the chemical sector has a broad range of applications. This indicates that no single buyer is very powerful.
- Due to the size and diversity of the sector, buyers have a lot of influence in negotiations.
- Because most chemicals are similar, customers can quickly move between suppliers. This increases buyer power and makes it important for companies to keep their prices low.

Figure 36. Porter's five forces



Source: Author's analysis

Bargaining power of suppliers | Moderate (2)

Bargaining power of suppliers is relatively moderate, considering:

- Raw materials such as oil and natural gas are expensive to explore and produce, which increases the power of suppliers.
- The industry has an oligopoly structure with few suppliers, strengthening its bargaining position.
- To obtain more control and influence in the market, many suppliers have expanded their business by including sales and distribution.
- Despite their advantages, a lot of suppliers rely on big orders from customers, which limits their total influence.

Threat of substitute products | Very low (2)

The actual threat of substitute products or services is relatively very low, by the following factors:

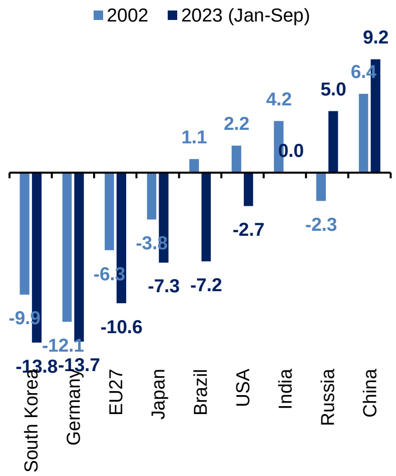
- Chemicals are essential to produce several goods, and there aren't many viable substitutes for them.
- Reducing carbon footprints is becoming more and more important, which promotes using chemicals that are natural rather than artificial ones.

Rivalry among existing competitors | Strong (2)

In terms of rivalry among existing competitors, the overall assessment is relatively strong considering:

- High fixed costs contribute to intense rivalry in the chemical industry.
- In Asian markets, the opening of the economy encourages investments, increasing competition.
- Rapid growth and industrialization in China intensify rivalry.
- The low diversity in products contributes to a stronger rivalry.

Figure 37. Chemicals Production growth % in main countries 2002-2023



Source: Eurostat, adapted by the author

SWOT Analysis

Figure 38. SWOT Analysis

Strengths	Weaknesses
• Global presence in diverse markets and opportunities for expansion • Wide range of product portfolio, serving various industries • Innovation in products and technologies, staying ahead of competitors • Sustainable initiatives and products • Brand recognition globally	• Raw material price volatility • Competitive market • Sensitivity to economic cycles • Complex supply chain
Opportunities	**Threats**
• Growing construction industry • Rising demand for sustainable products • Expansion into emerging markets • Digital transformation	• Economic downturns • Regulatory changes • Currency exchange rate fluctuations • Commodity price volatility

5. Investment Summary

The final recommendation for AkzoNobel is to **BUY**. This recommendation is based on **a target price of €85.18 per share** (Table 5**Error! Reference source not found.**), using the Free Cash Flow to Firm (**FCFF**) method, indicating an **upside potential of 47.77%** as of June 25, 2024[4], reflecting that the shares are likely to increase significantly in value.

This positive outlook is driven by its efforts on **strategic initiatives to improve its operations**, as well as **ongoing investments in innovation and sustainability**, which are related to its **Industry Transformation plan**. This new strategy includes an **unlocking value of around €250 Million**. Additionally, the company aims to **achieve an EBIT of €1.7Billion by 2027**.

Table 5. Price Target Breakdown

DCF Breakdown	
Equity Value (€ m)	14,529.7
Shares Outstanding (m)	170.6
Value Per Share (€)	**85.2**

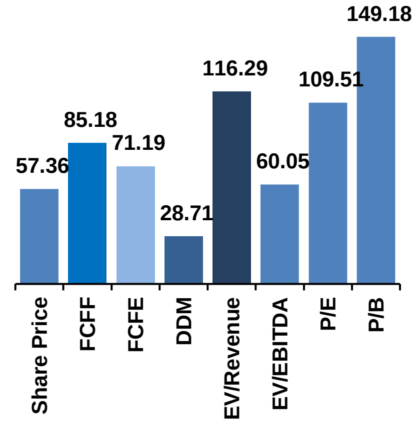
Source: The Author

Valuation Methods

As mentioned above, the **target price was calculated applying the Discount Cash Flow Model (DCF) through the Free Cash Flow to Firm**. To complement this approach, valuations methods such as **Free Cash Flow to Equity** (FCFE) and **Dividend Discount Model** (DDM) were performed. A **share price of €71.19 was obtained from the FCFE model**. On the other hand, a **share price of €28.71 was the result of the DDM**.

In addition to this, a **relative valuation approach** using market multiples such as **EV/EBITDA, EV/Revenue, P/E and P/B ratios** was applied. Using the **EV/EBITDA multiple**, which best reflects the company's financial profile and operational performance, a **share price of €65.49** was obtained, suggesting a potential increase of 13.6% from its current share price, and 23% less than the target price using the FCFF approach (Figure 37). Since the **FCFF method is very similar to the consensus numbers**, this approach was selected to achieve the final target price.

Figure 39. Valuation Methods in € per share



Source: The Author

Investments Risks

The company's stock price is susceptible to changes in raw material prices and global economic changes. Environmental and operational challenges are also important, particularly in terms of compliance with environmental regulations and potential incidents that could impact financial performance. Additionally, if AkzoNobel's ESG performance is behind industry standards, it may influence the decision of investors who prioritize sustainability.

[4] Based on Euronext Amsterdam Exchange

6. Valuation

For a better understanding of this section, from Appendix 1 to Appendix 6, it is possible to find the forecasted financial statements such as Income Statement, Balance Sheet and Cash Flow Statement.

Industry Transformation Plan

In 2023, AkzoNobel announced its **Industry Transformation Plan**, to be executed **over a five-year period and concluding in 2027**. This plan involves the **reduction of complexity** across its production processes, **improving its capacity**, as well as **modernizing production facilities**. With this, it is expected to unlock approximately **€250 Million in value through cost savings and efficiency gains** in the mentioned period, incurring in a one-time investment of around €130-150 Million and €150 million in incremental CAPEX spread over 2024-2026.

Additionally, the company expects an **EBIT of €1.7 Billion by 2027**, driven by a decline in operating expenses and cost of goods sold. This was a key aspect to consider in the valuation of the company.

Revenue

Despite the challenges the industry has faced in the past, especially the post-pandemic effects as well as fluctuation in raw materials prices, **historically the company's total revenue increased from €9,276 million to €10,668 Million in the fiscal period 2019-2023.** For the forecasted period from 2024 to 2028, AkzoNobel **is expected to achieve a CAGR of 3.2%** approximately.

As a company that is very sensitive to global economic trends, its forecasted revenues are directly associated with economic indicators. For this, **the top-down GDP growth approach** was used, after calculating a positive correlation between revenue growth and GDP growth from the fiscal period 2019-2023. To obtain accurate values, the I**MF World Economic Outlook (2023) was used with the forecasted GDP growth rates from 2024 to 2028**. As seen in Figure 40, there is a strong relationship between growth related to historically sales from both Decorative Paints and Performance Coatings and Global GDP growth.

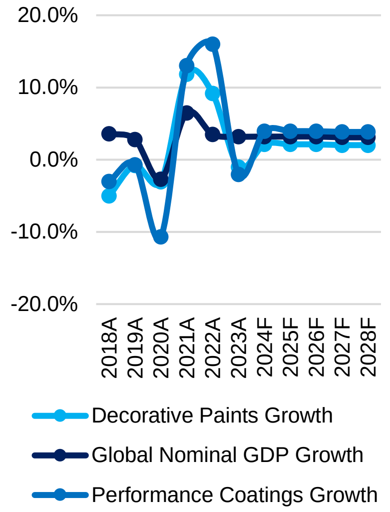
Finally, an adjustment to it was made taking into consideration the historical relationship between the company's growth and the real GDP growth, at a segment level. In **FY 2028**, AkzoNobel's total revenue is estimated to be around **€12,479 Million** (Figure 41).

It is worth noting that the proportion of revenue contribution of each segment was maintained to ensure **consistency with historical performance**. According to the forecast, **the Decorative Paints segment is expected to provide around 40% of total revenue**, while the **Performance Coatings segment is expected to continue contributing around 60% of total revenue**.

Operating Costs

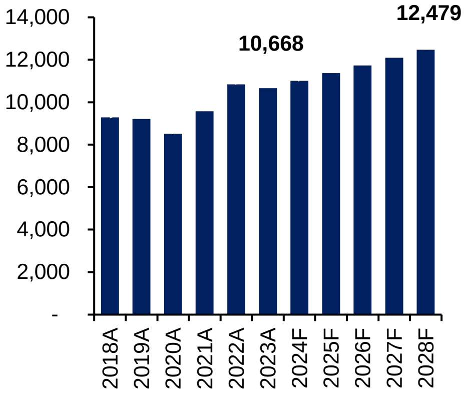
It is estimated the **gross profit margin** to **increase from 39.7% in 2023FY to 40.9% in 2024FY, increasing 0.7% on average until 2026FY**, and to **stabilize at 42.2% from 2027FY onwards**. On the other hand, **operating expenses as**

Figure 40. Revenue Growth per Segment and GDP Growth 2018-2028



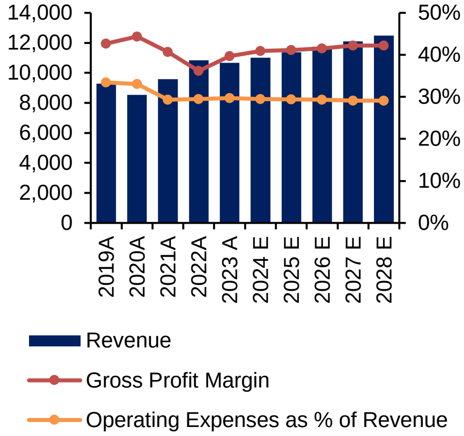
Source: Bloomberg, IMF and Author's Analysis

Figure 41. Total Revenues Forecasted, in € Million



Source: Bloomber and Author's Analysis

Figure 42. Operating Costs in and Revenue in € Million 2019-2028



Source: Bloomber and Author's Analysis

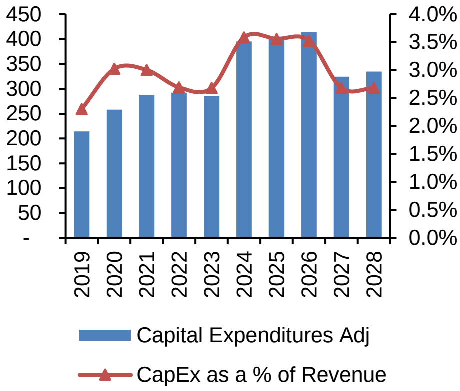
percentage of revenue is expected to **decrease at CAGR of -0.45% from 2023FY-2026FY**, and to **stabilize at 29.1% from 2027FY onwards** (Figure 42). As mentioned earlier, due to the Industry Transformation plan, the purpose is to unlock approximately €250 Million in value by 2027, distributed in around **€ 180-200 million from cost savings** through optimizing its processes and reducing unit production costs, which are allocated in **reduction of Cost of Goods Sold**, and **€50-70 million from efficiency gains** through increased asset utilization and operational improvements, allocated in **reduction of Operating Expenses**.

Capital Expenditures

In order to implement the Industry Transformation Plan, it is necessary to have **one-time investments of €130-150 Million and incremental CapEx of €150 Million**, spread over 2024-2026. The allocation of these investments was made uniformly through the mentioned years. From 2027FY onwards the capital expenditures were calculated in the regular way, taking into consideration the revenue growth, to keep the company's commitment to innovation (Figure 43).

Property, Plant & Equipment (PP&E) is also impacted by the Industry Transformation Plan. This includes the improvement of asset utilization, modernization of production facilities, as well as adopting advanced technologies.

Figure 43. Capital Expenditures in € Million 2019-2028



Source: Bloomber and Author's Analysis

Free Cash Flow to the Firm

The Free Cash Flow to the Firm (FCFF) approach was used to perform AkzoNobel's valuation, using the **Discounted Cash Flow (DCF) method**, indicating a **share price of €85.18**. For this, it was necessary to project future cash flows from the company **from 2024E-2028E** and discount them to their present value **using the Weighted Average Cost of Capital (WACC)**. Additionally, **to estimate the perpetual growth** of the company's cash flow, it was determined a **terminal growth rate**.

Weighted Average Cost of Capital

The weighted average cost of capital is the cost of different components of financing used by the firm, weighted by their market value proportions[5].

Cost of Equity: It was calculated using the Capital Asset Pricing Model (CAPM), taking into consideration the following inputs (Table 6):

- **Risk-Free Rate:** Based on the normalized return on the AAA Rated 10Y-Year maturity Euro area Government Bond.
- **Country Risk Premium (CRP):** Based on the weighted average of Country Risk Premium of AkzoNobel's main markets using Damodaran table and average percentage of sales per region.
- **Market Risk Premium (MRP):** Based on KPMG estimate by March 31, 2024, for the Netherlands.
- **Beta:** Based on the regression approach, using the STOXX50E and daily data for one year (53 observations). Then, this beta was adjusted using the Blume adjustment.

Table 6. Discount Rate Assumptions

Weighted Average Cost of Capital	
Risk-free rate	1.6%
Country Risk Premium (CRP)	1.7%
Risk-free (Rf)	**3.3%**
Beta (β)	0.96
Market risk premium (MRP)	6.5%
Cost of Equity	**9.5%**
Cost of Debt	**4.8%**
Equity (E/(D+E))	69.6%
Debt (D/(D+E))	30.4%
Tax Rate	31.9%
WACC	**7.6%**

Source: Author's Analysis

[5] (Damodaran, 1995)

Cost of Debt: It was calculated using the following formula: $K_d = R_f + Spread$. For the spread, it was assumed **1.47%** based on Damodaran's synthetic rating for larger firms, taking into consideration the **S&P Global Rating for AkzoNobel**, which is **BBB.**

Terminal Growth Rate

Given the strong growth drivers in the industry, it is assumed that long-term growth will match the inflation rate. Therefore, a **terminal growth rate of 2.00% has been chosen, in line with the European Central Bank's target for inflation**. It is believed that AkzoNobel will be able to maintain its market leadership, pricing power, and overall resilience, which should allow the company to achieve sustained growth at this rate over time.

Free Cash Flow to Equity

To complement the FCFF approach, the Free Cash Flow to Equity (FCFE) was performed, obtaining a **share price of €71.19**. Among all the valuations methods that were performed in this project, this is the closest both to the FCFE and consensus. For AkzoNobel, the FCFF method includes the company's whole capital structure and operational efficiency, whereas the FCFE approach takes into consideration financial leverage and debt level changes.

Relative Valuation

As mentioned before, a relative valuation approach was performed to complement the DCF model, taking into consideration **EV/EBITDA, EV/Revenue, P/E and P/B** ratios. The final target price for AkzoNobel under the relative valuation was considered as the one resulting from the **EV/EBITDA multiple**, as it is the **closest to the consensus** among the ones that were calculated, showing an upside potential of 13.6% (Table 7). Furthermore, this multiple is a good approach for comparing companies since it is not influenced by the company's capital structure or its amount of debt, providing a consistent valuation metric that is focused on the operational performance of businesses rather than how it is financed[6].

Table 7. Relative Valuation

EV/Revenue	
Peer median	2.1x
Revenue FY2024	11,010
Enterprise Value (€m)	23,562
Implied Market Value	19,840
# Shares Outstanding (m)	170.60
Share Price	**116.29**
EV/EBITDA	
Peer median	14.1x
EBITDA FY2024	1,626
Enterprise Value (€m)	22,970
Implied Market Value	19,247
# Shares Outstanding (m)	170.60
Share Price	**112.82**
P/E	
Peer median	28.3x
# Shares Outstanding (m)	170.60
Net Income FY2024	661
EPS	3.87
Share Price	**109.51**
P/B	
Peer median	5.3x
# Shares Outstanding (m)	170.60
Book Value of Equity FY2024	4,839
BPS	28.36
Share Price	**149.18**

Source: Bloomber and Author's Analysis

Dividend Discount Model

As another approach, the Dividend Discount (DDM) model was also performed to value AkzoNobel, obtaining an **equity value per share of €28.71**. To **project the dividends per share** for the fiscal period 2024FY-2028FY, the **2% growth rate aligned with the European Central Bank's inflation target** was used, and the **cost of equity from the Capital Asset Pricing Model** (CAPM) already calculated (9.5%).

Apart from the fact that the value per share obtained is below the consensus, **it might not take into consideration the company's growth potential and industry dynamics**, suggesting that a more comprehensive valuation could be possible with models such as DCF.

Table 8. Consensus Recommendations

Consensus Recommendations		
Recommendation	**#**	**%**
Buy	6	33%
Outperform	4	22%
Hold	7	39%
Underperfom	1	6%
Sell	0	0%
Total	**18**	**100%**

Source: S&P Global Market Intelligence

Author vs. Consensus

Despite some differences from the recent estimates, the author's recommendation is not that far from consensus. **With about 33%** of the

[6] (Hayes, 2024)

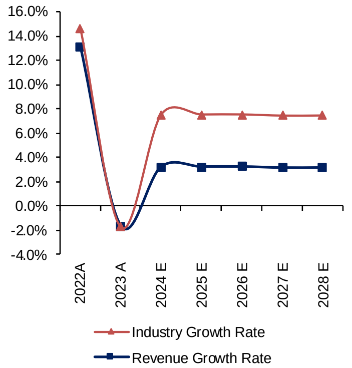
estimates, analysts' **recommendation remains in BUY** (Table 8). According to Capital IQ median, the target price related to the consensus is **€78.50.**

7. Financial Analysis

Growth and Profitability

AkzoNobel performance has been consistent with the Paints and Coatings Industry over the last years and expect to continue a stable growth in the forecasted period. **The company increased its revenues at a CAGR of approximately 4.5% from 2010FY-2023FY**. In **2023FY**, its revenues accounted for **€10,668 Million, -2% vs 2022FY**. Despite the recovery of the increase in raw materials prices and its projected normalization in the future periods, the global economy faced challenges in 2023 mainly driven by geopolitical tensions and high inflation, which led to a fluctuating demand. **In 2022FY, the company increased its revenues by 13%,** accounting for €10,846 Million, due to pricing **strategies to offset high commodities prices**, and **post pandemic recovery** across subsegments. Regarding **2021FY**, the revenue rise to €9,587 Million, **+12% vs FY2020**, showing the company's ability to outperform the market and demonstrating resilience during the pandemic.

Figure 44. Industry vs AkzoNobel Growth

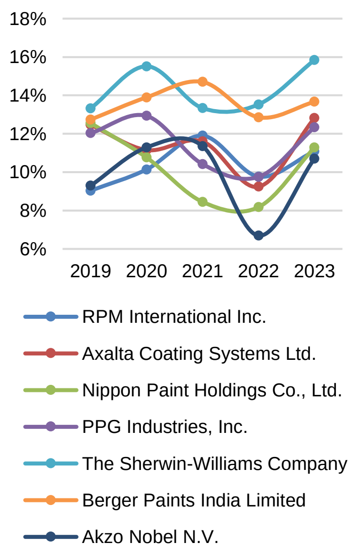


Source: Capital IQ; Author's Analysis

On the other hand, the **Paints and Coatings Industry is expected to growth at a CAGR of approximately 4.97%** according to Industry research. The outlook of the segment is mainly driven by an expected high demand in the construction, automotive and marine sectors. Additionally, the industry has been benefited from experiencing **higher demand in key markets** such as Asia, North America and Europe.

Due to challenges previously described, the company's operating margin fluctuated from 2019FY-2023FY. In FY2020, AkzoNobel increased its **operating margin to 11.29% (+2pp vs FY2019)** and then remained **stable at 11.36% in 2021FY**. However, because of increased raw material costs and supply chain interruptions, it dropped to the **lowest level of 6.69% in 2022FY**, as well as becoming the lowest among its peers (Figure 45).

Figure 45. Operating Margin vs Peers



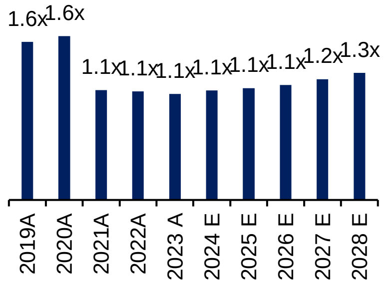
Source: Capital IQ; Author's Analysis

Looking forward, AkzoNobel's **operating margin is forecasted to improve steadily, reaching 13.11% by 2027 and 2028**. This anticipated growth reflects the results regarding the Industry Transformation plan, which is expected to increase profitability when reducing operating expenses and strengthening its market position. This suggests AkzoNobel is on a **positive trajectory towards better financial performance in the coming years**.

Liquidity

For AkzoNobel the current ratio has been above 1 historically. In **2020FY the ratio increased to 1.64 (vs 1.58 in 2019FY)**, being slightly below the industry median for that year (1.78 according to Capital IQ) but **above three of its six peers**, indicating a strong liquidity position. Opposite to this, the company decreased its current ratio from 2021FY-2023FY, indicating tighter liquidity. However, **starting in 2024, it is expected to gradually improve**, achieving a **current ratio of 1.7 by the end of 2028** (Figure 46). This implies that AkzoNobel will probably improve its liquidity position so that it can more easily satisfy its

Figure 46. Current Ratio 2019A-2028F

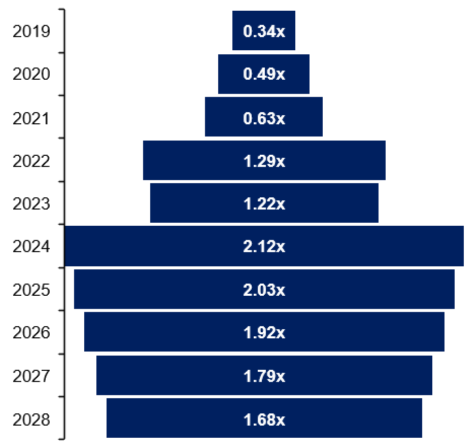


Source: Capital IQ; Author's Analysis short-term obligations going forward, which remains in line with the results derived from the Industry Transformation Plan.

Solvency

In terms of solvency, AkzoNobel has a **high credit rating**, obtaining a **BBB based on the S&P Credit Rating in 2023FY**. During the **2019FY-2023FY** period, the company's **D/E ratio increased to 1.22x (+0.9pp).** However, it always remained **below the industry median**, being one of the **lowest in 2019FY and 2020FY among its peers,** according to Capital IQ. On the other hand, during the upcoming Industry Transformation Plan from 2024FY-2027FY, it is expected that the **D/E ratio increases to 2.23x** because of the investments projected, **assumed to be financed by debt**. By 2028FY, it is expected that this ratio would decrease to 1.68x (Figure 47).

Figure 47. D/E ratio 2019A-2028E

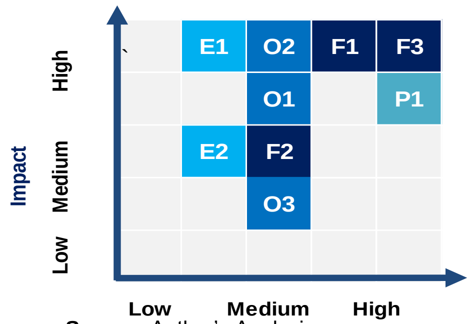


Source: Author's Analysis

8. Investment Risks

AkzoNobel faces diverse risks which must be taken into consideration. These risks include: i) **Financial Risks**; ii) **Operational Risks**; iii) **Environmental and Sustainability Risks**; and vi) **Political and Regulatory Risks,** which are described below and shown in Table 9 and Figure 48.

Table 9. Risk Matrix



Source: Author's Analysis

Financial Risks

Economic Turndown (F1)

AkzoNobel's performance depends significantly on the global economy as well as consumer expenditure. The company has large operations across Europe. Asia-Pacific and the Americas; hence a recession in these regions would reduce its product demand and consequently impact its sales and earnings.

Mitigation: The company is constantly diversifying its products portfolio as well as expanding into emerging markets. Moreover, AkzoNobel adopts flexible cost strategies to adapt to changes in the economy.

Exchange Rates Fluctuations (F2)

The company has exposure to fluctuations in foreign exchange rates since a major part of its revenue comes from foreign currencies. Concerning the operating expenses, most of which are in euros, alterations in currency values could affect its financial performance.

Mitigation: The business most likely uses financial instruments to hedge against currency risk and protect itself from unexpected fluctuations in exchange rates.

Raw Material Prices (F3)

Fluctuations of the price of the raw materials can be even more extreme due to factors such as supply-demand shifts and political instability. This volatility may affect a company's cost of production and gross or operating margins.

Mitigation: AkzoNobel employs flexible cost strategies to mitigate the impact of volatile raw material costs, such as long-term contracts and substitute components.

Figure 48. Key risks and mitigation

Risks	Mitigation
Financial Risks	
Macroeconomic Environment	Diversify products and markets
Exchange Rates Fluctuations	Hedge currency risks;Forecast expenses
Raw Material Prices	Flexible cost strategies
Operational Risks	
Management of Suppliers	Use multiple suppliers;Regular evaluation
Business Disruptions	Contigency plans; Comprehensive insurance
Talent Managemnet	Competitive wages; growth opportunities
Environmental and Sustainability Risks	
Natural Disasters	Resilient infraestructure; Quality insurance
Climate Change Regulations	Sustainable operations
Political and Regulatory Risks	

Source: Author's Analysis

Operational Risks

Management of Suppliers (O1)

Raw materials are a key resource in the production processes used by Akzo Nobel. Supply chain problems such as shortages or quality issues can completely stop production and escalate the cost of goods sold.

Mitigation: By diversifying its supplier base and performing regular evaluations to guarantee reliability and quality, AkzoNobel mitigates supplier risk. They make part of the **Together for Sustainability (TfS) program**, which uses global standards to evaluate and audit suppliers.

Business Disruptions (O2)

Accidents, natural disasters or other problems in terms of logistics and supplying raw materials can have high impact in Akzo Nobel, altering production and delivery of products.

Mitigation: The company has some of the most robust contingency plans and comprehensive insurance to deal with disruptions. They are updated at regular intervals to control business interruptions effectively.

Talent Management (O3)

Akzo Nobel's success and product development is directly associated with the company's capacity to hire and motivate qualified workers. Therefore, high turnover or challenges in staff hiring can pose a threat to the performance of the company.

Mitigation: AkzoNobel attracts talent and retains workers with competitive wages and growth opportunities. They focus on career development and employee engagement to keep a motivated workforce

Environmental and Sustainability Risks

Natural Disasters (E1)

In addition to earthquakes, Akzo Nobel is vulnerable to natural disasters like hurricanes, floods, and fires. These kinds of incidents may damage a business's production lines and supplies.

Mitigation: The company invests in resilient infrastructure, so in the event of natural disasters, it will ensure quality insurance to cover potential damages incurred.

Climate Change Regulations (E2)

Regulations related to climate change may result in additional expenses and stricter constraints on Akzo Nobel's ability to conduct business. Although it is not an easy undertaking, environmental laws and regulations should be followed to the fullest level possible.

Mitigation:

Political and Regulatory Risks

Compliance with Laws and Regulation (P1)

As a result of its international operations, product sales, and marketing, Akzo Nobel is subject to a few legal and regulatory requirements. In addition to penalties and legal consequences, policy violations can negatively impact the image of the company.

Mitigation: The company hires legal experts to ensure that the business operates within the ambit of all the relevant laws and regulations. They also have a process for keeping pace with the regulatory changes and minimizing possible legal risks.

Risk Assessment

Sensitivity Analysis

Given that Akzo Nobel's final target price was established using the FCFF (Free Cash Flow to the Firm) approach, a sensitivity analysis was performed to evaluate the effects of adjustments to the terminal growth rate and WACC (Weighted Average Cost of Capital).

The target price for Akzo Nobel, according to the sensitivity analysis, **ranges from €59.09/share** (with a WACC of 8.6% and a terminal growth rate of 1.0%) **to €140.72/share** (with a WACC of 6.6% and a terminal growth rate of 3.0%).

The recommendation is **to BUY** the stock **at its present price of €57.72**, with an initial target price of €85.18. This suggests that there is significant upside potential.

Additional analysis shows that the **BUY recommendation is strengthened when the WACC is reduced by 0.5pp, to 7.1%**, raising the target price to **€95.84/share**. The target price decreases to €76.32/share with a 0.5pp increase in WACC (to 8.1%)**, but a BUY is still suggested**. Moreover, a 0.5 pp decrease in growth rate (to 1.5%) brings the target **price down to €77.75/share**, maintaining the **BUY recommendation**; conversely, a 0.5 pp increase **in growth rate (to 2.5%)** contributes the target price up to **€94.08/share**, providing even more support for **BUY** (Table 10).

Table 10. Sensitivity Analysis: Nominal Values

Sensitivity Table	Growth Rate				
WACC	1.0%	1.5%	2.0%	2.5%	3.0%
6.6%	88.41	97.64	108.88	122.86	140.72
7.1%	79.20	86.78	95.84	106.87	120.59
7.6%	71.44	77.75	85.18	94.08	104.90
8.1%	64.81	70.13	76.32	83.62	92.35
8.6%	59.09	63.63	68.85	74.93	82.10

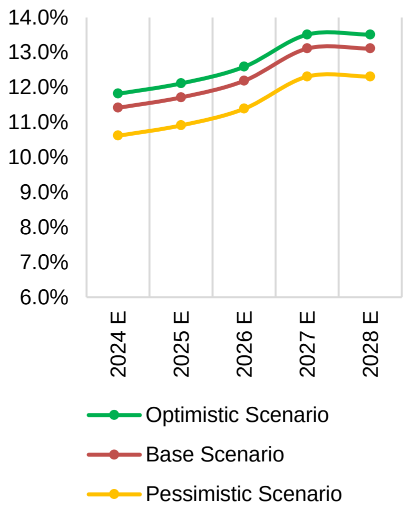
Source: The Author

Scenario Analysis

Three scenarios were created, optimistic, base and pessimistic, assuming changes in variables such as: i) the revenue growth rate; ii) gross profit margin; iii) WACC; and iv) Long-Term growth rate (Figure 49). In the optimistic scenario, changes were made to reflect higher revenue growth, higher gross profit margins, a higher long-term growth rate, lower effective tax rate, and a lower WACC. With a target price of **€165.15/share** (+94%), this scenario leads to a **STRONG BUY** recommendation.

On the other hand, in the pessimistic scenario, the changes were made to reflect lower revenue growth as well as gross profit margins, a higher effective tax rate, a lower long-term growth rate and higher WACC. With a target price of **€67.7/share** (-20%), this scenario leads to a **HOLD/NEUTRAL** recommendation.

Figure 49. Operating margin across scenarios



Source: The Author

Monte Carlo Simulation

To complement the risk assessment, a Monte Carlo Simulation was performed (Table 11), setting as assumptions the following drivers to changes in the valuation:

i) WACC; ii) long-term growth rate; iii) gross profit margin; and iv) tax rate:

After running 100,000 trials, the average estimated price was €87.01/share, which is close to the target price already established for AkzoNobel.

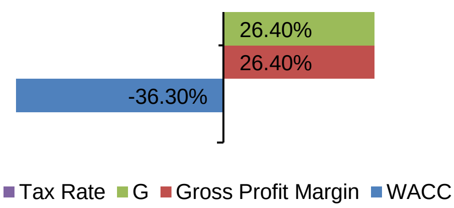
With a 50% probability, the results show that the stock price will be between €75.97/share and €90.60/share. The stock price follows a lognormal distribution pattern, with a right-skewed distribution, which means that there is potential for upside in the valuation, achieving higher stock prices.

Table 11. Monte Carlo Statistics

Indicator	Amount
Trials	100,000
Base Case	87.0
Mean	**83.7**
Median	82.9
St. Dev	11.1
10th Percentile	70.2
90th Percentile	98.3

Source: Crystal Ball; The Author

Figure 50. Variables in the sensitivity analysis



Source: Crystal Ball; The Author

Appendices

Appendix 1: Income Statement

Income Statement	2019A	2020A	2021A	2022A	2023 A	2024 E	2025 E	2026 E	2027 E	2028 E
Revenue	**9,276.0**	**8,530.0**	**9,587.0**	**10,846.0**	**10,668.0**	**11,010.5**	**11,364.8**	**11,731.4**	**12,099.1**	**12,479.1**
COGS	(5,314.0)	(4,745.0)	(5,683.0)	(6,923.0)	(6,434.0)	(6,507.6)	(6,690.6)	(6,862.9)	(6,990.7)	(7,210.3)
Gross Profit	**3,962.0**	**3,785.0**	**3,904.0**	**3,923.0**	**4,234.0**	**4,502.9**	**4,674.3**	**4,868.6**	**5,108.3**	**5,268.8**
Operating Expenses	(3,100.0)	(2,822.0)	(2,815.0)	(3,197.0)	(3,172.0)	(3,245.8)	(3,342.9)	(3,438.6)	(3,522.2)	(3,632.8)
Operating Income (EBIT)	**862.0**	**963.0**	**1,089.0**	**726.0**	**1,062.0**	**1,257.2**	**1,331.4**	**1,430.0**	**1,586.2**	**1,636.0**
Interest Expense	(90.0)	(62.0)	(74.0)	(106.0)	(193.0)	(208.4)	(218.6)	(222.1)	(229.2)	(236.5)
Interest Income	17.0	-	15.0	36.0	69.0	69.0	69.0	69.0	69.0	69.0
Income from Affiliates	20.0	25.0	26.0	18.0	27.0	27.0	27.0	27.0	27.0	27.0
Currency Exchange Gains	(24.0)	-	(21.0)	(65.0)	(128.0)	(71.3)	(71.3)	(71.3)	(71.3)	(71.3)
Other Non-Operating Income	-	(7.0)	-	13.0	(7.0)	2.0	2.0	2.0	2.0	2.0
Legal Settlements	-	-	70.0	-	-	-	-	-	-	-
Other Unusual Items	-	-	-	(20.0)	(46.0)	(46.0)	(46.0)	(46.0)	(46.0)	(46.0)
Pretax Profit (EBT)	**785.0**	**919.0**	**1,105.0**	**602.0**	**784.0**	**1,029.5**	**1,093.5**	**1,188.6**	**1,337.6**	**1,380.1**
Income Tax Expense	(230.0)	(241.0)	(246.0)	(214.0)	(296.0)	(327.9)	(348.3)	(378.6)	(426.1)	(439.6)
Earnings from Discontinued Operations	22.0	(7.0)	6.0	(10.0)	(5.0)	-	-	-	-	-
Profit for the Period	**577.0**	**671.0**	**865.0**	**378.0**	**483.0**	**701.5**	**745.1**	**809.9**	**911.5**	**940.5**
Minority Interests in Earnings	(38.0)	(41.0)	(36.0)	(26.0)	(41.0)	(41.0)	(41.0)	(41.0)	(41.0)	(41.0)
Net Income	**539.0**	**630.0**	**829.0**	**352.0**	**442.0**	**660.5**	**704.1**	**768.9**	**870.5**	**899.5**

Margins/Growth Rates										
Revenue Growth Rate		-8.0%	12.4%	13.1%	-1.6%	3.2%	3.2%	3.2%	3.1%	3.1%
Gross Profit Margin	42.7%	44.4%	40.7%	36.2%	39.7%	40.9%	41.1%	41.5%	42.2%	42.2%
Operating Expenses as % of Revenue	33.4%	33.1%	29.4%	29.5%	29.7%	29.5%	29.4%	29.3%	29.1%	29.1%
Tax Rate	29.3%	26.2%	22.3%	35.5%	37.8%	31.9%	31.9%	31.9%	31.9%	31.9%
Memo: COGS Growth rate		-10.7%	19.8%	21.8%	-7.1%	1.1%	2.8%	2.6%	2.6%	2.6%
Memo: Depreciation in opex and COGS	(293.0)	(297.0)	(281.0)	(281.0)	(277.0)	(285.9)	(295.1)	(304.6)	(314.2)	(324.0)
Memo: Capital Expenditures	(214.0)	(258.0)	(288.0)	(292.0)	(286.0)	(395.2)	(404.7)	(414.5)	(324.4)	(334.6)
Memo: Amortization in opex and COGS	(67.0)	(64.0)	(70.0)	(87.0)	(80.0)	(82.6)	(85.2)	(88.0)	(90.7)	(93.6)
Memo: Purchase of Intangibles	(136.1)	(166.7)	(183.4)	(187.8)	(183.0)	(188.9)	(195.0)	(201.3)	(207.6)	(214.1)

Appendix 2: Balance Sheet

Balance Sheet	2019A	2020A	2021A	2022A	2023 A	2024 E	2025 E	2026 E	2027 E	2028 E
Cash, Cash Equivalents & STI	1,409.0	1,856.0	1,210.0	1,786.0	1,778.0	1,914.4	2,103.8	2,354.9	2,885.9	3,362.6
Accounts Receivable	2,154.0	2,009.0	2,436.0	2,539.0	2,564.0	2,646.3	2,731.5	2,819.6	2,907.9	2,999.3
Inventories	1,139.0	1,159.0	1,650.0	1,843.0	1,649.0	1,667.9	1,714.8	1,758.9	1,804.2	1,850.7
Other WC Assets	42.0	40.0	52.0	76.0	53.0	54.7	56.5	58.3	60.1	62.0
Total Current Assets	**4,744.0**	**5,064.0**	**5,348.0**	**6,244.0**	**6,044.0**	**6,283.3**	**6,606.5**	**6,991.7**	**7,658.1**	**8,274.6**
Property, Plant & Equipment	2,074.0	1,945.0	2,104.0	2,259.0	2,296.0	2,405.3	2,514.9	2,624.8	2,635.0	2,645.5
Intangible Assets	3,625.0	3,554.0	3,690.0	4,072.0	4,081.0	4,187.3	4,297.1	4,410.4	4,527.2	4,647.8
Long-term Investments	150.0	166.0	178.0	193.0	216.0	216.0	216.0	216.0	216.0	216.0
Deferred Tax Assets	529.0	497.0	482.0	498.0	512.0	512.0	512.0	512.0	512.0	512.0
Other Non-Current Financial Assets	88.0	87.0	88.0	90.0	89.0	89.0	89.0	89.0	89.0	89.0
Other Non-Current Assets	1,774.0	1,864.0	1,988.0	1,385.0	1,320.0	1,320.0	1,320.0	1,320.0	1,320.0	1,320.0
Total Non Current Assets	**8,240.0**	**8,113.0**	**8,530.0**	**8,497.0**	**8,514.0**	**8,729.6**	**8,949.0**	**9,172.2**	**9,299.2**	**9,430.3**
Total Assets	**12,984.0**	**13,177.0**	**13,878.0**	**14,741.0**	**14,558.0**	**15,012.9**	**15,555.5**	**16,163.9**	**16,957.3**	**17,704.8**
Accounts Payable	1,883.0	2,032.0	2,376.0	2,206.0	2,312.0	2,338.4	2,404.2	2,466.1	2,529.6	2,594.7
Accrued Expenses and Other	486.0	504.0	540.0	516.0	598.0	617.2	637.1	657.6	678.2	699.5
Short-Term Debt	79.0	33.0	1,469.0	2,457.0	2,309.0	2,383.1	2,459.8	2,539.2	2,618.7	2,701.0
Current Portion of Leases	90.0	86.0	87.0	86.0	89.0	89.0	89.0	89.0	89.0	89.0
Curr. Income Taxes Payable	196.0	162.0	216.0	236.0	211.0	211.0	211.0	211.0	211.0	211.0
Other Current Liabilities	268.0	276.0	181.0	245.0	187.0	193.0	199.2	205.6	212.1	218.7
Total Current Liabilities	**3,002.0**	**3,093.0**	**4,869.0**	**5,746.0**	**5,706.0**	**5,831.8**	**6,000.3**	**6,168.5**	**6,338.7**	**6,514.0**
Long Term Debt	1,780.0	2,533.0	1,782.0	3,134.0	2,971.0	2,971.0	2,971.0	2,971.0	3,052.5	3,052.5
Long Term Leases	262.0	238.0	212.0	198.0	194.0	194.0	194.0	194.0	194.0	194.0
Other Non Current Liabilities	1,372.0	1,363.0	1,379.0	1,115.0	1,141.0	1,177.6	1,215.5	1,254.7	1,294.1	1,334.7
Total Non Current Liabilities	**3,414.0**	**4,134.0**	**3,373.0**	**4,447.0**	**4,306.0**	**4,342.6**	**4,380.5**	**4,419.7**	**4,540.6**	**4,581.2**
Total Liabilities	**6,416.0**	**7,227.0**	**8,242.0**	**10,193.0**	**10,012.0**	**10,174.4**	**10,380.8**	**10,588.3**	**10,879.2**	**11,095.2**
Common Stock	100.0	95.0	91.0	87.0	85.0	85.0	85.0	85.0	85.0	85.0
Retained Earnings	668.0	6,524.0	5,846.0	573.0	679.0	971.5	1,307.7	1,708.6	2,211.1	2,742.6
Comprehensive Inc. and Other	5,582.0	(873.0)	(512.0)	3,673.0	3,558.0	3,558	3,558	3,558	3,558	3,558
Total Common Equity	**6,350.0**	**5,746.0**	**5,425.0**	**4,333.0**	**4,322.0**	**4,614.5**	**4,950.7**	**5,351.6**	**5,854.1**	**6,385.6**
Total Minority Interest	218.0	204.0	211.0	215.0	224.0	224.0	224.0	224.0	224.0	224.0
Total Common Equity	**6,568.0**	**5,950.0**	**5,636.0**	**4,548.0**	**4,546.0**	**4,838.5**	**5,174.7**	**5,575.6**	**6,078.1**	**6,609.6**
Total Liabilities and Equity	**12,984.0**	**13,177.0**	**13,878.0**	**14,741.0**	**14,558.0**	**15,012.9**	**15,555.5**	**16,163.9**	**16,957.3**	**17,704.8**

Appendix 3: Cash Flow Statement

In € Millions

Cash Flow Statement	2024 E	2025 E	2026 E	2027 E	2028 E
Net Income	660.5	704.1	768.9	870.5	899.5
Depreciation and Amortization	368.5	380.3	392.6	404.9	417.6
Accounts Receivable	(82.3)	(85.2)	(88.1)	(88.4)	(91.3)
Inventory	(18.9)	(46.9)	(44.2)	(45.3)	(46.5)
Other WC Assets	(1.7)	(1.8)	(1.8)	(1.8)	(1.9)
Accounts Payable	26.4	65.8	61.9	63.5	65.1
Accrued Expenses and Other	19.2	19.9	20.6	20.6	21.3
Short-Term Debt	74.1	76.7	79.4	79.6	82.3
Other Current Liabilities	6.0	6.2	6.4	6.4	6.7
Cash Flow from Operations	**1,051.9**	**1,119.2**	**1,195.7**	**1,310.1**	**1,352.8**
Capital Expenditures	(395.2)	(404.7)	(414.5)	(324.4)	(334.6)
Purchases of Intangible Assets	(188.9)	(195.0)	(201.3)	(207.6)	(214.1)
Cash for Investing Activities	**(584.1)**	**(599.7)**	**(615.8)**	**(531.9)**	**(548.7)**
Long-Term Debt	-	-	-	81.5	-
Other Non Current Liabilities	36.6	37.9	39.2	39.3	40.6
Issuances of Common Stock	-	-	-	-	-
Comprehensive Inc. and Other	-	-	-	-	-
Dividends	(368.0)	(368.0)	(368.0)	(368.0)	(368.0)
Cash from Financial Activities	**(331.4)**	**(330.1)**	**(328.8)**	**(247.2)**	**(327.4)**
Effect of Foreign Exchange Rates	-	-	-	-	-
Net Changes in Cash	**136.4**	**189.4**	**251.1**	**530.9**	**476.8**

Appendix 4: Income Statement Forecasting Assumptions

Income Statement	Assumptions
Revenue	Revenues are forecasted based on the top-down approach,using the forecasted real GDP growth.
Cost of Goods Sold	Forecasted as the average from FY2019 to FY2023 and adjusted for incremental savings from the Industry Transformation plan (See Appendix *)
Operating Expenses	Forecasted as the average from FY2019-FY2023 and adjusted for incremental savings from the Industry Transformation plan (See Appendix *)
Interest Expense	Forecasted based on the average percentage of revenues from FY2021-FY2023 times the forecasted revenue
Interest Income	Equal to the value of previous year
Income from Affiliates	Equal to the value of previous year
Currency Exchange Gains	Forecasted as the historical average from FY2021-FY2023
Other Non-Operating Income	Forecasted as the historical average from FY2021-FY2023
Legal Settlements	Equal to the value of previous year
Other Unusual Items	Equal to the value of previous year
Income Tax Expense	Equal to EBIT times the Netherlands statutory tax rate from 2023
Earnings from Discontinued Operations	Assumed to be zero
Minority Interests in Earnings	Equal to the value of previous year

Appendix 5: Balance Sheet Forecasting Assumptions

Balance Sheet	Assumptions
Cash, Cash Equivalents & STI	Assumed as the Cash and Cash Equivalents from previous year plus Retained Earnings from the forecasted year
Accounts Receivable	Assumed to growth in line with revenue growth from the forecasted year
Inventories	Assumed to growth in line with Cost of Goods Sold growth from the forecasted year
Other WC Assets	Assumed to growth in line with revenue growth from the forecasted year
Property, Plant & Equipment	Assumed as the PP&E at the end of previous year + Capital Expenditures from current year- Depreciation from current year
Intangible Assets	Assumed as the Intangible Assets at the end of previous year + Purchase of intangibles from current year- Amortization from current year
Long-term Investments	Equal to the value of previous year
Deferred Tax Assets	Equal to the value of previous year
Other Non-Current Financial Assets	Equal to the value of previous year
Other Non-Current Assets	Equal to the value of previous year
Accounts Payable	Assumed to growth in line with Cost of Goods Sold growth from the forecasted year
Accrued Expenses and Other	Assumed to growth in line with revenue growth from the forecasted year
Short-Term Debt	Assumed to growth in line with revenue growth from the forecasted year
Current Portion of Leases	Equal to the value of previous year
Curr. Income Taxes Payable	Equal to the value of previous year
Other Current Liabilities	Assumed to growth in line with revenue growth from the forecasted year
Long Term Debt	Equal to the value of previous year + Investment in Capex for the Industry Transformation plan financed through debt
Long Term Leases	Equal to the value of previous year
Other Non Current Liabilities	Assumed to growth in line with revenue growth from the forecasted year
Common Stock	Equal to the value of previous year
Retained Earnings	Assumed as the Retained Earnings at the end of previous year + Net Income from current year- Common Dividends
Comprehensive Inc. and Other	Equal to the value of previous year
Total Minority Interest	Equal to the value of previous year

Appendix 5: Revenue Estimation

Net Sales (Amount in € Million)	2018A	2019A	2020A	2021A	2022A	2023A	2024F	2025F	2026F	2027F	2028F
Decorative Paints											
Sales	3,699	3,670	3,558	3,979	4,344	4,300	**4,391**	**4,484**	**4,580**	**4,672**	**4,767**
Sales Growth	-5.0%	-0.8%	-3.1%	11.8%	9.2%	-1.0%	2.1%	2.1%	2.1%	2.0%	2.0%
Global Real GDP Growth	3.6%	2.8%	-2.7%	6.5%	3.5%	3.2%	3.2%	3.2%	3.2%	3.1%	3.1%
Adjustment	-8.6%	-3.6%	-0.4%	5.3%	5.7%	-4.2%	-1.1%	-1.1%	-1.1%	-1.1%	-1.1%
Performance Coatings											
Sales	5,587	5,549	4,957	5,603	6,499	6,368	**6,619**	**6,880**	**7,152**	**7,427**	**7,713**
Sales Growth	-3.0%	-1%	-11%	13%	16%	-2%	3.9%	3.9%	3.9%	3.8%	3.8%
Global Real GDP Growth	3.6%	2.8%	-2.7%	6.5%	3.5%	3.2%	3.2%	3.2%	3.2%	3.1%	3.1%
Adjustment	-6.6%	-3.5%	-8.0%	6.5%	12.5%	-5.2%	0.7%	0.7%	0.7%	0.7%	0.7%
Total Net Sales											
Nominal Value	9,286	9,219	8,515	9,582	10,843	10,668	**11,010**	**11,365**	**11,731**	**12,099**	**12,479**
Growth		-0.7%	-7.6%	12.5%	13.2%	-1.6%	3.2%	3.2%	3.2%	3.1%	3.1%

As mentioned before, to forecast AkzoNobel's net sales, a top-down approach was employed, using the growth relative to GDP growth method. This approach connects the company's growth rate to global real GDP growth, with adjustments calculated at the segment level to reflect the difference between the segment's revenue growth rate and the global real GDP growth rate. For both Decorative Paints and Performance Coatings, the adjustments were done based on historical data, excluding 2020 due to COVID-19 impact. By integrating these adjustments with forecasted global real GDP growth rates from the IMF, reliable projections for AkzoNobel's future sales were obtained.

Appendix 6: Industry Transformation Plan

In € Millions

	2024	2025	2026	2027	2028
COGS allocation	18	45	90	180	
COGS Adj	**(6,508)**	**(6,691)**	**(6,863)**	**(6,991)**	**(7,210)**
Gross Profit Margin %	40.9%	41.1%	41.5%	42.2%	42.2%
OpEx savings	5	13	25	50	
OpEx Adj	**(3,246)**	**(3,343)**	**(3,439)**	**(3,522)**	**(3,633)**
Op. expenses %	29.5%	29.4%	29.3%	29.1%	29.1%
CapEx					
One-time CapEx	50	50	50		
Incremental CapEx	50	50	50		
CapEx Adj	**(395)**	**(405)**	**(415)**	**(324)**	**(335)**

To forecast the impacts of the industry transformation plan, there were taken into consideration €230 million (€180 related to COGS and €50 related to Opex) that were increasing proportionally from 2024 to 2027. Then, considering the average of gross profit margin from historical values, the base of forecasted COGS was calculated based on the forecasted revenue. The COGS adjusted is equal to the base + COGS allocation. For 2028E, COGS value was calculated without any effect of adjustment, with the assumption that from that year onwards costs are going to be stable.

Similarly, the Opex adjusted was calculated, taking into consideration historical values of Operating Ex. as % of Revenue to calculate the base + Opex allocation. For 2028E, Opex value was calculated without any effect of adjustment, with the assumption that from that year onwards costs are going to be stable.

For the Capex adjusted, the revenue growth rate was considered to calculate the base. Then, Capex adjusted was calculated as the following: Capex base + One-Time investment + Incremental Capex. From 2028E onwards, it is assumed that the Capex calculations continue as usual, based on the revenue growth rate.

In € Millions

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Revenue Growth Rate			**-8.0%**	**12.4%**	**13.1%**	**-1.6%**	**3.2%**	**3.2%**	**3.2%**	**3.1%**	**3.1%**
Capital Expenditures		(214)	(258)	(288)	(292)	(286)	(295)	(305)	(315)	(324)	(335)
Gross Profit Margin % Original		42.71%	44.37%	40.72%	36.17%	39.69%	40.73%	40.73%	40.73%	40.73%	40.73%
Cost of Goods Sold		(5,314)	(4,745)	(5,683)	(6,923)	(6,434)	(6,526)	(6,736)	(6,953)	(7,171)	(7,396)
Operating Ex. as % of Revenue		33.42%	33.08%	29.36%	29.48%	29.73%	29.52%	29.52%	29.52%	29.52%	29.52%
Operating expenses		(3,100)	(2,822)	(2,815)	(3,197)	(3,172)	(3,251)	(3,355)	(3,464)	(3,572)	(3,684)

Appendix 7: Free Cash Flow to the Firm (FCFF)

	FY 2024 E	FY 2025 E	FY 2026 E	FY 2027 E	FY 2028 E
NOPAT	856.7	907.3	974.4	1,080.9	1,114.8
Depreciation & Amortization	368.5	380.3	392.6	404.9	417.6
Change in NWC	(22.89)	(34.70)	(34.15)	(34.65)	(35.67)
Capital Expenditures	(395.2)	(404.7)	(414.5)	(324.4)	(334.6)
FCFF	**807.07**	**848.20**	**918.38**	**1,126.77**	**1,162.23**
Present Value of Free Cash Flow	**750.1**	**732.6**	**737.2**	**840.6**	**805.8**

Weighted Average Cost of Capital	
Risk-free rate	1.6%
Country Risk Premium (CRP)	1.7%
Risk-free (Rf)	**3.3%**
Beta (β)	0.96
Market risk premium (MRP)	6.5%
Cost of Equity	**9.5%**
Cost of Debt	**4.8%**
Equity (E/(D+E))	69.6%
Debt (D/(D+E))	30.4%
Tax Rate	31.9%
WACC	**7.6%**

Implied Share Price Calculation	
Sum of PV of FCF	3,866
Growth Rate	2.0%
WACC	7.6%
Terminal Value	21,164
PV of Terminal Value	14,672.6
Enterprise Value	**18,539**
(+) Cash & Equ.	1,778
(-) Debt	(5,563)
(-) Minority Interest	(224)
Equity Value	**14,530**
Shares Outstanding	170.6
Share Price	**85.18**

Appendix 8: Free Cash Flow to the Equity (FCFE)

	FY 2024 E	FY 2025 E	FY 2026 E	FY 2027 E	FY 2028 E
Net Income	661	704	769	871	899
Depreciation & Amortization	368	380	393	405	418
Change in NWC	(23)	(35)	(34)	(35)	(36)
Capital Expenditures	(395)	(405)	(415)	(324)	(335)
Net Borrowings	74	77	79	161	82
FCFE	**685**	**722**	**792**	**1,077**	**1,029**
Present Value of Free Cash Flow	**626**	**602**	**603**	**749**	**654**

Implied Share Price Calculation	
Sum of PV of FCFE	3,234
Growth Rate	2.0%
Cost of Equity	9.5%
Terminal Value	13,991
Discounted Terminal Value	8,887
Equity Value	**12,121**
Shares Outstanding	170.6
Share Price	**71.06**

Appendix 9: Dividend Discount Model (DDM)

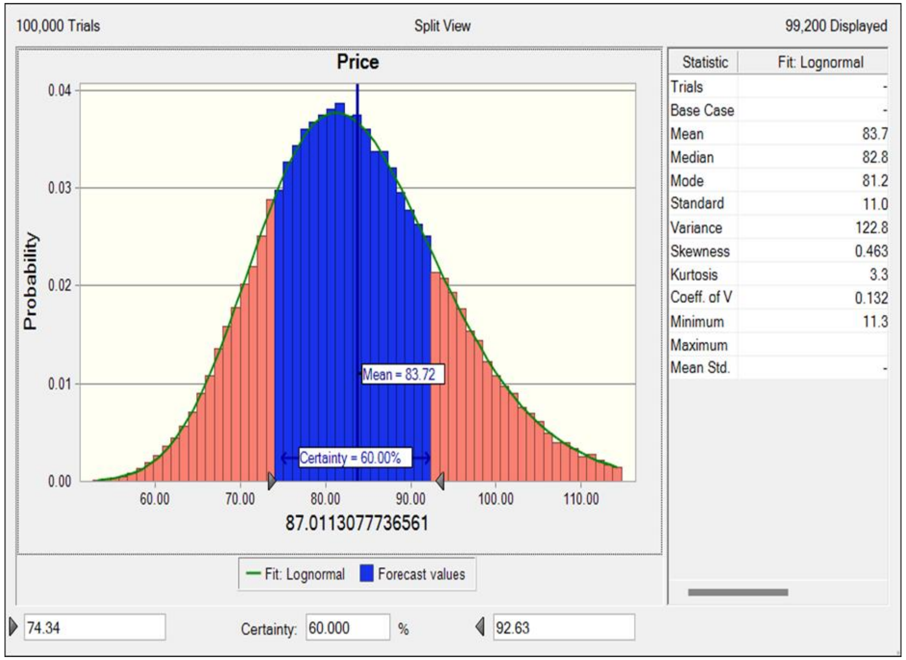
Cost of equity 9.5% **Using CAPM**

	FY 2024 E	FY 2025 E	FY 2026 E	FY 2027 E	FY 2028 E
Dividend per Share	2.02	2.06	2.10	2.14	2.19
Projection year	1	2	3	4	5
Present value of dividends	**1.84**	**1.72**	**1.60**	**1.49**	**1.39**
Terminal value	29.72				
PV of terminal value	20.67				
Equity Value per Share	**28.71**				

Appendix 10: Relative Valuation

Peer Metrics							
			Last Twelve Months (LTM)				
Company	**Ticker**	**EV (€m)**	**EV/Revenue**	**EV/EBITDA**	**P/E**	**P/S**	**P/B**
PPG Industries Inc	PPG.N	33,516	2.0x	11.7x	21.7x	1.7x	3.8x
Sherwin-Williams Co	SHW.N	82,700	3.9x	17.9x	32.1x	3.3x	21.7x
Nippon Paint Holdings Co Ltd	4612.T	15,963	2.0x	13.3x	20.1x	1.7x	1.7x
Axalta Coating Systems Ltd	AXTA.N	9,093	2.0x	10.6x	30.9x	1.5x	4.4x
RPM International Inc	RPM.N	14,752	2.3x	14.9x	25.7x	1.9x	6.1x
Berger Paints India Ltd	BRGR.NS	6,658	5.3x	30.9x	50.1x	5.2x	10.9x
High			5.3x	30.9x	50.1x	5.2x	21.7x
75th Percentile			3.5x	17.2x	31.8x	3.0x	9.7x
Average			**2.9x**	**16.6x**	**30.1x**	**2.6x**	**8.1x**
Median			**2.1x**	**14.1x**	**28.3x**	**1.8x**	**5.3x**
25th Percentile			2.0x	12.1x	22.7x	1.7x	4.0x
Low			2.0x	10.6x	20.1x	1.5x	1.7x
Akzo Nobel NV	**AKZO.AS**	**14,973**	**1.3x**	**11.7x**	**9.6x**	**0.9x**	**2.2x**

Appendix 11: Monte Carlo Simulation



Long-Term Growth Rate	WACC									
	-	5.0%	5.5%	6.0%	6.5%	7.0%	7.5%	8.0%	8.5%	9.0%
	0.00%	107.43	95.12	84.86	76.19	68.76	62.33	56.71	51.75	47.35
	0.25%	113.32	99.87	88.76	79.44	71.50	64.67	58.72	53.50	48.87
	0.50%	119.86	105.09	93.02	82.96	74.46	67.18	60.87	55.36	50.49
	0.75%	127.17	110.87	97.68	86.79	77.65	69.87	63.17	57.33	52.21
	1.00%	135.40	117.29	102.81	90.97	81.11	72.77	65.63	59.44	54.03
	1.25%	144.72	124.46	108.48	95.55	84.87	75.90	68.27	61.70	55.98
	1.50%	155.37	132.53	114.78	100.58	88.97	79.30	71.12	64.12	58.05
	1.75%	167.67	141.68	121.82	106.14	93.46	82.99	74.20	66.71	60.26
	2.00%	182.01	152.13	129.74	112.32	98.40	87.01	77.53	69.51	62.64
	2.25%	198.96	164.19	138.71	119.23	103.86	91.42	81.15	72.53	65.18
	2.50%	219.30	178.27	148.97	127.00	109.92	96.27	85.10	75.80	67.93
	2.75%	244.15	194.90	160.80	135.81	116.70	101.63	89.43	79.35	70.89
	3.00%	275.23	214.85	174.61	145.88	124.33	107.58	94.18	83.23	74.10
	3.25%	315.18	239.24	190.93	157.49	132.98	114.23	99.44	87.48	77.59
	3.50%	368.45	269.73	210.51	171.04	142.86	121.72	105.29	92.15	81.40
	3.75%	443.02	308.93	234.45	187.06	154.25	130.21	111.82	97.31	85.57

Level of Risk	SELL	REDUCE		HOLD/NEUTRAL		BUY		STRONG BUY
High Risk	0%≤	>0% & ≤10%		>10% & ≤20%		>20% & ≤45%		>45%
	57.72	57.72	63.49	63.49	69.26	69.26	83.69	83.694

Appendix 12: SARD Approach

SARD Peers Determination Approach													
Entity Details		SARD Variables					Rankings					SARD Result
#	Name	ROE	Debt/EBIT	Market Cap ($'Bn)	EPS Growth	EBIT Margin	ROE	Debt/EBIT	Market Cap ($'Bn)	EPS Growth	EBIT Margin	
Potential Peers												
0	**AKZO NOBEL N.V.**	**13.47**	**5.78**	**12,115**	**-53.48**	**6.53**	**11**	**24**	**19**	**1**	**5**	**0**
1	RPM INTERNATIONAL INC	29.11	3.44	12,472	-1.84	10.59	19	21	20	6	11	**23**
2	PPG INDUSTRIES INC	20.22	3.53	31,174	-27.26	9.70	12	22	23	2	10	**13**
3	NIPPON PAINT HOLDINGS CO LTD	7.44	0.03	16,043	16.70	8.55	4	15	22	12	7	**32**
4	KANSAI PAINT CO LTD	7.48	-0.01	3,451	1.34	6.30	5	7	13	8	4	**37**
5	BERGER PAINTS INDIA LTD	20.37	0.01	7,565	3.26	11.97	13	13	17	9	12	**30**
6	AXALTA COATING SYSTEMS LTD	23.06	6.98	6,557	-24.56	8.66	15	25	16	4	8	**14**

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- AI-based research tools were used to assist in literature review and data collection.
- AI-powered software was utilized for data analysis and visualization.
- Generative AI tools were consulted for brainstorming and outlining purposes. However, all final writing, synthesis, and critical analysis are my own work. Instances where AI contributions were significant are clearly cited and acknowledged.

Nonetheless, I have ensured that the use of AI tools did not compromise the originality and integrity of my work. All sources of information, whether traditional or AI-assisted, have been appropriately cited in accordance with academic standards. The ethical use of AI in research and writing has been a guiding principle throughout the preparation of this thesis.

I understand the importance of maintaining academic integrity and take full responsibility for the content and originality of this work.

Juliana Aguilar Sarria, June 30, 2024.

Recommendation System

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%

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