Universidade do Minho
Escola de Economia e Gestão

Equity Research Altri SGPS, S.A.

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UMinho | 2024

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Master's Project
Master's in Finance

Work performed under the supervision of
Professor Doutor Artur Rodrigues

May 2024

DiREITOS DE AUTOR E CONDIÇÕES DE UTILIZAÇÃO DO TRABALHO POR TERCEIROS

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Thank you to all who have contributed in any way to this project.

STATEMENT OF INTEGRITY

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Equity Research Report Altri SGPS, S.A.

Resumo

Este Equity Research Report tem como objetivo providenciar uma análise sobre Altri SGPS, S.A., uma empresa portuguesa que atua na indústria de celulose e papel, com presença no Canadá, Europa e China. O relatório explora a trajetória histórica da empresa, a situação atual e perspetivas futuras. O relatório reforça a posição de liderança da Altri SGPS, S.A. em Portugal, evidenciando as suas iniciativas estratégicas e conquistas no mercado de celulose.

O relatório utiliza duas metodologias de avaliação, o Fluxo de Caixa Descontado (DCF) e análise de avaliação relativa através de indicadores de mercado, fornecendo uma avaliação do valor intrínseco da empresa. Uma análise de sensibilidade também é conduzida para avaliar a robustez dos resultados de avaliação em diversas condições de mercado e pressupostos. O relatório conclui com uma recomendação de compra de ações da Altri, estabelecendo um preço-alvo de €5,07 por ação. O Método de Fluxo de Caixa Descontado resultou em um valor de €5,46 por ação, e a abordagem de Avaliação Relativa resultou em um valor de €4,15 por ação. O preço-alvo final é uma combinação ponderada desses métodos de avaliação.

Em resumo, este relatório serve como um recurso para investidores, analistas e partes interessadas que buscam compreender e acompanhar o desempenho financeiro, posicionamento de mercado e trajetórias de crescimento da empresa.

Palavras Chaves: Análise da empresa; Análise de sensibilidade; Análise relativa; Fluxo de Caixa Descontado; Preço-alvo.

Equity Research Report Altri SGPS, S.A.

Abstract

This Equity Research Report aims to provide an analysis of Altri SGPS, S.A., a Portuguese company operating in the pulp and paper industry, with presence in Canada, Europe, and China. The report explores the company's historical trajectory, current situation, and future prospects. The report reinforces Altri SGPS, S.A.'s leadership position in Portugal, highlighting its strategic initiatives and achievements in the pulp market.

The report utilizes two valuation methodologies, Discounted Cash Flow (DCF) and relative valuation analysis using market indicators, providing an assessment of the company's intrinsic value. Sensitivity analysis is also conducted to evaluate the robustness of valuation results under various market conditions and assumptions. The report concludes with a buy recommendation for Altri's shares, establishing a price target of €5.07 per share. The Discounted Cash Flow method resulted in a value of €5.46 per share, while the Relative Valuation approach resulted in a value of €4.15 per share. The final price target is a weighted combination of these valuation methods.

In summary, this report serves as a resource for investors, analysts, and stakeholders seeking to understand and track the financial performance, market positioning, and growth trajectories of the company.

Key words: Analysis of the company; Discounted Cash Flow (DCF); Price target; Relative analysis; Sensitivity analysis

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“Our Value is made of Fiber”.

José Soares de Pina Chairman of the Executive Committee | CEO

I. Investment Summary

Recommendation	
Date	Dec 31, 2023
Current Price	€ 4.60
DCF (70%)	€ 5.46
Relative Valuation (30%)	€ 4.15
Target Price	€ 5.07
Upside	10%
Ticker	ALTR.LS
Industry	Pulp and Paper
Market	Euronext Lisbon
Shares Outstanding	205,131,672
Market Cap (M)	943 €
EPS	0.74 €
Free Float	67.42%

Table 1 - Recommendation Biases

Source: Refinitiv, Own Analysis

The analysis conducted on Altri SGPS S.A. supports a Buy recommendation with a target price of €5.07 per share for the end of 2023. This target reflects a upside potential of 10% from the closing price of €4.60. The target price lies in an evaluation that combines the Discounted Cash Flow (DCF) valuation method and the Relative valuation method. The DCF method, given a weight of 70%, emphasizes the intrinsic value of the company based on its expected future cash flows. Meanwhile, the Relative valuation method, weighted at 30%, gauges the company's value relative to its peers in the market.

The alignment of observed events with fluctuations in the Portugal Index (PSI 20) further underscores the correlation between Altri's performance and the broader market trends. This correlation is visually represented in Figure 1, emphasizing the significance of monitoring macroeconomic indicators and market indices when assessing the company's prospects.

The emphasis on a diversified valuation approach, incorporating both intrinsic and relative metrics, underscores the robustness of the analysis. By assigning a higher weight to the DCF method, the report acknowledges the importance of the company's fundamental financial health and its ability to generate cash flows over time.

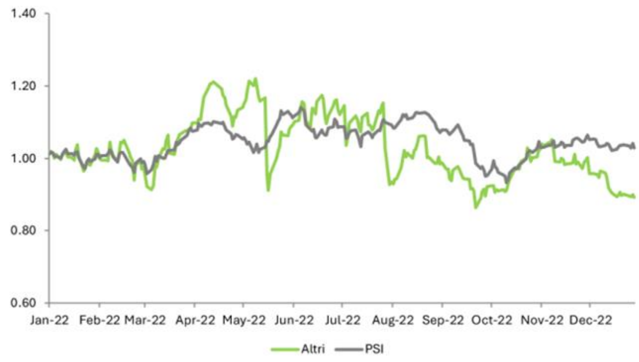


Figure 1 - Stock Exchange Evolution of Altri's and PSI 20 (%)

Source: Company Data

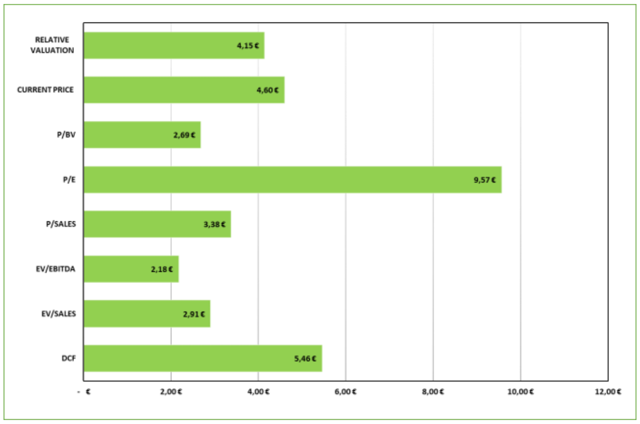


Figure 2 - Altri's Valuation Methods Price

Source: Refinitiv, Own Analysis

II. Company Overview

GENERAL INFORMATION	
ISIN Code	PTALT0AE0002
Exchange Code	LIS
TRBC Industry	Paper Products
No. of Employees	791
Company Market Cap (EUR)	923,71M

Figure 3 - Altri's General Information

Source: Refinitiv Eikon

Basic Information| Altri SGPS, S.A. is a European group that was established in February 2005 and has become a leading producer of cellulosic fibers in the renewable energy sector. This company is traded on the Euronext Lisbon stock market under the symbol ALTR.LS and the ISIN (PTALT0AE0002). Regarding the share price history, the highest of all time was €7.61 per share, and the lowest was €0.257 per share.

On the international level, Altri's products reach more than 20 countries on three different continents, with European countries being the main market for bleached cellulosic fibers (BEKP), and China being the primary market for dissolving cellulosic fibers (DWP).

Altri experienced significant growth and achieved remarkable sustainability milestones, translating into record-breaking financial results. The company's revenues increased substantially by 34.4% (Figure 4), surpassing €1 billion in turnover for the first time. Despite the challenging business environment, the Altri Group demonstrated strong operational performance, with an EBITDA of €301.4 million (+32.4%) and a net income of €152 million from continued operations (Figure 5).

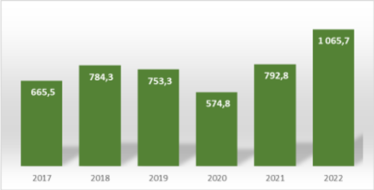


Figure 4 - Altri's Revenues (€Millions)

Source: Company Data

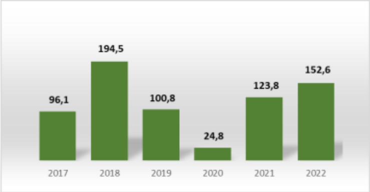


Figure 5 - Altri's Net Income from Operating Activities

Source: Company Data

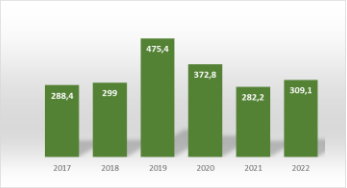


Figure 6 - Altri's Net Debt

Source: Company Data

III. Business Description

Figure 7 - Altri's Purpose and Vision

Source: Company Data

In 2022, Altri experienced significant growth and achieved remarkable sustainability milestones, resulting in record-breaking financial results. Altri's goal is to establish itself as the global leader in the efficient supply of cellulosic fibers to its customers. To achieve this objective, Altri has developed a comprehensive strategy focused on two key pillars: optimizing operational efficiency and diversifying revenue streams into higher-value segments. This strategic approach aims to drive an evolution in the value chain and stands as a testament to the Altri Group's commitment to building a more sustainable world while generating value for its stakeholders.

Operating within the B2B segment, Altri follows the Management by Objectives (MBO) model. The company implements numerous transversal engagement initiatives at all organizational levels, emphasizing the needs of its employees and rewarding their contributions.

Altri is strongly committed to becoming the most efficient global producer of cellulosic fibers, contributing to a renewable world.

The company's strategy revolves around enhancing operational efficiency and diversifying revenue sources into higher-value segments. The core values that drive Altri are integrity, courage, simplicity, and excellence. Their strategic approach involves focusing on operational efficiency, diversifying revenue sources, promoting forest recovery, and embracing excellence and technological innovation.

Cellulosic Fiber | Altri SGPS, S.A. is a producer of cellulosic fibers catering to diverse applications such as printing and writing paper, domestic papers, and the textile sector. The production process for these fibers begins with sustainable forest management, adhering to best practices that promote environmental responsibility across.

Altri fully owns its subsidiaries Biotek, Caima, and Celbi (Figure 8), collectively a production capacity that exceeds 1 million tons. Biotek and Celbi specialize in producing cellulosic fibers known as BEKP, which find extensive applications in the manufacturing of domestic paper, printing paper, and writing paper. Meanwhile, Caima focuses on the production of dissolving cellulosic fibers called DWP, primarily utilized in the textile industry.

Figure 8 - Altri's Subsidiaries

Source: Company Data

In 2022, Altri achieved a significant milestone as the total volume of pulp produced reached an all-time high, registering 1,142.6 thousand tons, marking a 1.5% increase compared to the same period in the previous year. However, in terms of pulp sales, there was a recorded decrease of 4.0% compared to the same period in the previous year, attributed to a slowdown in demand observed in the last quarter. This dynamic overview emphasizes Altri's commitment to sustainable practices, diversified product offerings, and strategic ownership of subsidiaries, positioning itself as a key player in the cellulosic fiber industry.

Figure 9 - Renewable Energy Consumption

Source: Company Data

Forest-based renewable energy sector | Altri places significant emphasis on the sustainable management of forests throughout its entire value chain. The company oversees approximately 90 thousand hectares of forestland in Portugal through its subsidiary, Altri Florestal. As of 2022, an impressive 70% of the wood supplied to Altri's industrial units originated from forests certified by globally recognized organizations such as FSC® (Forest Stewardship Council) and PEFC™ (Programme for the Endorsement of Forest Certification). This certification ensures rigorous compliance with environmental preservation, labor and human rights laws, and ethical procurement practices.

In a cooperative effort that engages the public and private sectors, civil protection agencies, and both traditional and innovative approaches, Altri established AFOCELCA, a Forest Protection Company. Additionally, Altri is committed to rejuvenating areas affected by fires through its Fénix Project. This initiative focuses on the rehabilitation of fire-damaged eucalyptus areas in small rural properties, encompassing activities such as reducing tree densities, eliminating invasive species, clearing undergrowth, and removing dead wood left behind by fires. Conservation of biodiversity is a paramount concern for Altri, acknowledging the intrinsic value of forests as habitats for diverse species and their crucial role in carbon sequestration and climate change mitigation. The Altri Diversity Program takes a central role in the company's strategy for protecting and restoring natural spaces. Altri has also become a signatory of Act4nature Portugal, committing to ten transversal commitments aligned with the company's 2030 Commitment and the United Nations Sustainable Development Goals.

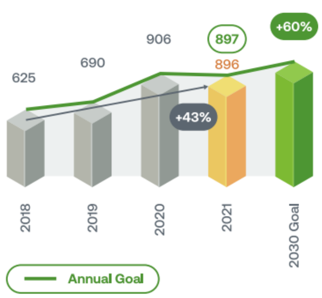


Figure 10 - Energy Injected in the National Grid

Source: Company Data

In line with its commitment to sustainability, Altri has been actively working to improve the energy efficiency of its production process by reducing energy consumption and set the goal to annually increase the percentage of energy injected into the national grid while also prioritizing the use of renewable energy in its production. Altri has implemented various measures to achieve this commitment, underscoring its dedication to environmentally responsible practices and contributing to a more sustainable future.

Research & Development Projects (R&D) | Developing an innovation strategy goes beyond the creation of new technologies or products, requires a profound integration within the business model, organizational workflows, and the very essence of corporate culture. This strategic mindset serves as the pilar for sustained company advancement, catalysing transformations that enhance operational efficiency, guide investment endeavours, and spearhead pioneering research undertakings. Altri exemplifies innovative excellence, cultivating strong collaborations with stakeholders while

Figure 11 – Altri's Innovation Projects

Source: Company Data

delivering efficient, impactful solutions that generate both economic value and intellectual assets within four pivotal strategic domains, intricately woven into our core business.

In charting strategic trajectories, Altri meticulously considers wood and biomass applications, areas long explored by the cellulosic fiber industry, aligning our ventures with these established resources. Altri maintains an unwavering commitment to innovation and development, exemplified by ongoing projects that fuel the company's growth. This commitment put Altri as a leader in the industry but also ensures that innovation becomes an ingrained part of the organizational DNA, fostering a culture that thrives on creativity and continuous improvement.

By integrating innovation into various facets of our operations, from the business model to organizational workflows, Altri aims to stay at the front line of technological advancements and market trends. This forward-thinking approach not only enhances the competitive edge but also contributes to the broader goals of sustainability and responsible business practices. Altri´s dedication to innovation isn´t just a strategic choice but a philosophy that guides in their actions, enabling to navigate the complexities of the modern business landscape and pioneer solutions that make a meaningful impact.

IV. Environmental, Social & Governance

Figure 12 - Altri's ESG Score

Source: Company Data

Altri SGPS S.A in 2022 received an ESG score of 62.34, corresponding to a Grade B (Figure 12). Over the past 5 years, Altri has maintained an average ESG score of 52.35, with a median ESG score of 55.63. These scores reflect Altri's commitment to Environmental, Social, and Governance (ESG) principles, showcasing a consistent effort to uphold responsible and sustainable business practices, accordingly to Refinitiv Eikon data. In the evaluation of ESG performance, the Environmental, Social, and Governance pillars carry weights of 45.60%, 30.40%, and 24.00%. This balanced approach signifies that Altri places substantial importance on environmental considerations, social responsibility, and effective governance in its overall corporate strategy.

Environmental

Altri SGPS S.A. is aware of the imperative of decarbonization and has made a firm commitment to reducing greenhouse gas (GHG) emissions in alignment with science-based targets. The ambitious goals set include a 51% reduction in scope 1 and 2 emissions and a 25% reduction in scope 3 emissions by the year 2030, as compared to 2020 levels.

Altri places a strong emphasis on energy efficiency with initiatives focused on reducing natural gas consumption and investing in renewable energy sources. By prioritizing these efforts, the company aims not only to curb emissions but also to transition towards cleaner and more sustainable energy practices. In terms of water management, Altri has implemented effective practices that prioritize reducing water consumption and ensuring the quality of discharged effluents through measures such as recirculating water, treating evaporated particles, and modernizing wastewater treatment plants. Despite a slight increase in specific water use, the company maintains a global benchmark with a value of 20 m3/ADT (Figure 13). This underlines Altri's commitment to sustainable water management, contributing significantly to mitigating water scarcity and safeguarding ecosystems.

Figure 13 - Altri's emissions (kgCO2/ADt)

Source: Company Data

Figure 14 - Nº of women in leadership positions.

Source: Company Data

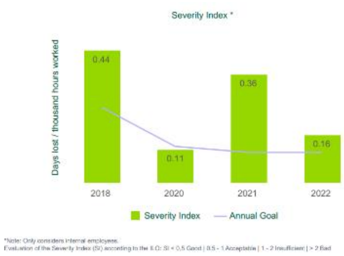


Figure 15 - Severity Index

Source: Company Data

Figure 16 - Altri's People Development

Source: Company Data

Altri's dedication to waste reduction is also noteworthy achieving a remarkable 12.7% reduction in waste per ton of pulp produced compared to the previous year. The company successfully recovered 64% of waste in 2022 through various methods, including reintegrating waste into the production process and collaborating with other industries for recycling and substituting virgin raw materials. By prioritizing waste reduction, responsible waste management, and waste recovery, Altri demonstrates its dedication to sustainability and minimizing its environmental footprint. These actions contribute not only to a healthier environment but also to the preservation of natural resources, supporting the principles of a circular economy and exemplifying responsible corporate citizenship.

Social

Gender Diversity and Equality | Altri's efforts in gender diversity and equality underscore its commitment to fostering the full and effective participation of women, ensuring equal opportunities for leadership across all levels of decision-making. This commitment is particularly significant for Altri, given the historical predominance of men in industrial activities. The company has actively defined and implemented measures aimed at achieving greater gender parity within its organizational structure. The principal goal set by Altri is to have 38 women in leadership roles by the year 2030, as illustrated in Figure 14. This target represents a commitment to promoting diversity and inclusivity within the company's leadership positions. By setting such goals, Altri not only acknowledges the importance of gender diversity but also takes proactive steps to address any imbalances that may exist within its leadership ranks. This initiative aligns with broader efforts globally to advance gender equality in the workplace, recognizing the positive impact that diverse perspectives can have on innovation, decision-making, and overall organizational success. Altri's focus on gender diversity not only reflects its commitment to social responsibility but also contributes to creating a workplace culture that values and supports the contributions of all individuals, irrespective of gender.

Health, Safety and Well-being of Employees | Altri places a high priority on the well-being of its employees, aspiring to cultivate a workplace culture where health and safety are intrinsic values. The company's commitment to employee well-being is operationalized through the Altri People Lab, which oversees programs designed to promote and appreciate the workforce. To ensure a comprehensive approach to health and well-being, Altri has established a Clinical Directorate for Occupational Health and Well-being. This directorate, led by an Occupational Physician, plays a pivotal role in developing policies, coordinating occupational medicine services, and managing risk identification and safety procedures. By having a dedicated team focused on these aspects, Altri ensures that the health and well-being of its employees are integrated into the core fabric of the organization. By closely tracking relevant metrics, the company can identify trends, assess the effectiveness of existing initiatives, and implement targeted strategies to enhance the overall health and safety environment.

Skills development | Altri recognizes that its most valuable asset is its people and because of that one of its primary goals is to invest in a qualified workforce capable of innovation and developing improved solutions that promote sustainability. This commitment goes beyond developing technical skills, it also encompasses enhancing performance management and attracting and retaining highly qualified and motivated individuals. In pursuit of this goal, Altri invested significantly in the development of its workforce, with more than 23 thousand hours of training provided in 2022. These training initiatives cover a spectrum of areas, including technical and specific domains related to the complex manufacturing processes.

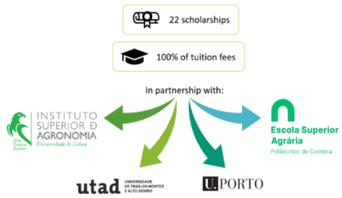


Figure 17 - Altri's Community

Source: Company Data

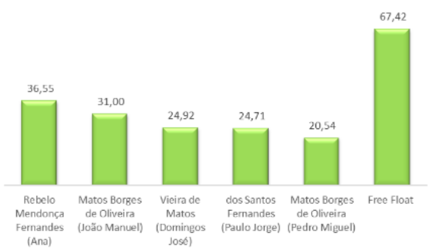


Figure 18 - Altri's Government Structure

Source: Company Data

The ambitious vision of the Altri Group in this area is clear: to have the best and well-prepared professionals in the industry. By investing in continuous learning and development, Altri aims not only to keep its workforce abreast of industry advancements but also to foster a culture of innovation and expertise that contributes to the company's sustained success.

Community | Altri actively engages in the development and support of a variety of initiatives and activities, these efforts actively contribute to create relationships with the communities surrounding its industrial units and forestry activities. Altri's involvement in community development is exemplified through donations and logistical support reflecting the company's dedication to social responsibility but also demonstrate a tangible commitment to making a positive impact on the well-being of the communities in which it operates.

By actively participating in initiatives and activities that benefit the community, Altri showcases a holistic approach to corporate social responsibility. This commitment goes beyond the core business operations, acknowledging the interconnectedness between the company and the local community. Such initiatives contribute to building a positive corporate image, fostering goodwill, and establishing a sense of shared responsibility for the well-being of the community.

Governance Structure

The governance structure has the goal to create an positive impact on the world and contribute to sustainable development, being a more responsible, ethical, and human company, which consequently influences the way its teams work. The board of directors is supported by four committees: The Executive Committee, the Operating Strategy and Monitoring Committee, the Ethics Committee, and the Sustainability Committee.

Executive Committee: plays a crucial role in the operational management of the company, adhering to the company's objectives and values while providing necessary information to support decision-making by the corporate bodies.

Operating Strategy and Monitoring Committee: This committee is responsible for supporting the board of directors in the monitoring and performance of the executive board, assisting the board of directors in the evaluation process of the members of the executive board, and supporting the board of directors and the Executive Board in matters of assessment and evaluation of corporate governance. This committee is composed of Paulo Fernandes (Vice-President), João Borges Oliveira (Vice-President), and José Soares da Pina (CEO).

Ethics Committee: plays a crucial role in ensuring ethical conduct within the organization by overseeing compliance with the Code of Ethics, reporting, and addressing violations, and monitoring the implementation of the Group's Equality Plan.

Sustainability Committee: proposing to the Board of Directors new sustainability objectives and targets and to monitor the performance of the defined objectives, to review and monitor the investments necessary for its pursuit with a view to always creating long-term value.

V. Industry Overview & Competitive Landscape

Industry Overview – Overall

Economic Growth | The global economy is expected to experience a slowdown, with growth rates decreasing from 3.5% in 2022 to 3.0% in 2023, and further dropping to 2.9% in 2024. This decline is mainly driven by advanced economies, where growth is anticipated to decrease significantly from 2.6% in 2022 to 1.5% in 2023 and 1.4% in 2024. In emerging market and developing economies are expected to maintain stable growth from 2022 to 2024, with a slight uptick in 2025. In the United States, growth is forecasted to be 2.1% in 2023 and 1.5% in 2024, with a upward revision attributed to robust business investment and consumption growth. Nevertheless, a slowdown is expected in the latter part of 2023 and throughout 2024. The euro area is anticipated to experience a decline in growth, decreasing from 3.3% in 2022 to 0.7% in 2023, followed by a rebound to 1.2% in 2024. Growth prospects vary among major euro area economies, with Germany facing a slight economic contraction while France is experiencing improved industrial production and external demand. In emerging and developing Europe, growth is projected to be 2.4% in 2023, with a minor decrease to 2.2% in 2024. China's growth is expected to be 5.0% in 2023 and 4.2% in 2024, primarily due to a crisis in the property market leading to reduced investment. This data was based on “WORLD ECONOMIC OUTLOOK” from INTERNATIONAL MONETARY FUND about October 2023.

Covid-19 and Russia & Ukraine | The global economic recovery from the COVID-19 pandemic and Russia's invasion of Ukraine is losing momentum due to disparities among sectors and regions. While COVID-19 is no longer a global health emergency, challenges persist but high inflation rates remain, leading to tighter monetary policies and reduced borrowing, which in turn impacts economic growth. Although concerns in the banking sector have eased, high interest rates are affecting financial systems and lending standards, particularly in advanced economies. This situation has also strained public finances, especially in poorer nations. While the services sector remains resilient, other sectors, such as manufacturing, are weakening. As mobility returns to normal, further growth in services is limited. Investment in productive capacity has slowed, impacting international trade and manufacturing. Excess savings are decreasing, leaving economies vulnerable to shocks.

Inflation | Global inflation is poised to follow a downward trajectory, with a gradual decline from 8.7% in 2022 to 6.9% in 2023 and 5.8% in 2024. This shift is primarily driven by an increase in core inflation, contributing to a 0.6% upward adjustment for 2024. Notably, advanced economies are witnessing a more substantial reduction in inflation compared to emerging markets and developing economies. This discrepancy can be attributed to the stronger monetary policy frameworks and reduced exposure to commodity price and exchange rate shocks in advanced economies. However, it's important to acknowledge that low-income developing countries are still grappling with double-digit inflation, and any relief is anticipated to occur only in 2024. The major economies exhibit varying inflation trajectories, with the euro area and the United States experiencing significant declines. Despite the overall trend, core inflation is proving more persistent than initially expected. In 2023, it is expected that the majority of inflation-targeting economies will surpass their official targets, with a few exceptions like China, Thailand, and Vietnam. As we progress towards 2025, global inflation is anticipated to approach target levels in most economies. The global inflation outlook is a dynamic landscape influenced by multiple factors, including monetary policies, commodity prices, and labor market conditions. These elements contribute to regional variations, emphasizing the need for flexible and adaptable economic strategies in response to changing conditions. This data was based on “WORLD ECONOMIC OUTLOOK” from INTERNATIONAL MONETARY FUND about October 2023.

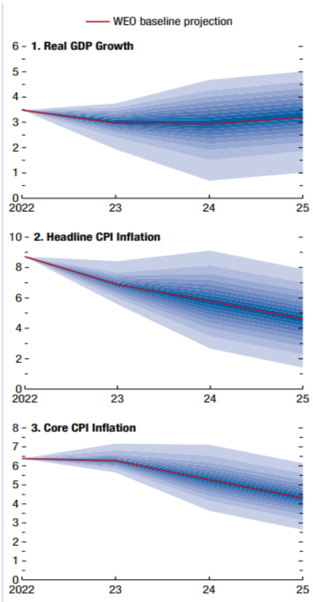


Figure 19 - Headline Inflation Forecasts

Source: IMF Calculations

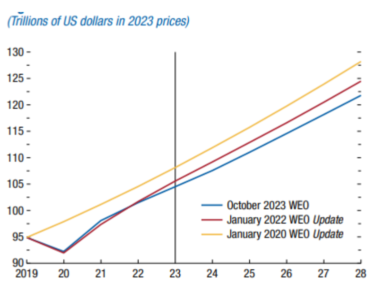


Figure 20 - Forecasts of Global GDP

Source: IMF Calculations

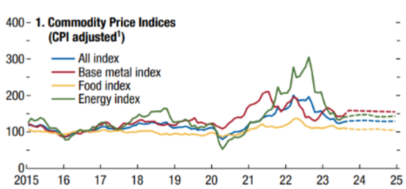


Figure 21 - Commodity Price Index

Source: IMF Calculations

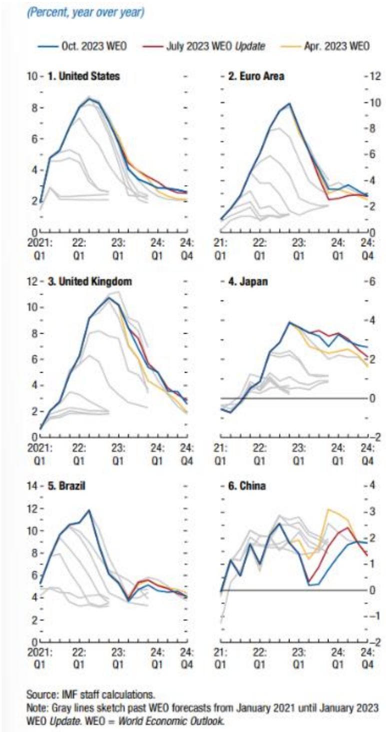


Figure 22 - Distribution of Forecast Uncertainty around GDP Growth and Inflation Projections

Source: IMF Calculations

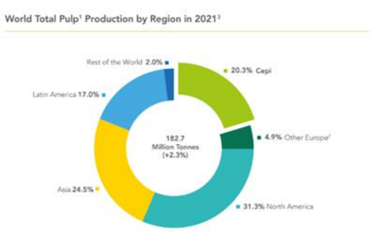


Figure 23 - World Total Pulp Production by Region in 2021

Source: CEPI Calculations

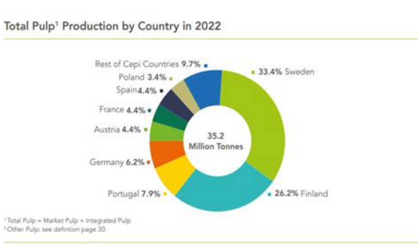


Figure 24 - Total Pulp Production by Country in 2022

Source: CEPI Calculations

Upside Risks | Faster-Than-Expected Decline in Inflation driven by factors such as a stronger than expected pass through effect resulting from lower energy prices or a tightening of profit margins to absorb rising costs. Furthermore, if job vacancies decrease more swiftly, it could alleviate labor market pressures, reduce the vacancies-to-unemployment ratio, and mitigate the need for further monetary tightening. Such developments would not only help mitigate inflation but also support economic growth by restoring purchasing power for households, potentially enabling central banks to consider easing their policy stances. **Faster Recovery in Domestic Demand** many economies have amassed excess savings during the pandemic, and consumption has yet to return to pre-pandemic levels leading to an rapid recovery in consumption, attributed to factors such as a tighter-than-anticipated labor market in the United States, increased policy support in China (such as targeted household transfers), and the possibility of private investment rebounding more robustly in response to existing policy initiatives. Breakthroughs in artificial intelligence and advancements in green technologies could also usher in a new era of robust productivity growth, stimulating investment and fostering overall economic expansion. **Downside Risks | China's Economic Slowdown,** there are concerns about a further slowdown in China's economic growth, which poses risks to trading partners in which the Chinese government's policy response, including addressing financial stability, restructuring property developers, and boosting business and consumer confidence. The policy options include potential monetary easing and reorienting fiscal expenditures; **Commodity Price Volatility**, climate, and geopolitical shocks, such as heat waves, droughts, and supply chain disruptions, may lead to increased volatility in commodity prices. Crop failures, export restrictions on agricultural products, and fluctuations in food, fuel, and fertilizer prices are major concerns. Higher oil prices could impact global economic activity. Underlying Inflation, Persistent underlying inflationary pressures could arise from tight labor markets and wage demands. Near-term inflation expectations remain elevated, complicating the task of monetary policy in maintaining price stability; **Financial Market Repricing**, Financial markets have adjusted their expectations for monetary policy tightening, but upside inflation surprises could trigger a reassessment and lead to a sudden rise in interest rate expectations, affecting asset prices and financial conditions. Banks and nonbank financial institutions could be stressed, and there may be a flight to safety, impacting global trade and inflation in emerging markets; **Debt Distress,** Lending standards have tightened, and loan demand has declined in some economies, while borrowing costs for emerging markets remain high. Debt distress is a growing concern, especially for low-income countries and emerging markets; **Geoeconomic Fragmentation**, Ongoing geoeconomic fragmentation, driven by geopolitical tensions and restrictions on trade, capital movements, and international payments, could hinder global prosperity. Trade fragmentation, where countries trade exclusively within blocks, could significantly reduce global GDP. This fragmentation may also affect multilateral cooperation in addressing global challenges. This text about upside risks and downside risks was based on "WORLD ECONOMIC OUTLOOK" from INTERNATIONAL MONETARY FUND about October 2023.

Industry Overview – Market Sector

Paper Products Market | The global pulp and paper market size was valued at €323.67 billion in 2021 and is expected to grow from €326.31 billion in 2022 to €343.17 billion by 2029 with a forecast CAGR of 0.72%, according to Market Research Report about the Pulp and Paper Market published in July of 2022. This growth is driven by increased demand for eco-friendly packaging, advancements in recycling infrastructure, and anti-plastic sentiments. The primary drivers include rising demand from chemical and industrial sectors and expanding applications in packaging. Strategic sourcing, aided by demand and price prediction models, is crucial for cost reduction.

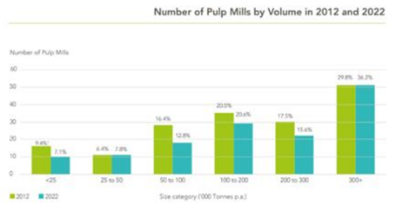


Figure 25 - Number of Pulp Mills by Volume in 2012 and 2022

Source: CEPI Calculations

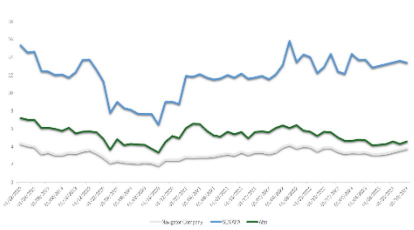


Figure 26 - Altri S.A., Semapa S.A. and Navigator Company S.A. 5-year historical stock price.

Source: Refinitiv, Own Analysis

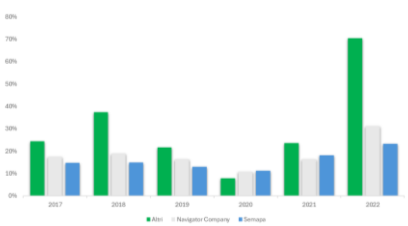


Figure 27 - Altri S.A, Semapa S.A. and Navigator Company S.A. 6-year historical ROE.

Source: Refinitiv, Own Analysis

In 2028, the Hardwood segment is projected to lead, benefiting from its density and improved production capacity in paper and pulp mills.

Portugal Market | In 2022, the pulp, paper, and cardboard production sector in Portugal demonstrated outstanding performance, underscoring its growing significance within the national economy. The Biond, a non-profit association, plays a pivotal role in representing the collective interests of the industrial and forestry activities related to these sectors makes a projection for 2023 a record-breaking forest-related exports, constituting 9.1% of the total national exports, according to 2022 statistical bulletin published by Biond. The trade balance for forestry and logging remained positive, reaching 3.3 billion euros in 2022. Notably, paper, and cardboard surpassed cork-based products as the group with the highest surplus for the first time, while paper pulp maintained its position as the third most surplus group. The sector's consolidation is evident in the substantial increase in sales from Biond-associated companies, propelling the Portuguese trade balance to over 4 billion euros, reflecting a nominal annual growth of 42.3%. The net profit of Biond-associated companies experienced a remarkable growth of 56.7%, reaching 596.35 million euros in 2022. This surge underscores the sector's contribution to the national GDP. Both pulp and paper and cardboard production sustained their upward trajectory, with pulp production reaching 2.87 million tons (+2.2%) and paper and cardboard production reaching 2.11 million tons (+3.8%). The gross value added by Biond-affiliated companies witnessed a substantial increase, reaching 1,446 million euros in 2022, marking an approximately 59.4% surge compared to 2021. The sector's resilience and substantial contribution to the Portuguese economy are evident, making it a compelling subject for further exploration in academic research.

Peer Companies: The principal Altri peers in the Portuguese market are Navigator Company S.A. (NVG.LS) and SEMAPA (SEM.LS). In relation to last 5 years of historical data, SEMAPA S.A. has been the one with the highest share price, ALTRI S.A. being the company that stands in the middle and Navigator Company S.A. being the lowest (Exhibit 25). Altri stands out as a company demonstrating remarkable financial performance compared to Navigator Company S.A. and Semapa S.A. The Return on Equity (ROE) of Altri is particularly impressive, reaching exceptional peaks of 37% in 2018 and 70% in 2022 (Figure 27). These figures significantly surpass those achieved by the other companies, highlighting Altri's consistent ability to generate substantial returns for its shareholders. Altri's Net Income Margin also distinguishes itself, despite facing fluctuations over the years. Even during the challenging period in 2020, the company showcased resilience, recovering, and achieving a margin of 16% in 2022 (Figure 28). In comparison, competitors displayed lower margins. These indicators reveal that, despite encountering volatility in certain years, Altri not only managed to recover but also reached exceptional levels in terms of profitability and operational efficiency.

Competitive Analysis

Threat of New Entrants (Low) | The paper and pulp industry in Portugal faces a low threat of new entrants, mainly due to limited access to high-quality wood and raw materials, combined with competition from existing industry players, presents further obstacles for newcomers. Despite these challenges, strategic navigation of compliance, adoption of sustainable practices, and securing reliable sources for essential resources can unlock opportunities in this industry.

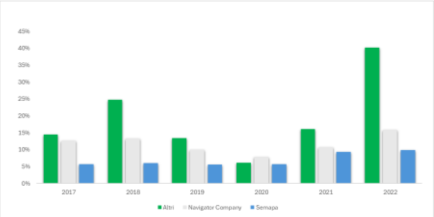


Figure 28 - Altri S.A, Semapa S.A. and Navigator Company S.A. 6-year historical Net Income Margin

Source: Refinitiv, Own Analysis

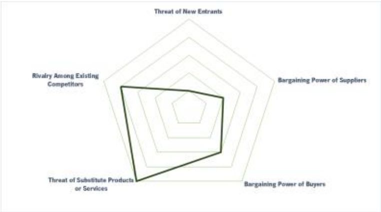


Figure 29 - Altri Porter's five forces analysis.

Source: Author, Company Data

Bargaining Power of Suppliers (Medium) | Relying on a network of wood suppliers, including self-managed forests, the company's supplier dynamics fluctuate based on local timber concentrations. ALTRI SGPS strategically diversifies its global raw material sources, reducing dependency on specific regions. These measures position ALTRI SGPS to navigate the evolving dynamics and maintain a resilient and efficient supply chain.

Bargaining Power of Buyers (Moderate-high) | The company focuses on product differentiation and upholding high-quality standards. ALTRI SGPS minimizes the impact of price pressure, establishing long-term contracts with major buyers enhances stability, providing a buffer against the fluctuations of buyer power. Through these strategic measures, ALTRI SGPS maintains resilience and a competitive edge in serving diverse industries such as packaging, publishing, and specialty paper.

Threat of Substitute Products or Services (High) | ALTRI SGPS diversifies its products with a focus on sustainability and explores digital solutions. Leveraging its established reputation, commitment to quality, and a culture of innovation, ALTRI SGPS fortifies itself against substitutes. This strategic approach not only aligns with evolving market preferences but also positions the company as a forward-thinking industry leader, enhancing resilience in the face of potential substitutes.

Rivalry Among Existing Competitors (Moderate-High) | In Portugal's paper and pulp industry, the competition is High due to factors such as market demand, price competition, and capacity expansions contribute to this dynamic landscape. Companies like SEMAPA and Navigator are proactively investing in research and development to introduce innovative and sustainable products. Navigating this environment requires a strategic focus on innovation and differentiation to stay competitive both locally and on the global stage.

VI. Valuation

Input	Rate	Source
Risk-Free Rate	2.91 %	10-year Government Bond
Beta	1.015	Linear Regression between Euro Stock 600 and Altri, without the Covid-19 Period
Equity Risk Premium	6.84%	Weighted Average based on Revenue per region (Damodaran)
Cost of Equity	9.85%	CAPM
Cost of Debt	5.41%	Risk-Free Rate & Default Spread & Country Default Spread (Damodaran)
Tax Rate	23%	Average 6-year historical tax rate without the COVID-19 period
Debt/Equity	36%	Market Values
WACC	8.36%	

Table 2 – WACC Inputs

Source: Author, Company Data

Cost of Debt	
Risk-Free Rate	2.91%
Default Spread (Damodaran)	0.75%
Country Default Spread – Portugal (Damodaran)	1.75%

Table 3 - Cost of Debt

Source: Refinitiv, Own Analysis

In order to evaluate ALTRI SGPS different methods were used to get a more occurred price for the company. Among these methods, the Discounted Cash Flow (DCF) technique serves as a fundamental valuation method, allowing for a thorough estimation of an investment's value based on its anticipated future cash flows. Through the projection of forthcoming cash flows and their subsequent discounting to present value using a chosen discount rate (WACC).

WACC | The value of WACC estimated was 8,36% with a Debt/Assets ratio of 26% and an Equity/Assets ratio of 74%. The Weighted Average Cost of Capital (WACC) is a crucial metric that combines a company's costs of equity and debt. It represents the overall cost of investors. The effective tax rate in the WACC calculation is due to the need to obtain a more accurate assessment of the company's cost of capital, considering the specific tax effects of its financing structure and ensuring a more informed decision-making regarding financing and investment.

COST OF DEBT | The cost of debt refers to the effective rate a company pays on its borrowed funds. The initial step involves estimating the interest coverage ratio, a key measure that evaluating how effectively a company can manage its interest expenses with its earnings before interest and taxes (EBIT). Damodaran's website provides a table with the credit ratings related to financial ratio. The **interest coverage ratio** of the company is 18,40 in 2022 matched to a specific credit rating, "Aaa", with an associated **default spread** of 0,75% (Appendix 18), Incorporating the credit risk premium

DCF Model

Terminal Growth Rate	2,91%
Discount Rate	8.36%
PV of Terminal Value (€ Million)	€ 1,019
PV of FCFF (€ Million)	€ 184
Shares Outstanding	205,131,672
Target Price	€5.46
Price 2023	€4.60

Table 4 - DCF Model

Source: Author, Company Data

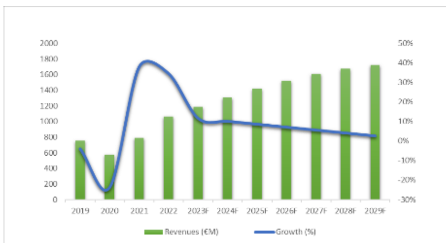


Figure 30 - Altri's Growth Rate

Source: Author, Company Data

(CRP) is crucial for reflecting the default risk of the company and its financial obligations. By including the CRP, investors are appropriately compensated for potential defaults or credit deterioration, leading to a more accurate assessment of third-party capital costs, and informing sound financing and investment decisions. The default spread is added to the risk-free rate (German 10Y T-Bill) and the Country default spread for Portugal with a value of 1.75%. The after-tax cost of debt is 4,17%.

COST OF EQUITY |The current value of German 10Y Treasury Bills (2.91%) is used as a proxy for the risk-free rate. The equity risk premium (ERP) was based on a weighted average between the different most regions that the company sells for with a final value of 6,84% (Appendix 16 and Appendix 17). The beta was calculated based in a regression between the returns of the Euro Stock 600 and Altri returns with a value of 1,015 (Appendix 14 and Appendix 15), this regression method employs a wide array of market data, facilitating the capture of the inherent diversification spanning the entire market. This facilitates a more comprehensive estimation of beta, which precisely depicts the asset's risk relative to the overall market, irrespective of the specific attributes of individual companies selected for comparison. Getting together all these variables resulted in a cost of equity of 9.85% using CAPM model.

Discounted Cash Flow Valuation (DCF)

Free Cah Flow to Firm (FCFF) | Financial metric used in Discounted Cash Flow analysis to get the company's financial health. It signifies the cash available to all investors after operating expenses and necessary investments. Calculated by adjusting operating income for taxes, changes in working capital, capital expenditures, FCFF highlights cash for distribution or future growth. Its understanding aids investors in assessing a company's cash generation capability and growth potential for informed investment choices.

Terminal Value | The Terminal Value represents the present value of future cash flows beyond the year 2029, calculated based on the value in the year 2029. A simplified version of the Gordon Growth Model is then utilized, where the future cash flow from the year 2029 is divided by the difference between the terminal cost of capital (10%) and the terminal growth rate (1.9%) to derive the Terminal Value.

Growth Rate | The company's revenue growth has been analyzed by considering a historical 6-year average without the COVID-19 period (2020-2021), yielding a value of 11.61%. However, moving forward, a more conservative approach has been adopted, anticipating a gradual decline in growth rates leading up to 2029. In this projection, the company is expected to experience a shift towards a steadier growth trajectory, with an estimated annual growth rate of 2.91% based on the German 10Y Treasury Bills.

€ (in Millions)	**2022**	**2023F**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**
EBIT	€237	€279	€298	€313	€325	€332	€334	€331
Tax Rate	27%	23%	23%	23%	23%	23%	23%	23%
Capex	€67	€453	€206	€289	€309	€324	€331	€336
Depreciations	€64	€94	€110	€127	€144	€160	€175	€188

Change in WC	€94	€48	€27	€26	€24	€21	€17	€13
FCFF	€77	€-191	€107	€54	€61	€71	€84	€95
Terminal Value								€1,787

Table 5 - FCFF Calculations

Source: Author, Company Data

Relative Valuation

A multiple valuation was performed comparing Altri with companies in the same industry. The group of peers was selected from Refinitiv Eikon. The multiples implemented in this valuation were P/E, P/BV, P/Sales, EV-to-Sales ratio, and EV-to-EBITDA ratio. Based on relative valuation the target price is €4.15 a downside of 10% compared to the current price of €4.60.

Price-to-Earnings ratio | The industry's P/E ratio stands at 5, while Altri's P/E ratio is 2.1. Altri's current price is €4.60, whereas the market price is €9.57. Altri's P/E ratio being 2.1 compared to the industry's 5 suggests that the company is trading at a lower multiple of earnings compared to the industry. The gap between the current price and the market price of €9.57 indicates a substantial difference in how the market values our company compared to its current trading price. This scenario might imply that Altri is undervalued relative to industry peers based on the P/E ratio.

Price-to-Sales | Altri's P/S ratio of 0.8, compared to the industry's 0.6, suggests that investors are paying more for each unit of sales generated by Altri compared to the industry peers. Despite this, Altri's current stock price of €4.60 exceeds the calculated value of €3.38 based on the P/S ratio. This discrepancy implies that investors are valuing Altri's stock higher than what the P/S ratio alone would suggest, potentially indicating overvaluation or a more favorable market sentiment towards Altri's future sales growth and overall prospects.

Price-to Book Value Ratio | Altri's Price-to-Book Value (P/B) ratio of 1.5, which exceeds the industry average of 0.6, indicates that the market is attributing a higher value to the company's assets relative to its industry peers. This suggests that investors are willing to pay more for each unit of Altri's book value. However, the current stock price of €4.60 compared to an implied book value indicator of €2.69 suggests that the market's valuation of Altri's book value is higher than the book value itself. This could indicate either potential overvaluation or favorable market sentiment towards the company's asset base and future prospects.

EV-to-EBITDA ratio | Altri's EV-to-EBITDA ratio of 3.6 being higher than the industry average of 2.6 indicates that the market places a higher value on Altri's EBITDA relative to its enterprise value, suggesting that investors are willing to pay more for Altri's operating earnings compared to industry peers. Despite the higher valuation multiple, Altri's current stock price of €4.60 doesn´t directly correlate to the EV-to-EBITDA ratio but may reflect investor optimism regarding Altri's future cash flows and profitability suggests a favorable view of Altri's earnings potential and growth prospects.

EV- Sales Ratio | Altri's EV-to-Sales ratio of 0.9, which exceeds the industry average of 0.6, indicates that the market values Altri's sales revenue at a higher multiple of its enterprise value compared to industry peers. This suggests that investors are willing to pay more for Altri's sales, indicating a higher valuation relative to sales. However, the current stock price of €4.60 compared to an implied value of €2.91 suggests that the market may be placing a higher premium on Altri's sales potential and future revenue growth. This could indicate optimism or favorable market sentiment towards the company's market position and growth prospects.

	Country	EV/Sales	EV/EBITDA	P/E	P/sales	P/BV
SEMAPA SGPS SA	Portugal	0.2	0.71	3.21	0.32	0.75
Navigator Company SA	Portugal	0.9	3.11	5.83	0.93	1.82
Ence Energia y Celulosa SA	Spain	0.4	1.07	1.64	0.40	0.58
HOLMEN AB	Sweden	1.8	4.76	7.19	1.76	0.74
STORA ENSO OYJ	Finland	1.0	4.48	7.36	0.98	0.91
IBERPAPEL GESTION SA	Spain	0.2	2.2	4.2	0.2	0.2
NORDIC PAPER HOLDING AB	Sweden	0.4	2.2	3.3	0.4	1.8
NEODECORTECH SPA	Italy	0.2	2.1	4.0	0.2	0.4
Industry Average		**0.6**	**2.6**	**5.0**	**0.6**	**0.6**
Altri SGPS SA	Portugal	0.9	3.6	2.1	0.8	1.5
Price	-	€2.91	€2.18	€9.57	€3.38	€3.69
Analysis	-	**Overvalued**	**Overvalued**	**Undervalued**	**Overvalued**	**Overvalued**

Table 6 - Relative Valuation Method

Source: Author, Company Data

Sensitivity Analysis and Scenario Analysis

A sensitivity analysis was conducted based on the DCF valuation. The analysis explores the impact of minor fluctuations of ±0.05% in both the Weighted Average Cost of Capital (WACC) and the growth rate on financial projections. Understanding these variations is crucial, given their profound influence on future cash flows, project valuations, and overall financial performance. The analysis endeavors to reveal the implications of these subtle changes and their importance in guiding our decision-making processes.

		Growth				
		1.9%	2.4%	2.9%	3.4%	3.9%
WACC	7.36%	€5.75	€6.30	€6.99	€7.85	€8.95
	7.86%	€5.15	€5.60	€6.15	€6.81	€7.65
	8.36%	€4.65	€5.02	€5.46	€5.99	€6.64
	8.86%	€4.23	€4.54	€4.90	€5.33	€5.84
	9.36%	€3.87	€4.13	€4.43	€4.78	€5.20

Table 7 - Scenario Analysis

Source: Author, Company Data

The sensitivity analysis based on the company's valuation reveals that Altri stock can ranging from €3.87/share in a pessimistic scenario to €8.95 share in an optimistic setting. This showcases the significant impact of variations in Weighted Average Cost of Capital (WACC) and Terminal Growth rate, highlighting the sensitivity of the company's valuation to changes in these key factors. The pessimistic scenario simulates a recessionary environment and weaker financial performance, while the optimistic scenario reflects highly favourable macroeconomic conditions and robust financial performance.

The scenario analysis effectively demonstrates how various variables influence the Discounted Cash Flow (DCF) valuation. Particularly, profitability indicators such as Earnings Before Interest and Taxes (EBIT) margins play a significant role in determining the target price. A decrease in the EBIT margin to 18.2% results in a downside potential to €4.57/share with a 1% increase in WACC, while an increase to 20.2% shows an upside potential to €7.16/share with a 1% decrease in the discount rate (Appendix 10). This underscores the criticality of operational performance management in company value. Additionally, changes in Capital Expenditure (Capex) and depreciation also have a notable impact on the company's value. This emphasizes the need for careful consideration and strategic management of these financial variables, as they contribute to shaping the overall valuation of the company (Appendix 11 and 12).

In summary, the sensitivity analysis not only provides a range of potential valuations based on different scenarios but also underscores the importance of managing key financial and operational metrics to maximize company value. This comprehensive understanding allows stakeholders to assess the potential impact of various market conditions and operational strategies on the company's overall valuation.

Bull Case Scenario	
WACC	7.36%
Terminal Growth Rate	3.9%
Price per share	€8.95

Table 8 - Bull Case Scenario

Source: Author, Company Data

Base Case Scenario	
WACC	8.36%
Terminal Growth Rate	2.9%
Price per share	€5.46

Table 9 - Base Case Scenario

Source: Author, Company Data

Bear Case Scenario	
WACC	9.36%
Terminal Growth Rate	1.91%
Price per share	€3.87

Table 10 - Bear Case Scenario

Source: Author, Company Data

VII. Financial Analysis

Working Capital | A favorable working capital position plays a crucial role in facilitating the smooth coverage of day-to-day operational expenses, underscoring its pivotal role in sustaining business operations and fortifying resilience. The effective management of working capital, achieved through a balance between receivables and payables, empowers companies to navigate challenges adeptly and capitalize on growth opportunities, thereby fostering sustained financial health. This is supported by the forecast of gradual and consistent increases in working capital in the future years (2023 to 2029F), indicating a stronger financial position and the ability to finance operations with internal resources. Beyond this, a gradual decline is projected until 2029F reflecting the expected slowdown in growth and consolidation.

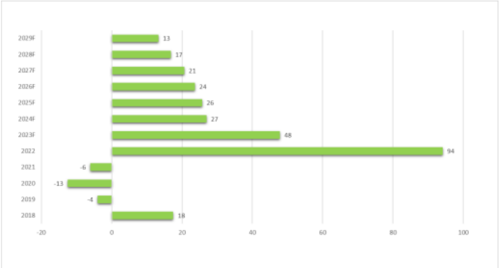


Figure 31 - Working Capital Changes

Source: Author, Company Data

Profitability| The positive trajectory of Altri's margins show a consistent movement that concludes with a projected convergence towards industry standards (Figure 32). This growth is particularly evident in the gross margin, which has been bolstered by the reduction in the cost of revenues. Simultaneously, the net income margin has experienced a corresponding increase, reflecting overall growth across various operational facets.

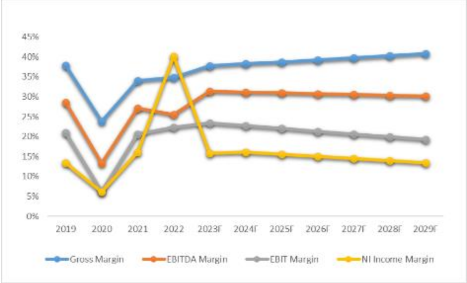


Figure 32 – Altri's Margins

Source: Author, Company Data

Examining the Return on Assets (ROA), that the highest value was achieved in 2022, reaching a value of 29%. However, subsequent years reveal a stable trend, indicating sustained performance albeit at a slightly lower level. This suggests that Altri has been effectively utilizing its assets to generate returns, contributing to the overall financial health of the company. Similarly, the Return on Equity (ROE) reached its highest value in 2022 with a value of 70% (Figure 33). It's important to acknowledge that this peak was influenced by the sale of extraordinary items during that year. Subsequent years show a consistent tendency, converging towards industry standards. This indicates that while the exceptional items had a significant impact in 2022, the company has since demonstrated a stable performance in generating returns for its equity holders. The observed increase in margins can indeed be linked to the easing of COVID-19 restrictions, particularly those affecting the use of paper. As these restrictions subside, the demand for paper products likely rebounded, positively influencing Altri's financial performance.

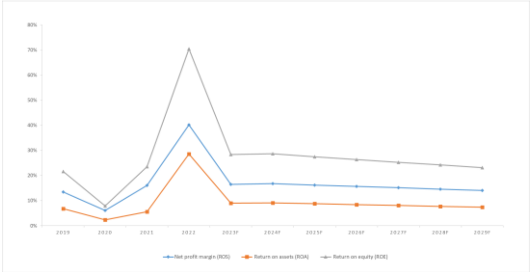


Figure 33 - Profitability Ratios

Source: Author, Company Data

Dividend Policy | In 2023F, there is a visible slowdown in the dividend payout ratio, suggesting a period of stability (Figure 34). Following this, the forecast anticipates an increase in the dividend per share, accompanied by a decrease in the retention rate over time. The decision to increase the retention ratio is strategic, enabling the company to reinvest a larger portion of its earnings back into the business for future growth opportunities. By doing so, Altri positions itself to fund capital expenditures, research and development initiatives, and other projects that contribute to its long-term expansion and sustainability. Assuming a constant dividend payout ratio of 82% for the forecast period after 2029 indicates a commitment to returning a significant portion of earnings to shareholders while retaining enough capital to fuel internal growth. This balance allows the company to reward investors through regular dividends while simultaneously ensuring it has the financial resources to invest in strategic initiatives that enhance its competitive position. The anticipated decrease in the retention rate over time suggests a strategic shift towards rewarding shareholders more generously, possibly as the company achieves certain growth milestones or reaches a mature stage in its business lifecycle. This aligns with the notion that companies often increase dividends as they become more established and generate consistent, stable cash flows.

Figure 34 - Dividend Policy

Source: Author, Company Data

Solvency | The Debt-to-Equity (D/E) ratio serves as a key indicator of a company's financial structure, showcasing the balance between borrowed funds and shareholder investments. In the case of Altri, the D/E ratio has experienced an upward trajectory, rising from 106%, in 2022, to 156%, in 2023, and maintaining a constant value thereafter (Figure 35). This shift indicates a growing dependence on financial debt to support the company's expansion initiatives. While a higher D/E ratio can imply increase risk due to a heavier reliance on debt, it may also signify the potential for higher growth opportunities. In tandem with the D/E ratio, the interest coverage ratio has witnessed an increase and remains consistent after 2023F. This suggests an improvement in earnings before interest and taxes (EBIT) over the forecasted years. The observed stability in this ratio is a positive signal, indicating that is expected to generate sufficient earnings to cover its interest expenses. Furthermore, the stability observed in the Leverage Ratio reinforces the idea of a consistent level of debt.

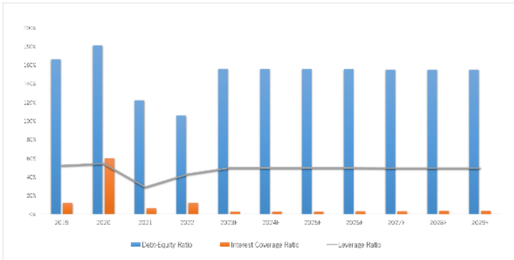


Figure 35 - Solvency Ratios

Source: Author, Company Data

Liquidity | Altri's liquidity outlook appears optimistic as the company is expected to improve in liquidity over the forecasted years (Figure 36), primarily driven by an increase in cash and equivalents. Liquidity indicators, such as the current ratio, remain stable and even show an upward trend, signaling enhanced short-term liquidity. The current ratio, which measures the company's ability to cover short-term obligations with its current assets, has increased. This suggests that Altri has a more favorable balance of current assets compared to current liabilities, indicating a strengthened capacity to meet immediate financial obligations. This is a positive signal for the company's operational efficiency and financial health. Despite the increase in the current ratio, it's noted that the operating cash flow ratio experienced an increase in 2022 but then slowed

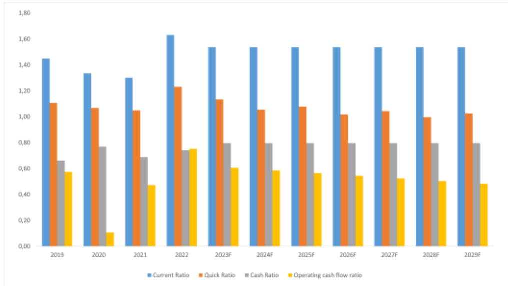


Figure 36 - Liquidity Ratios

Source: Author, Company Data

down due to the company's investments. While this might indicate a temporary decrease in the ability to generate cash from operating activities, it also reflects strategic investments made by the company.

Activity Ratios | The increase in inventory turnover is particularly noteworthy, as it signals a rapid turnover of products, aiming to restore the company's inventory ratio that was previously impacted by the COVID-19 repercussions. This suggests a recovery in demand and operational effectiveness. The overall improvement in the cash cycle, facilitated by the enhanced activity ratios, indicates that Altri aims to operate using funds received from customers before settling payments to suppliers. This advantageous time gap can be a strategic advantage, enabling the company to manage its cash flow and working capital more effectively. It provides Altri with the flexibility to invest in growth opportunities, repay debts, and meet other financial obligations efficiently.

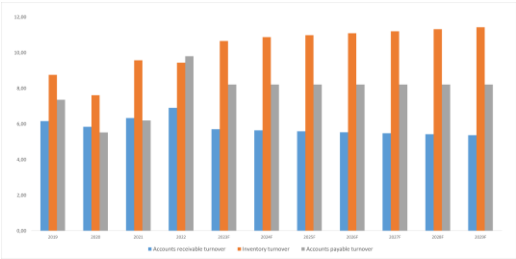


Figure 37 - Activity Ratios

Source: Author, Company Data

VIII. Investment Risks

Operational Risks | OR

OR1 | Supply Chain (Probability: moderate | Impact: Moderate) | Altri have been diversified suppliers, their supply chain for better visibility, and established comprehensive contingency plans. Building strong relationships with suppliers and proactive measures aim to strengthen supply chain resilience. The goal is to not just lower the chances of disruptions but also minimize their impact on daily operations. In 2022, the eruption of conflict between Russia and Ukraine initiated a global surge in material prices. In the selection of its suppliers, Altri prioritizes the choice of national suppliers to promote the local and national economy, and in 2022, 81% of the total expenses were spent with national suppliers. In order to maintain a close relationship and facilitate verification of those requirements required by Altri, suppliers are requested to register with the External Services Qualification Portal ("PQSE" or "Portal") and provide the required documentation, that is validated and regularly checked by Altri teams.

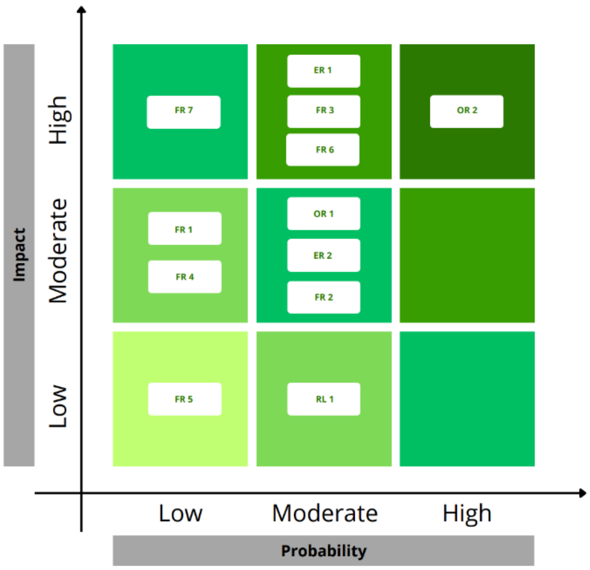


Figure 38 - Risk Matrix

Source: Author, Company Data

OR2 | Innovation & Competition (Probability: High | Impact: High) | Altri is aware of the evolving technological landscape impacting paper consumption and competition. This prompts the company to innovate continually, adapting to changing market demands. Innovation becomes pivotal, driving eco-friendly production methods and new paper products that align with market needs. In a fiercely competitive environment where price, quality, and sustainability matter, innovation stands out as crucial for staying ahead. Through robust research and strategic partnerships, Altri remains agile in responding to market shifts, securing its competitive advantage. The company prioritizes customer preferences while integrating new technologies. This strategic alignment helps Altri strike a balance between innovation and competition, ensuring ongoing relevance and growth in the industry. Altri has launched various initiatives to counter the declining paper usage due to emerging technologies. These proactive steps showcase the company's commitment to tackling this challenge and positioning itself favorably amid technological transitions, aiming to outpace competitors.

Economial Risks | ER

ER1 | Geopolitical Risk (Probability: Moderate| Impact: High) | The conflict in Ukraine has notably heightened geopolitical risks across Europe, triggering fluctuations in both oil and wood prices. This sudden surge in prices presents an immediate challenge for Altri, impacting the cost of raw materials and potentially straining the supply chain. To counter this risk, Altri entered into agreements to hedge against variations in paper pulp prices, tailoring these agreements to expected operations to dampen the impact on result volatility.

ER2 | Taxation Risk (Probability: moderate| Impact: Moderate) In Portugal, there are occasional tax incentives or exemptions for certain regions or activities that can reduce this rate, these incentives aim to attract investment and support specific industries, but they might be subject to changes in government policies. Altri is actively committed to ethical and transparent operations, emphasizing efficiency, innovation, professionalism, and competitiveness. To comply with EU directives and regulations, particularly Directive 2013/34/EU and Regulation (EU) No 2020/852, Altri is venturing into the realm of sustainable investment by structuring internal practices. This initiative aims to meet the requirements of the EU Taxonomy, aligning the company's practices with sustainability standards and enhancing transparent reporting. By publishing information in line with the EU Taxonomy, Altri is demonstrating its commitment to sustainable development, specifically in relation to environmental considerations.

Financial Risks | FR

FR1 | Interest Rate Risk (Probability: Low| Impact: Moderate) | Interest rates are a crucial variable in the market, higher rated demand higher return on the invested capital from the investors. Higher interest rates lead to a lower discounted cash flow value turning the value of Altri Assets lower, cash flow risk. Altri has been capable of managing their debt situation well for the last years due to the lower value of interest expenses they have. The Altri Group strategically manages its major indebtedness, predominantly indexed at variable rates, using interest rate swaps for future cash flow protection. These swaps convert variable-rate loans into fixed rates by agreeing with reputable credit institutions to exchange interest rate differences at preset intervals. The Group selectively engages high-quality banks, aligning these instruments with its financing operations. Fair value determination involves option models, cash-flow updating methods, and market-based assumptions. The Board approves significant financing terms, assessing risks and market options. Altri aims to mitigate cash-flow fluctuations by balancing fixed and variable-rate debt, utilizing derivatives strictly for risk reduction rather than speculation. Most derivative tools are cash-flow hedges mirroring underlying loans, although some, despite hedging intentions, fall short of meeting categorization criteria.

FR2 | Foreign Exchange Risk (Probability: Moderate| Impact: Moderate) | Altri operates across three continents, exposing the company to currency risks due to its dealings in three currencies: the euro, renminbi, and Canadian dollar. Altri is confident that fluctuations in foreign exchange rates won't notably impact the consolidated financial statements. This belief stems from the relatively small scale of foreign currency-denominated assets and liabilities, coupled with their short-term nature. When deemed essential, the Board manages result volatility due to currency fluctuations using a program involving purchasing and selling currencies at fixed rates (forwards) or other derivative instruments related to foreign exchange. The figure 39, illustrates the exchange rates between the euro and the Canadian dollar (EUR/CAN) and the euro and the Chinese renminbi (EUR/CNY). A noteworthy observation is the relatively stable and consistent trend in the EUR/CAN exchange rate, which appears as an almost straight line. On the contrary, the EUR/CNY exchange rate exhibits multiple oscillations, characterized by fluctuations and variations over time.

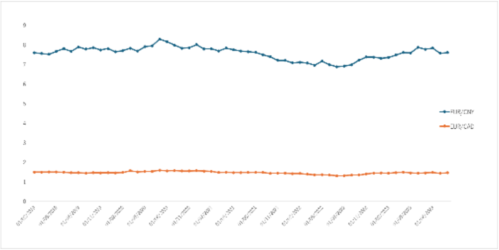


Figure 39 - EUR/CAD and EUR/CNY 5-year historical values

Source: Author, Yahoo Finance

This discrepancy in the behavior of the two exchange rates carries implications for Altri, particularly in terms of exchange risk. In the context of Altri, as the EUR/CNY exchange rate experiences these frequent ups and downs, it introduces a higher level of uncertainty and potential risk for the company.

FR3 | Inflation Risk (Probability: Moderate | Impact: High) | Inflation risk poses challenges for companies like Altri squeezing profit margins and limit pricing flexibility, affecting overall financial performance. A higher inflation rate can increase the cost of materials leading to a decrease in the margins of Altri. Although inflation rates are supposed to slowdown in the next time periods leading a less preoccupation with the risk of inflation could have in the earnings of Altri.

FR4 | Liquidity Risk (Probability: Low | Impact: Moderate) | The liquidity risk management policy aims to ensure that Altri consistently maintains sufficient financial resources to meet obligations, pursue strategies, and honor commitments. It emphasizes managing loan maturity, retaining ample resources for short-term needs, and aligning debt maturity with cash flow projections and financial leverage.

FR5 | Credit Risk (Probability: Low | Impact: Low) | Altri manages credit risk in its operations through a robust qualitative financial information system sourced from reputable entities. Regular assessments, considering economic conditions and individual company positions, guide corrective actions. To mitigate risk, the Group strategically selects counterparties, obtains credit insurance for a substantial portion of credited business, and uses additional enhancements like bank guarantees for uncovered sales.

FR6 | Market Risk (Probability: moderate | Impact: High) | The current complex economic situation, marked by rising costs, geopolitical tensions, and uncertainties due to global events like the pandemic and regional conflicts. Altri's Board of Directors is closely monitoring the situation, implementing measures to minimize the impact of escalating costs and uncertainties on their operations. They're tackling increased expenses in natural gas, chemicals, and wood through initiatives like exploring alternative energy sources, enhancing operational efficiency, and investing in renewable energy generation. Additionally, the company utilizes derivative instruments primarily for hedging against risks like fluctuating interest rates, currency exchange rates, commodity prices, and risks associated with forest management. In essence, Altri is proactively responding to economic complexities by taking steps to mitigate cost increases, adopt sustainable practices, and manage market risks through strategic measures.

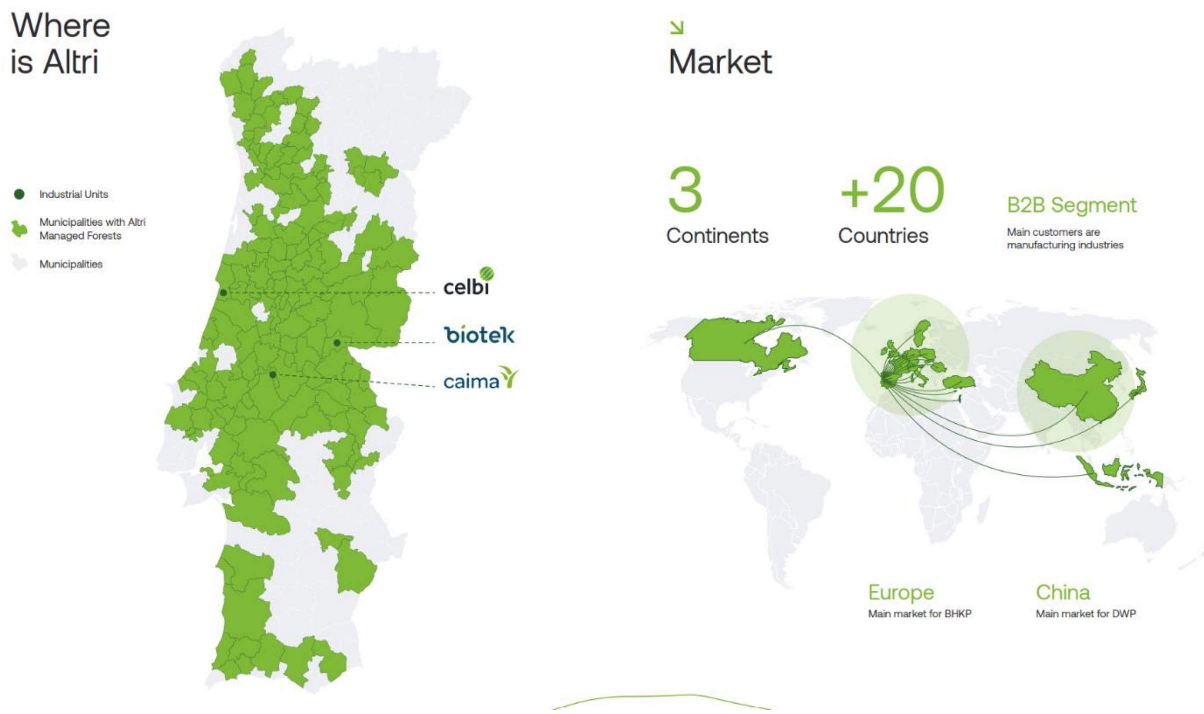
FR7 | Capital Risk (Probability: Low | Impact: High) | Capital risk refers to the danger of having insufficient capital to cover potential financial losses or risks faced by a business. The Altri Group manages its capital structure to sustain operations, maximize shareholder returns, and optimize financing expenses. Regular monitoring helps identify adjustments needed for these goals. As of December 31, 2022, and 2021, the accounting gearing stands at 148% and 116%, respectively. Notably, around 74% of current liabilities are covered by the Group's 'Cash and Cash Equivalents'.

Regulatory and legal risks | RL

RL1 | Regulatory and legal risks (Probability: moderate | Impact: Low) | Regulatory and legal risks at Altri encompass potential challenges stemming from changes in laws and regulations affecting its operations in the pulp and paper industry. These risks may arise from shifts in environmental, labor, taxation, or trade policies, impacting operational practices and financial obligations. To navigate these challenges, Altri continually monitors regulatory changes, ensures compliance, and adjusts its strategies to align with evolving legal frameworks, thereby maintaining operational efficiency and adherence to industry standards.

IX – Appendices

At international level, Altri's products reach more than 20 countries on 3 different continents, with European countries being the main market for bleached cellulosic fibers (BEKP) and China being the main market for dissolving cellulosic fibers (DWP).



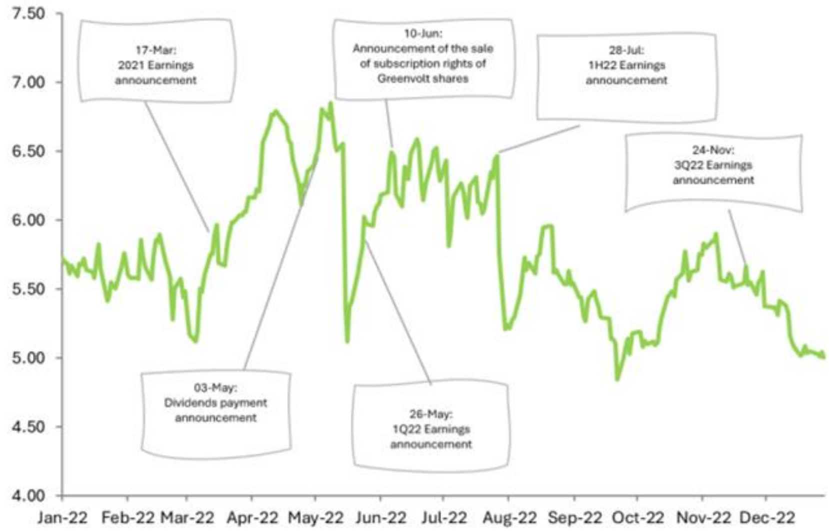
Appendix 1 – Altri's Market's

Source: Company Data

In 2022, Altri's stock experienced fluctuations influenced by key events, as illustrated in Appendix 2. Following the announcement of earnings for the year 2021 on March 27, there was a discernible uptick in the stock price, signaling investor confidence. However, a subsequent decline was observed after the company distributed dividends to shareholders, a typical market response to such payouts.

The stock exhibited a positive trajectory suggesting sustained optimism driven by favorable financial performance.

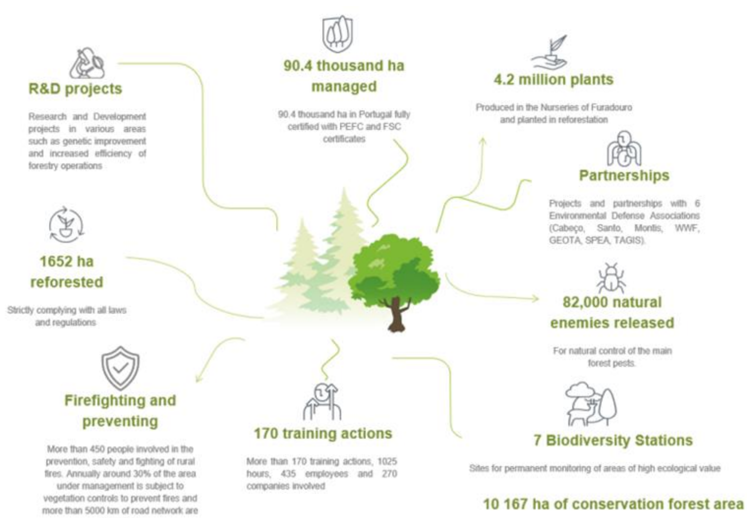
In summary, the movements in Altri's stock price in 2022 were notably influenced by earnings releases and dividend distributions. Analyzing these events provides valuable insights into the market's reaction and investors' perceptions, contributing to a comprehensive understanding of the dynamics shaping Altri's stock performance during this period.



Appendix 2 – Altri's Stock exchange Evolution

Source: Company Data

Altri Florestal oversees the management of approximately 90 thousand hectares of forest across the national territory. The guiding principle behind this management is the optimization of productive capacity, implemented through a sustainable and long-term forestry model. The focus is on ensuring the responsible and efficient use of this valuable resource, aligning with principles of environmental stewardship, and promoting sustainability practices in forestry. Through this approach, Altri Florestal aims to balance economic goals with ecological considerations, contributing to the preservation of forest ecosystems while meeting the demand for wood and related products.

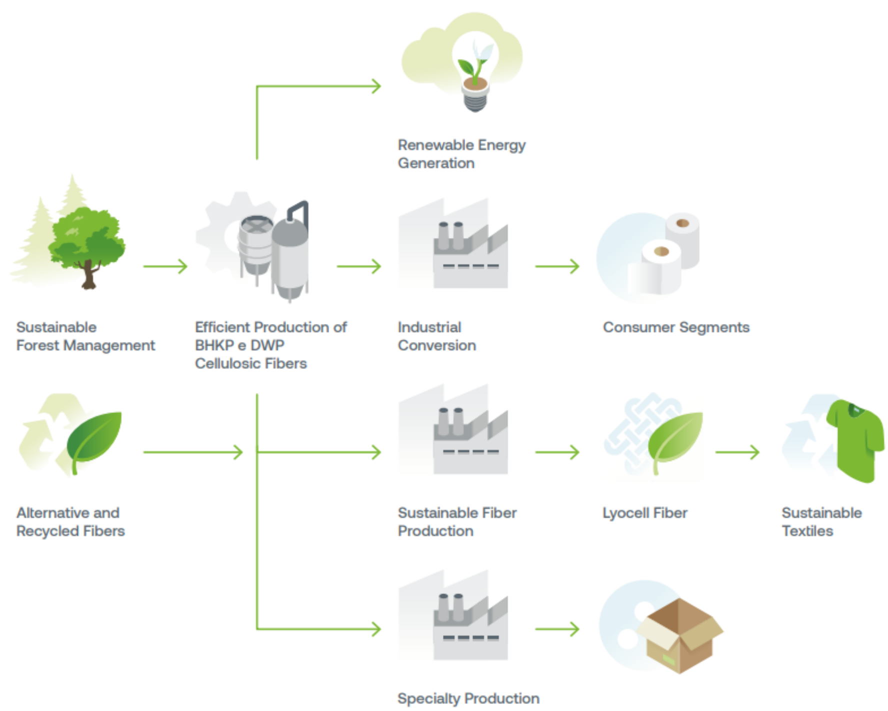


Appendix 3 – Altri's Projects

Source: Company Data

It all begins in the forest, which not only stands as a pivotal asset in Altri's value chain but also holds profound significance for life on our planet and the sustainable development of future generations. Recognizing this, the strategic importance of managing, protecting, and appreciating the forest is paramount.

The forest serves as a rich source of various resources, including wood and biomass, which have been explored by the cellulosic fiber industry for decades. These resources offer a wide array of applications, contributing to the versatility and sustainability of the industry. Some of the key applications include:



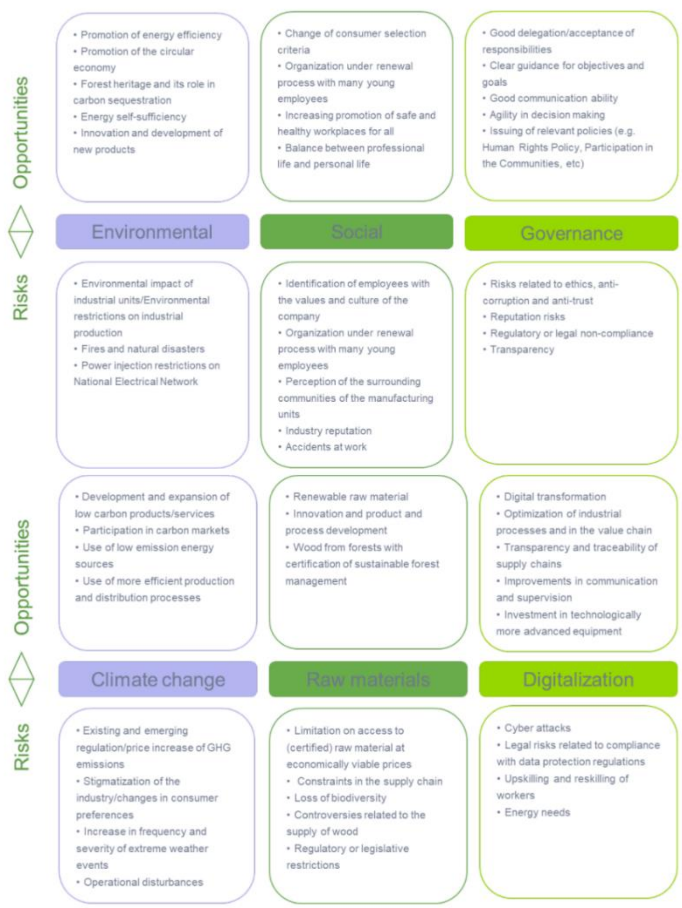
Appendix 4 – Altri's Operation Segments

Source: Company Data

This involves actively identifying and monitoring factors that could impact the company's operations, with a particular focus on climate change and its implications for business. Altri is committed to a proactive risk management approach, aiming not only to mitigate risks promptly but also to transform challenges into opportunities, aligning with its sustainability goals.

Significant changes with financial implications, either directly affecting Altri or its value chain, are closely monitored.. Altri's approach to risk management centers on creating value, with a keen focus on identifying threats to business objectives. The company recognizes the growing importance of sustainability in this process, taking a holistic approach that considers environmental and social factors. Within its management systems, Altri uses an integrated approach for identifying, evaluating, prioritizing, and managing risks related to quality, environment, energy, and safety. A notable initiative in 2022 involved aligning the risk management process with international standards (COSO ERM 2017 and ISO 31000:2018), reflecting a commitment to best practices.

Regular reviews of risk and business opportunities occur biannually, leading to an annual assessment of mitigation actions. During these evaluations, Altri employs a cross-assessment method, considering both the impact magnitude and the likelihood of occurrence. This results in a relevance matrix that aids in prioritizing identified risks, enhancing Altri's ability to navigate challenges and capitalize on opportunities in a dynamic business landscape.



Appendix 5 – Altri's Risks and Opportunities

Source: Company Data

(€ Millions)	2015	2016	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Assets															
Cash and Short-Term Investments	€243	€300	€194	€241	€181	€255	€239	€234	€368	€409	€447	€483	€513	€539	€558
Total Receivables	€100	126	€131	€158	€122	€99	€125	€154	€209	€232	€255	€275	€294	€309	€321
Total Inventory	€56	59	€51	€70	€86	€76	€83	€113	€112	€120	€130	€137	€144	€148	€151
Prepaid Expenses	€2	€2	€2	€7	€6	€6	€4	€4	€13	€13	€13	€14	€15	€16	€16
Other Current Assets	€2	–	€5	€0	€2	€7	€1	€9	€5	€9	€13	€16	€19	€21	€24
Current Assets	€411	€488	€383	€476	€398	€442	€452	€514	€706	€783	€857	€925	€984	€1,032	€1,071
PPE	€466	€462	€491	€654	€729	€695	€511	€514	€873	€968	€1,130	€1,296	€1,460	€1,617	€1,765
Goodwill	€266	€266	€266	€266	€266	€266	€266	€266	€266	€266	€266	€266	€266	€266	€266
Intangibles	€0	€1	€1	€55	€52	€52	€0	€0	€11	€20	€30	€42	€55	€69	€82
Long Term Investments	€23	€26	€26	€2	€1	€1	€1	€2	€10	€11	€12	€13	€14	€15	€15
Other Long-Term Assets	€31	€43	€43	€40	€37	€31	€1,063	€202	€298	€352	€330	€292	€236	€165	€81
Non-Current Assets	€785	€798	€827	€1,017	€1,085	€1,045	€1,841	€984	€1,457	€1,616	€1 769	€1,909	€2,031	€2,130	€2,209
Total Assets	€1,195	€1,285	€1,210	€1,492	€1,483	€1,486	€2,293	€1,498	€2,163	€2,400	€2,626	€2,834	€3,015	€3,163	€3,279
Liabilities															
Accounts Payable	€61	€69	€95	€124	€102	€104	€128	€109	€145	€159	€173	€185	€196	€204	€210
Accrued Expenses	€29	€31	€39	€17	€17	€17	€27	€19	€38	€42	€46	€50	€53	€56	€58
Notes Payable/Short Term Debt	€53	€84	€0	€0	€0	€2	€0	€19	€19	€19	€19	€19	€19	€19	1€9
Current Port, of LT Debt/Capital Leases	€64	€76	€101	€135	€118	€179	€143	€100	€152	€169	€185	€199	€212	€222	€230
Other Current liabilities	€36	€38	€39	€73	€37	€29	€50	€68	€106	€120	€135	€148	€161	€171	€180
Current Liabilities	€243	€298	€274	€349	€275	€331	€347	€315	€460	€510	€558	€602	€641	€672	€697
Long-Term Debt	€567	€580	€482	€540	€657	€625	€521	€524	€905	€1,004	€1,098	€1,185	€1,261	€1,323	€1,372
Deferred Income Tax	€16	€19	€23	€41	€45	€48	€32	€39	€46	€51	€56	€60	€64	€67	€69
Minority Interest	€0	–	€0	€0	€0	€0	€181	€2	€0	€0	€0	€0	€0	€0	€0
Other Liabilities	€47	€45	€37	€41	€40	€36	€669	€11	€64	€71	€77	€83	€89	€93	€96
Non-Current Liabilities	€630	€644	€542	€622	€742	€710	€1,404	€575	€1,014	€1,125	€1 231	€1,329	€1,414	€1,483	€1,538
Total Liabilities	€873	€941	€816	€971	€1,016	€1,041	€1,751	€891	€1,474	€1,635	€1 789	€1,931	€2,054	€2,155	€2,234
Shareholders' Equity															
Common Stock	€26	€26	€26	€26	€26	€26	€26	€26	€26	€26	€26	€26	€26	€26	€26
Retained Earnings (Accumulated Deficit)	€297	€318	€369	€496	€440	€413	€529	€551	€625	€708	€786	€857	€919	€972	€1,015
Other Equity	–	–	–	€0	€0	€6	€(13)[1]	€31	€39	€31	€26	€21	€16	€10	€4
Total Equity	€322	€344	€395	€522	€466	€445	€542	€608	€689	€765	€837	€903	€961	€1,008	€1,045
Total Liabilities & Shareholders' Equity	€1,195	€1,285	€1,210	€1,492	€1,483	€1,486	€2,293	€1,498	€2 163	€2,400	€2,626	€2,834	€3,015	€3,163	€3,279

Appendix 6 – Altri's Forecasted Balance Sheet

Source: Author, Refinitiv

[1] This negative value is due to a negative incomprehensive income from the company.

Financial Metric	Assumption
Cash and Short-Term Investments	Based on the 6-year historical [2]geometric average without the COVID-19 period[3] (52% of current assets)
Total Receivables	Based on the 6-year historical geometric average without the COVID-19 period (30% of current assets) increasing 5% each year
Total Inventory	Based on the 6-year historical geometric average Inventory turnover without the COVID-19 period (11%) increasing 1% each year
Prepaid Expenses	Based on the 6-year historical geometric average without the COVID-19 period (1% of current assets)
Current Assets	Based on the 6-year historical geometric average without the COVID-19 period (33% of Total Assets)
PPE	Based on the 6-year historical geometric average without the COVID-19 period (60% of non-current assets) and after 2024F increasing 4% each year
Intangibles	Based on the 6-year historical geometric average without the COVID-19 period (0.22% of non-current assets)
Long Term Investments	Based on the 6-year historical geometric average without the COVID-19 period (1% of non-current assets)
Non-Current Assets	Based on the 6-year historical geometric average without the COVID-19 period (67% of Total Assets)
Total Assets	Based on the 6-year historical geometric average without the COVID-19 period of (Asset turnover/Revenue) decreasing 0,65% each year
Accounts Payable	Based on the 6-year historical geometric average without the COVID-19 period of day's accounts payable (Days)
Accrued Expenses	Based on the 6-year historical geometric average without the COVID-19 period (8% of current liabilities)
Notes Payable/Short Term Debt	Based on the value of 2022
Current Port, of LT Debt/Capital Leases	Based on the 6-year historical geometric average without the COVID-19 period (33% of current liabilities)
Current Liabilities	Based on the 6-year historical geometric average without the COVID-19 period (32% of Total Liabilities)
Total Long-Term Debt	Based on the 6-year historical geometric average without the COVID-19 period (89% of non-current liabilities)
Deferred Income Tax	Based on the 6-year historical geometric average without the COVID-19 period (5% of non-current liabilities)
Non-Current Liabilities	Based on the 6-year historical geometric average without the COVID-19 period (68% of Total Liabilities)
Total Liabilities	Based on the 6-year historical geometric average without the COVID-19 period (68% of Total Assets)
Common Stock	Based on the value of 2022
Retained Earnings (Accumulated Deficit)	The value of the year before plus the retained earnings of the actual year
Total Equity	Based on the 6-year historical geometric average without the COVID-19 period (32% of Total Assets)

Appendix 7 – Altri's Assumptions Balance Sheet

Source: Author, Refinitiv

[2] The period used was from 2015 to 2019 and 2022

[3] The COVID-19 period is considered the years of 2020-2021

(€ Millions)	2015	2016	2017	2018	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Revenues	€664	€612	€666	€784	€753	€575	€793	€1,066	€1,189	€1,310	€1,422	€1,523	€1,609	€1,675	€1,723
Cost of Revenue	€401	€406	€424	€443	€468	€438	€523	€694	€741	€809	€871	€926	€969	€1,001	€1,021
Gross Profit	€264	€206	€242	€342	€285	€137	€270	€372	€449	€501	€551	€598	€639	€674	€702
SG&A	€41	€36	€35	€42	€44	€41	€46	€52	€66	€80	€93	€108	€122	€135	€148
Depreciation/Amortization	€53	€51	€54	€60	€75	€62	€64	€64	€94	€110	€127	€144	€160	€175	€188
Other Operating Expenses	€2	€2	€15	€7	€7	(€2)[4]	(€4)	€18	€10	€13	€17	€22	€26	€30	€35
Operating Income (EBIT)	168	116	137	233	158	36	164	€237	€279	€298	€313	€325	€332	€334	€331
Net Interest	€14.8	€9.9	€16.6	(€19.8)	€18.5	€21	€11	€29	€8	€9	€10	€10	€11	€11	€12
Other's	€5.9	€5.7	€2.3	€1.7	€3.1	€1	€3	€2	€5	€5	€6	€6	€6	€7	€7
Net Income Before Taxes (EBT)	€148	€101	€119	€251	€136	€14	€150	€207	€266	€284	€298	€308	€315	€316	€313
Taxes	€30	€24	€23	€56	€35	(€11)	€27	€55	€71	€65	€68	€70	€72	€72	€71
Net Income After Taxes	€118	€77	€96	€195	€101	€25	€124	€152	€195	€219	€230	€238	€243	€244	€242
Extraordinary Items	-	-	-	-	-	€10	€4	€275	€0	€0	€0	€0	€0	€0	€0
Net Income (NI)	€118	€77	€96	€195	€101	€35	€128	€428	€195	€219	€230	€238	€243	€244	€242

Appendix 8 – Altri's Forecasted Income Statement

Source: Author, Refinitiv

Financial Metric	Assumption
Gross of revenue	Based on the 6-year historical geometric average without the COVID-19 period (62%) after 2022 a decrease of 0.5% until reach the industry value
SG&A	Based on the 6-year historical geometric average without the COVID-19 period (6%) after 2022 an increase of 0.5%
Depreciation/Amortization	Based on the 6-year historical geometric average without the COVID-19 period (8%) after 2022 an increase of 0.5%
Other Operating Expenses	Based on the 6-year historical geometric average without the COVID-19 period (1%) after 2022 remaining equal
Net Interest	Based on the 6-year historical geometric average without the COVID-19 period (1%) after 2022 remaining equal
Other's	Based on the 6-year historical geometric average without the COVID-19 period (0.4%) after 2022 remaining equal
Taxes	Based on the 6-year historical geometric average without the COVID-19 period (23%) after 2022 remaining equal

Appendix 9 – Altri's Assumptions Income Statement

Source: Author, Refinitiv

[4] The values in parentheses represent positive returns for the company.

		EBIT Margin				
		18.2%	18.7%	19.2%	19.7%	20.2%
WACC	7.36%	€6.15	€6.23	€6.99	€7.08	€7.16
	7.86%	€5.99	€6.07	€6.15	€6.22	€6.30
	8.36%	€5.53	€5.40	€5.46	€5.53	€5.60
	8.86%	€5.03	€5.09	€4.90	€4.96	€5.02
	9.36%	€4.57	€4.62	€4.43	€4.49	€4.54

Appendix 10 – Altri's EBIT Margin Scenario Analysis

Source: Author. Refinitiv

		Capex				
		-1.0%	-0.5%	0.0%	0.5%	1.0%
WACC	7.36%	€6.51	€6.33	€6.99	€6.87	€6.93
	7.86%	€6.35	€6.25	€6.15	€6.05	€5.94
	8.36%	€5.64	€5.55	€5.46	€5.38	€5.29
	8.86%	€5.32	€5.24	€4.90	€5.82	€4.75
	9.36%	€4.83	€4.75	€4.43	€4.36	€4.29

Appendix 11 – Altri's Capex Scenario Analysis

Source: Author. Refinitiv

		D&A				
		-1.0%	-0.5%	0.0%	0.5%	1.0%
WACC	7.36%	€6.19	€6.25	€6.99	€7.05	€7.12
	7.86%	€6.03	€6.09	€6.15	€6.20	€6.26
	8.36%	€5.54	€5.50	€5.46	€5.51	€5.56
	8.86%	€5.06	€5.11	€4.90	€4.95	€4.99
	9.36%	€4.60	€4.64	€4.43	€4.47	€4.51

Appendix 12 – Altri's D&A Scenario Analysis

Source: Author. Refinitiv

The analysis reveals a correlation between EBIT Margin and WACC with the share price. An increase in EBIT Margin and an increase in WACC lead to a decrease in the share price, the opposite happens if the EBIT margin and the WACC decreases the share price increases.

If on variable remains constant and the other changes the situation is different, for example, and increase in EBIT margin and the company's risk doesn't change, the share price increases because the company earns more, leading to greater net income. Conversely, if the risk increases and the EBIT margin decreases, the share price decreases because the company's earnings will be adversely affected.

The scenario analysis for Capital Expenditures illustrates a fluctuating pattern from -1.0% to 1.0% as a percentage of sales. This variability showcases the responsive nature of investment decisions with negative Capex percentages potentially reflecting cost-cutting measures or a conservative approach to investments affecting the share price positively or negatively. Depreciation & Amortization expenses with the WACC also affects the share price. Higher levels of D&A values lead to increase in the share price if the risk doesn't change. This information is critical for understanding how alterations in the cost of capital influence Altri's depreciation expenses impacting net income and cash flows.

Key Financials	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Revenues (€ Millions)	€753	€575	€793	€1.066	€1.189	€1.310	€1.422	€1.523	€1.609	€1.675	€1.723
EPS	€0.51	€0.11	€0.59	€0.74	€0.62	€0.70	€0.73	€0.76	€0.77	€0.77	€0.77
Dividend per Share (EUR)	€0.22	€0.18	€0.07	€0.17	€0.39	€0.43	€0.48	€0.53	€0.54	€0.57	€0.57
Payout Ratio (%)	43%	164%	12%	23%	62%	62%	66%	70%	74%	78%	82%
Profitability Ratios											
Gross Margin (%)	38%	24%	34%	35%	38%	38%	39%	39%	40%	40%	41%
EBITDA Margin (%)	29%	13%	27%	25%	31%	31%	31%	31%	31%	30%	30%
EBIT Margin (%)	21%	6%	21%	22%	23%	23%	22%	21%	21%	20%	19%
Net Income Margin (%)	13%	6%	16%	40%	16%	17%	16%	16%	15%	15%	14%
ROE (%)	22%	8%	24%	70%	28%	29%	27%	26%	25%	24%	23%
ROIC (%)	12%	1%	16%	19%	17%	17%	16%	15%	15%	14%	14%
Leverage and Liquidity Ratios											
Debt/Equity Ratio	166%	181%	122%	106%	156%	156%	156%	155%	155%	155%	155%
Current Ratio	1.45	1.33	1.30	1.63	1.54	1.54	1.54	1.54	1.54	1.54	1.54
Cash Ratio	0.66	0.77	0.69	0.74	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Operating cash flow	0.57	0.11	0.47	0.75	0.61	0.58	0.56	0.54	0.52	0.50	0.48
Leverage Ratio	52%	54%	29%	43%	50%	50%	50%	50%	49%	49%	49%

Appendix 13 – Altri's Financial Ratios

Source: Author. Refinitiv

The financial outlook for the company from 2019 to 2029F presents a promising trajectory were the revenues are projected to steadily rise from €753 million in 2019 to €1.723 million in 2029F. indicating a growth trend after 2029F growing at 2.91% a year. Earnings per share (EPS) fluctuate over the forecast period. reaching €0.77 in 2029F. while the dividend per share exhibits a gradual increase from €0.22 in 2019 to €0.57 in 2029F.

Regarding profitability. the gross margin remains relatively stable at approximately %. suggesting consistent profitability on sales. EBITDA. EBIT. and Net Income Margins show variations but generally maintain healthy levels. Return on Equity (ROE) and Return on Invested Capital (ROIC) demonstrate positive trends. reflecting efficient capital utilization.

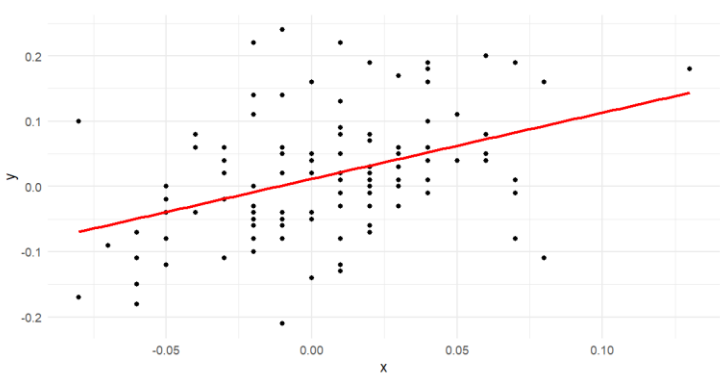
Leverage and liquidity ratios offer insights into the company's financial structure. The Debt/Equity Ratio fluctuates. reaching 181% in 2020 but decreasing thereafter. indicating a manageable debt structure. The current ratio remains around 1.54. indicating a healthy ability to cover short-term liabilities. The cash ratio remains stable around 0.80. reflecting a consistent level of cash reserves. The Leverage Ratio shows fluctuation but maintains an overall manageable level.

In conclusion. the financial projections portray a positive outlook. with increasing revenues. stable profitability. and prudent financial management. The company's commitment to delivering shareholder value is evident through the upward trajectory of earnings and dividends. While leverage and liquidity ratios indicate a balanced approach to capital structure. ongoing monitoring is crucial to assess performance against these projections in the dynamic business environment.

	Dependent variable:
	Altri
Euro_Stock_600	1.015^{***}
	(0.230)
Constant	0.012
	(0.009)
Observations	106
R^2	0.158
Adjusted R^2	0.150
Residual Std. Error	0.090 (df = 104)
F Statistic	19.482^{***} (df = 1; 104)
Note:	*p<0.05; **p<0.01; ***p<0.001

Appendix 14 – Beta Estimation

Source: Author, Yahoo Finance Data



Appendix 15 – Linear Regression Plot of Beta Coefficient

Source: Author, Yahoo Finance Data

A regression model was employed to ascertain the beta coefficient of Altri. utilizing the returns of the Euro Stoxx 600 index and Altri SGPS S.A. The resultant coefficient of 1.015. depicted in Figure 38. reveals that Altri exhibits a modestly heightened volatility compared to the broader market. Specifically. for every 1% fluctuation in the market. Altri's returns are anticipated to adjust by approximately 1.015%. (Apprendix 14)

Beta coefficients serve as fundamental tools for investors in assessing risk and potential returns. A value exceeding 1 signifies increased volatility. necessitating a thorough evaluation of investment strategies. Hence. a beta of 1.015 indicates a marginally amplified susceptibility of Altri's asset price movements relative to the broader market. Investor decisions predicated on such insights necessitate a nuanced understanding of risk dynamics. underlining the significance of meticulously analyzing beta coefficients within a broader financial context.

Equity Market Risk Premium

Portugal	7.89%	15%
Europe	6.70%	78%
Asia	6.07%	7%
Total	**6.84%**	**100%**

Appendix 16 – Equity Market Risk Premium and final Value

Source: Author, Company Data and Damodaran Data

Europe		**Asia**	
United Kingdom	5.91%	China	6.07%
Luxemburg	5.00%		
Ireland	5.91%		
Netherlands	5.00%		
France	5.75%		
Germany	5.00%		
Polonia	6.28%		
*Switzerla*nd	5.00%		
Türkiye	14.86%		
Romenia	8.33%		
Israel	6.07%		
Total	**6.70%**	**6.07%**	

Appendix 17 – Equity Market Risk Premium Europe and Asia Regions

Source: Author, Company Data and Damodaran Data

	2022	2021
Europe (excl. Portugal)	61%	61%
Middle East	17%	17%
Portugal	15%	14%
Asia	7%	8%

Appendix 18 – Weight of sales (Volume) by region

Source: Company Data

To ascertain the Equity Risk Premium was made a weighted average of the country risk premiums attributed to the regions where Altri operates as illustrated in Appendix 16. The weights applied in this computation were obtained directly from the company's financial reports from 2022 (Appendix 18). This meticulous approach ensures that the resulting Equity Risk Premium accurately mirrors the geographical distribution of Altri's operational footprint and incorporates the pertinent country-specific risk factors.

Appendix 17 delineates the diverse equity risk premiums prevalent across European countries in which Altri conducts business. culminating in a comprehensive average representing the collective risk profile of the European market. Notably. within the Asian zone. China emerges as the predominant country influencing the risk dynamics.

Interest Coverage Ratio	*Rating*	*Spread*
> 12.5	AAA	0.75%
9.5 � 12.5	AA	1.00%
7.5 � 9.5	A+	1.50%
6 � 7.5	A	1.80%
4.5 - 6	A-	2.00%
3.5 � 4.5	BBB	2.25%
3 � 3.5	BB	3.50%
2.5 - 3	B+	4.75%
2 � 2.5	B	6.50%
1.5 - 2	B-	8.00%
1.25 �1.5	CCC	10.00%
0.8 � 1.25	CC	11.50%
0.5 � 0.8	C	12.70%
< 0.5	D	14.00%

Appendix 19 – Interest Coverage Ratios and Ratings: Low Market Cap Firms

Source: Damodaran Website Data

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