

A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

Navigating through Crises: Cost Control as
the Catalyst for Renewed Strength?

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

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Abstract

This paper is **one part** of the “**Navigating through Crises**” Equity Research report on **Vetropack Holding AG**, a Swiss glass packaging production company that has faced multiple severe crises in recent years, impacting it on various levels. This part includes a company overview, a SWOT and Porter’s 5 Forces analysis, market trends, a forecast of the operating model, the associated cost of capital, and an intrinsic valuation analysis and a scenario analyses.

The Equity Research report suggest a **BUY** position. This is based on the share price of CHF 30.90 as of 06.05.2024 and a projected target share price of CHF 34.55 on 31.12.2024. Including a projected dividend payment of CHF 1.00, the report anticipates a total return of 15.1% within this period.

Keywords

Vetropack
Glass Packaging
Equity Research
Valuation

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This report is part of the Vetropack Holding AG Equity Research report “Navigating through Crises” (annexed), developed by Manuel Kienzle and Mina Andjelkovic and should be read as an integral part of it.

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Introduction

As part of our Master's thesis, this individual report provides an extensive analysis of Vetropack Holding AG (Vetropack), a renowned glass packaging manufacturer based in Switzerland. Working alongside my colleague, we have developed a comprehensive equity research report aimed at delivering a detailed and nuanced perspective on Vetropack. The goal of this report is to furnish potential investors with in-depth information to aid their decision-making process on whether to buy, hold, or sell Vetropack stock, based on our projected target price and dividends by the end of 2024.

Through our thorough examination, we recognize Vetropack as a well-established and respected part of the industry, which has successfully navigated through several significant crises in recent years. These include, amongst others, severe uncontrollable spikes in energy and material costs, a closure of the Ukrainian plant in Gostomel due to significant damage from a military strike and persistent consumer sentiment issues driven by inflation, leading to reduced purchasing in the end market and therefore less demand for Vetropack products.

To provide a balanced mix of descriptive and analytical content, this section will include a company overview, SWOT and Porter's 5 Forces analysis, market trends, a forecast of the operating model, a cost of capital assessment, intrinsic valuation (DCF) and scenario analyses. The second part of this series will cover a macroeconomic analysis, a market analysis, a competitive landscape analysis, key risks and opportunities, an analysis of historical financials and forecast implications alongside management guidance, a relative valuation section, discount discussions and our final recommendation with reasoning. The individual reports do not form a connected narrative within the joint report. Therefore, reading both parts is necessary for a comprehensive understanding of the company, market and valuation.

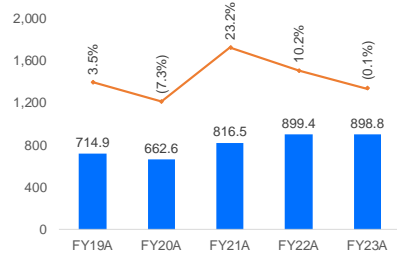
Concluding from our joint report, we expect Vetropack to have the fundamental strengths, cost adjustment abilities and innovation DNA, needed to regain its pre-crisis performance levels and progress further. This growth is bolstered by its sustainable product solutions and continuous improvements in process efficiency. Based on our profound analyses, we assign Vetropack a BUY position. This recommendation is based on a share price of CHF 30.90 as of 06.05.2024 and a projected target share price of CHF 34.55 by 31.12.2024. Including an anticipated dividend payment of CHF 1.00, the report expects a total return of 15.1% within this period.

Company overview

Company description

Vetropack Holding AG (“Vetropack”) is a glass packaging manufacturer for the European food and beverage market, headquartered in Bülach, Switzerland. It offers a broad portfolio of >2,500 products, selling custom designed and standardized bottles and jars for the high-volume wine, beer, soft drink and food markets as well as to more premium segments, like spirits and sparkling wine. Since its founding by Henri Cornaz in 1911, Vetropack evolved from a regional supplier in Switzerland to a significant force within the European landscape. Starting with its first major acquisition in 1959 to become the Swiss market leader, Vetropack continued to branch out to Austria in 1986, the Czech Republic in 1991 and further countries in Eastern and Southern Europe from 1996 onwards. It operates 9 production plants in 8 countries with a strong focus on Central and Eastern Europe, including Italy, Switzerland, Austria, Croatia, Czech Republic, Slovakia, Ukraine and Moldova. Due to a stated 400km delivery radius for its products, it can be inferred that its sales markets must be producing and adjacent countries. However, an exact list of countries in which the company operates is not disclosed for confidential reasons. As of FY23, Vetropack realized revenues of CHF 899.8m and employed around 3,770 professionals. For Vetropack, glass constitutes the cornerstone of packaging due to its high reusability and environmentally friendly characteristics. Vetropack’s sales primarily arise from its manufacturing-heavy business. The production process broken down begins with batching raw materials and cullet, which are then melted in a furnace to form molten glass before finally being shaped into containers or bottles. Lastly, the finished glass packaging undergoes quality control checks before being packaged and distributed to customers.

Exhibit 1: Revenue development



Source: Company information

Ownership, organisational and share structure

Vetropack Holding AG exhibits a dual share structure, comprising 13.774m Class A shares (publicly listed on the Swiss Stock Exchange) and 30.250m Class B shares (unlisted and entirely kept by the Cornaz Holding AG, the founder’s family). Each share holds one voting right. However, due to further possession of Class A shares, the Cornaz Holding AG currently possesses 71.6% of voting rights, resulting in an unbreakable control over the company. Alongside, the Holding keeps the rights to appoint the Chairman and Vice-Chairman. According to latest filings, institutional investors hold 35% of class A shares¹. Both shares receive dividends, however, these are adjusted based on their nominal value of CHF 1.0

Exhibit 2: Share overview

Share class	Listed	Amount	Nominal value
Class A shares	yes (SIX)	13,774,000	CHF 1
Class B shares	no	30,250,000	CHF 0.2

Source: Company information

¹ Retrieved from Bloomberg

(Class A) and CHF 0.2 (Class B). This is intended as compensation for having basically no influence on the company as a public shareholder. This further results in 19.284m shares being considered when computing market capitalization (total number of shares multiplied by its nominal value). However, since the beginning of the year, the stock price has undergone a downturn resulting in a severe decline in market valuation (CHF -162.6m). The Board of Directors (BD) is the central figure in the company's organization, formulating the corporate strategy and assessing yearly performance. The eight members of the BD are elected annually by the Annual General Assembly of Shareholders. An option for re-election exists. The newest addition to the BD is the CEO of the Huber + Suhner group Urs Ryffel who was elected in 2024. The Management Board operates within the framework provided by the BD.

SWOT & Porter's 5 Forces

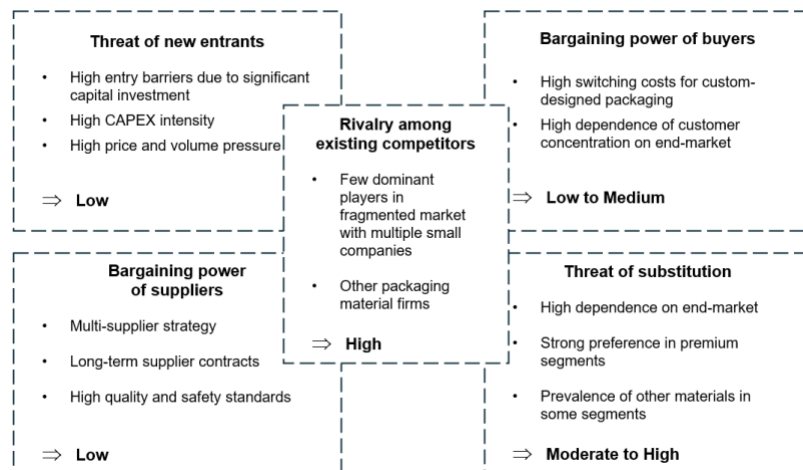
We recognize Vetropack's strengths in its outstanding innovation capabilities, ranging from products, over production processes towards customer retaining software solutions. For instance, it introduced the first returned bottle made of lightweight glass to the market, called Echovai, and is introducing new furnaces, such as oxyfuel and hybrid, to improve ecological effectiveness through better energy performance. Its ability to continuously improve production capabilities is evident through the strategic investment in a new plant in Boffaloro (Italy) that shows high resource efficiency by utilizing a closed-loop system with water reuse and smart technology. Moreover, its broad portfolio of >2,500 products across several end-markets enables it to serve a large customer base, fostering strong connections by covering every possible business need while keeping up capacities and utilization rates. As a family business, to a certain extent, Vetropack further highly values relationships. This becomes evident by looking at their success stories, promoting the growth of the in 1886 established brand Maison Gilliard by collaboratively developing a high-end bottle to endorse Swiss quality wine. Besides Vetropack's strengths, we see weaknesses in its business model such as the dependence on raw materials and energy, exposing the company to fluctuations in both markets and their respective prices. Furthermore, Vetropack has a strong presence in Europe, but its geographic reach may be limited compared to global competitors, making it more exposed to issues in the respective regions. Furthermore, Vetropack deals with an elevated overall cost structure compared to its peers, due to its Switzerland-based headquarters and thereof resulting high expenses, e.g., in overhead costs. Regarding opportunities, on the one hand, Vetropack could explore inorganic growth opportunities by expanding into emerging markets outside of Europe with growing demand for glass packaging, diversifying its revenue streams. On the other hand, the company can

further explore organic growth opportunities in European markets to strengthen its presence and attain a higher market share. Moreover, increasing consumer demand for sustainable packaging solutions presents an opportunity for Vetropack to further develop eco-friendly products, aligning with evolving market trends. However, there are several threats endangering its position. For instance, Vetropack faces significant competition from large-scale global and small-scale regional players, intensifying price and product competition. On top of that, evolving regulatory requirements may necessitate investments in compliance measures, increasing operational costs. Additionally, due to its reliance on raw materials, Vetropack is susceptible to supply chain disruptions, potentially affecting the business regarding sales and profitability. Following there is an overview of our SWOT analysis.

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> • Proven innovation capabilities • Continuous improvement of production facilities and processes • Broad product portfolio across several end-markets • Strong customer and supplier relationships 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> • High exposure to volatility in energy and raw material markets • Low business diversification due to geographical concentration in Europe • High cost structure through Switzerland headquarters
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> • Introduction of sustainable product solutions • International diversification outside of Europe • Organic growth possibilities in countries with market presence 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> • Potential loss of market share because of high competition • Potential failure to adapt to evolving operations-related regulation • Vulnerability to supply chain disruptions

The following will focus on the assessment of the Porter's five forces framework. The threat of new entrants is low, primarily due to substantial capital investments being required to construct manufacturing facilities prior to entering the market alongside significant recurring CAPEX requirements to keep up operations. New firms may also struggle to compete on a pricing level due to competitors having the upper hand from high volume productions. Vetropack relies heavily on suppliers for raw materials but mitigates this dependence by maintaining longstanding relationships with multiple suppliers who meet high quality and safety standards, resulting in low bargaining power for suppliers. The bargaining power of its customers may vary depending on the end-markets, with some markets being more concentrated among a few producers, such as beer, compared to others with a broader landscape, such as wine. Switching costs for customers are generally high for custom-designed products and lower for mass markets. These factors lead to low to medium buyer's bargaining power. The threat of substitution depends considerably on end-markets since glass has a stronghold in premium segments due to its prestigious image and quality. However, certain markets are more dominated by alternative packaging options. Thus, we see a medium to high threat overall. Competition in the glass packaging industry is characterized by high rivalry, including alternative packaging producers. This is due to Vetropack competing with major global players and multiple regional firms in a fragmented market with partially low product differentiation, depending on the end-market. Following you

find an analysis of the Porter's five forces.



Market trends

Glass packaging remains widely popular today due to its premium and sustainable material compared to other packaging alternatives. We see three significant markets trends that will further shape the development of the industry.

- **Sustainability**

Sustainability and adaption to climate change are important drivers for businesses nowadays with far reaching consequences for social and economic life. Environmental awareness has increased as consumers are more conscious of their own purchase behaviour and governments setting regulations to promote sustainable consumption. Especially, Europe has set goals to elevate packaging recycling rates and explore circular economy solutions. Glass as material fits well in this framework due to its properties of being 100% recyclable and can be used up to 50 times before serving being recycled². This results in conserved resources and minimized carbon emission. However, the high energy consumption of the manufacturing process and heavier weight compared to other materials are impacting its ecological footprint. The glass packaging industry has significantly reduced its carbon footprint, with glass now being 30% lighter and emitting 50% less CO² than fifty years ago³. Additionally, the industry aims to become climate-neutral by 2050 by adopting renewable energy sources and making substantial investments in technology.

- **Lightweight innovation**

Another market trend is the improvement of production processes to decrease the weight, resulting in significantly reduced CO² emissions, transportation and

² Friends of glass

³ FEVE

storage costs. Despite past advancements, the trend towards lighter packaging continues, aiming to reduce weight while maintaining quality and design standards. A prime example can be found in Vetropack's Echovai solution.

- Premiumization

A “glassification” trend is observed across food and beverage segments with glass containers being often preferred to reflect a premium positioning. Especially, premium beverage brands are turning to glass packaging to convey a prestigious image of the product. The clarity of glass is ideal for visually presenting the contents within the packaging. The weight and recyclability of glass impart a sense of high-quality craftsmanship and durability, suggesting that the package will endure over time. For instance, glass bottles have remained the preferred choice for the liquor industry owing to their adeptness in preserving the taste and quality of the product. In contrast to plastic or metal containers, glass bottles maintain the integrity of the liquor's taste due to their non-reactive properties. However, this trend finds limited application for the mass market.

Forecast of the operating model

Approach and data availability

To evaluate Vetropack’s core value, we restructured the financial statements into three segments: core, non-core and financial. Non-core and financial items are forecasted separately and are not discussed in detail, as they do not directly contribute to the core operations and therefore core EV. In our projection, we anticipate Vetropack to undergo two transitional years of normalizing operations and market, before reaching a certain steady state FY26 onwards.

Vetropack operates within a specialized niche market characterized by high competition and sensitive supplier relationships, who could potentially draw conclusions about margins and prices from segment results as they contain highly delicate and valuable information. Consequently, Vetropack refrains from disclosing specifics of its segment results and financial data to mitigate the risk of incurring substantial competitive disadvantages. Despite extensive attempts to acquire more detailed information, including outreach to Vetropack’s investor relations department, our efforts have regrettably not been fruitful.

Income statement related

- Sales forecast

Vetropack’s financial reports are lacking comprehensive information about the breakdown of product groups and geographical segmentation. To be more precise, there is no data given about the sales volume of jars vs bottles, which segments

Exhibit 27: Sales driver overview

Driver	Type
Production	Volume
Inflation	Price
Input costs	Price
End markets	Price and volume

Source: Own analysis

of the market they target or which countries they sell to. Thus, we utilized the limited information given to build up a country-based model with four main drivers for our revenue forecast.

Firstly, Vetropack reported net sales by supplying country and units sold to four regions until the annual report 2022. As outlined in its latest annual report, Vetropack specifies a delivery radius of 400km from its production plants. Thus, we can infer that the regions must contain supplying and adjacent countries within the set distance limit. Based on this geographical assumption, we defined the countries for our production driver as seen in Exhibit 28, market volume data for the mentioned countries was collected on the Globaldata⁴ until 2030 to forecast the market growth based on production volume. A regional split is approximated through an historical average of available data. The resulting production growth rates are added according to its historical average share of net sales. Secondly, information is lacking regarding the price movement of the glass packaging market, consequently necessitating approximation via macroeconomic drivers. We selected inflation since it indicates the general price increase in an economy. Detailed inflation forecasts are given by the IMF until 2028 such that the subsequent years until 2032 are extrapolated from the numbers observed in 2028 due to the difficulty in making accurate predictions in the far future. A weighted average of the different regions' inflation is then computed by applying the weights of the nominal domestic product values for each respective country and each regional average is added according to its historical average share of net sales.

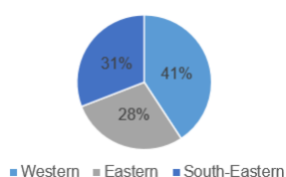
To adjust our market growth consisting of production volume and inflation, we carefully considered the three most significant input factors. As for the raw material input, management guides that the amount of used glass will increase to 70% until 2030. Based on that assumption, the share of other raw materials has been independently modelled until 2030. Raw material costs were determined based on an average of market growth rates sourced from market reports for each respective component. Energy costs have witnessed a notable increase since 2022. Current energy forecasts show that baseload power prices are expected to decrease until 2030. Hence, the energy input was derived from the power price estimate provided by S&P,⁵ resulting in a decline in the energy overgrowth to approximate pre-war levels. The growth of wages and salaries constitutes the third factor that based on per FTE sales and expenses. A more detailed description can be found in the COGS part. The sum of all cost input factors is multiplied by 0.1 before being added to the three driver's sales forecast. The factor was extracted from guidance given by O-I.⁶ The inclusion of selected input cost drivers is intended to finetune the price

Exhibit 28: European regions overview

European region	Countries
Western	AT, DE, FR, BE, LI, LU, CHF
South-Eastern	HR, SI, BA, RS, BG, IT
Eastern	CZ, MD, UA, BY, RO, SK, HU, PL

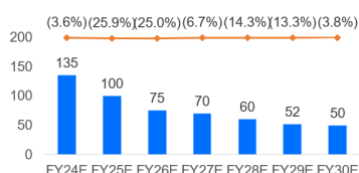
Source: Own analysis

Exhibit 29: Average FY16-FY21 aggregated European regions share of sales



Source: Company information

Exhibit 30: S&P forecast European baseload power prices



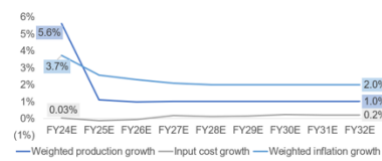
Source: S&P

⁴ Globaldata

⁵ S&P

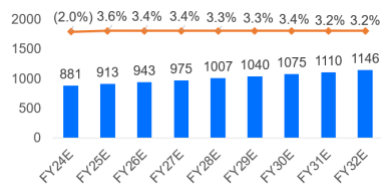
⁶ O-I Annual Report FY23

Exhibit 31: Production, input cost and inflation driver



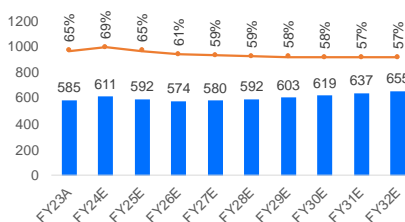
Source: Own analysis

Exhibit 32: Revenue forecast



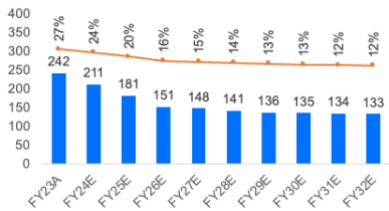
Source: Own analysis

Exhibit 33: COGS [% of Net sales]



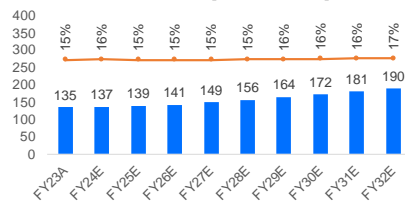
Source: Own analysis

Exhibit 34: Energy expenses [% of Net sales]



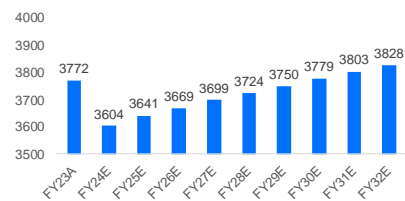
Source: Own analysis

Exhibit 35: Raw materials [% of Net sales]



Source: Own analysis

Exhibit 36: FTE count



Source: Own analysis

driver approximated through inflation, recognizing that price increases can only be passed on to consumers to a certain extent and with a certain time lag. End-market growth is incorporated as the fourth driver, representing the average market growth across all product categories. Product groups are seen as one due to lack of information on product splits. In conclusion, the sales forecast is calculated by assigning a weight of 0.8 to the combined production volume, inflation, and input cost drivers, and a weight of 0.2 to the end-market driver. As a result, we arrive at a base case of 3.6% growth in 2025, declining to 3.2% growth by 2032. This growth is in line with a market report by Mordor Intelligence⁷, suggesting a CAGR of 3.2% for the European glass packing market between FY24 and FY29. For FY24, we adjusted sales to -2.0% according to management guidance and Q1 2024 developments of peers, which have seen a decline in Q1 but are expecting considerable recovery during the year.

COGS and SG&A

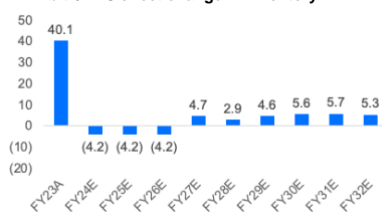
COGS are expected to further increase in FY24 before significantly decreasing until FY26 from where the improvement gradually thins out. This is primarily due to the three main cost-related performance driver and the income statement effect of change in inventory. We anticipate **raw material** prices (c. 92% of material expenses) to gradually normalise alongside business and market recovery by FY26, reaching their historical average of 15.0% of sales. Thereafter, we expect them to develop with the growth rate used within the sales forecast. **Energy costs** are expected to stabilize in FY26 at levels slightly below those of FY21, as indicated by the energy brainpool report.⁸ Thus, we expect energy expenses to stabilize at 16.0% of net sales, reflecting a lower level than in FY21 but elevated compared to FY20. Beyond FY26, these costs are anticipated to develop with the growth rate projected in our sales forecast. The impact of volume increases on energy and raw material costs is expected to be mitigated by enhanced production processes, the share increase of innovative products requiring fewer raw materials and energy as well as the deployment of modernized machinery and production processes that reduce waste and provide improved efficiencies. Wages and salaries (c. 75% of personnel expenses) are projected on a per FTE level. We expect wages and salaries per FTE to rise by 2.0% annually, mirroring Vetropack's historical trend and aligning with OECD⁹ covered historic averages. Furthermore, net sales per FTE are projected to increase by 2.6% annually, reflecting the historical CAGR of 2.5% plus an additional 0.1 p.p. from enhanced efficiencies of advanced machines and production processes. As a result, we expect a reduction in FTEs in FY24. This aligns with the management guidance, which includes

⁷ Mordor Intelligence

⁸ Brainpool

⁹ OECD

Exhibit 37: IS effect change in inventory



Source: Own analysis

Exhibit 38: Other administrative and operating expenses materials [% of Net sales]

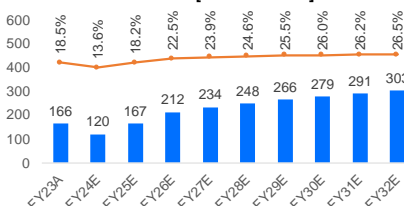


Source: Own analysis

restrictions in creating new positions and leaving vacancies unfilled. Our approach further yields an ongoing personnel cost efficiency over time. Based on competitor analysis, 55.5% of personnel expenses are allocated to COGS. Contrary to the recent years' trend, we expect Vetropack to gradually reduce their elevated inventory levels in response to the anticipated increase in demand until FY26, without having to activate additional production lines or significantly ramping up capacities. However, this approach will reverse the positive impact on COGS in recent years, resulting in higher COGS. Regarding SG&A, we anticipate that other administrative and operating expenses will gradually decrease from the current level of 9.7% of net sales to 9.0% by FY26, reflecting the historic lowest level, from where it will then stabilize. This trend follows management-initiated restructuring and measures, paired with digitalization efforts such as the development and rollout of Vetropack's holistic pallets and pad management system (HPPM) at their plants and clients' sites. Subsequent margin enhancements are due to SG&A's personnel expenses share.

Core EBITDA

Exhibit 39: Core EBITDA [% of Net sales]

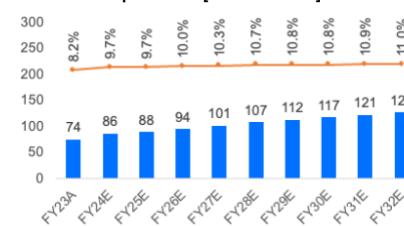


Source: Own analysis

Based on these assumptions, Vetropack's core EBITDA margin is projected to initially decline to 13.0% of net sales (-13.9%), followed by a swift recovery to 21.9% in FY26 and 25.9% in FY32. This indicates a potential surpassing of its previous peak performance of 22.6% in FY19. However, the trajectory is contingent with the evolution of material and energy expenses, which significantly impact this metric. These projections further imply that Vetropack will return to a competitive level with its peers (historical average EBITDA margin of 26.5%).

D&A

Exhibit 40: Depreciation [% of Net sales]



Source: Own analysis

Vetropack is expected to experience a significant surge in depreciation in FY24, primarily coming from the reclassification of advance payments and assets under construction into furnaces, equipment, production facilities, and molds. These assets carry a relatively high D&A rate of 18.4% of net sales, further amplifying the effect. Subsequently, the D&A rate continues to increase annually due to operations related adjustments in the tangible core assets structure, reaching 10.9% in FY32, remaining below the highest historical value of 11.1%.

Tax rate

Exhibit 41: Weighted statutory tax rate

Country	Statutory TR	Weight	Weight. TR
Switzerland	17.06%	11.76%	2.01%
Austria	23.00%	27.38%	6.30%
Czech Reput	21.00%	9.39%	1.97%
Croatia	18.00%	20.74%	3.73%
Slovakia	19.00%	8.47%	1.61%
Ukraine	18.00%	1.87%	0.34%
Italy	24.00%	12.92%	3.10%
Moldova	12.00%	7.48%	0.90%
Average	19.01%		19.95%

Source: Own analysis, Orbitax, PWC

For the tax rate, we utilized a production-based average statutory tax rate of 19.95%, aligning with historical averages and Bloomberg's recommendation. It is important to note that Vetropack is impacted by the new BEPS 2.0 regulation from the OECD, imposing a global minimum effective tax rate of 15% for revenues

exceeding EUR 750m.¹⁰ However, specific implications remain uncertain for us and Vetropack itself. Given the significantly higher rate of 19.95% being utilized, we believe it is prudent to account for potential effects.

Further items in the financial statements are of less significance and were primarily projected in alignment with total revenue growth, reflecting our anticipation that they will depend on the organic business development.

▪ Core result and return analysis

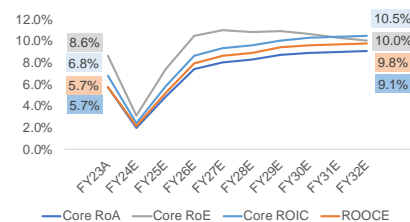
Overall, we anticipate Vetropack to experience a CHF 41.2m (-63.9%) decrease in its core result compared to FY23. However, it is crucial to note that the difference in inventory alone contributes a negative CHF -44.3m to this result (excluding tax effects). Going forward, we expect Vetropack to undergo a significant recovery due to ongoing positive cost effects, cost-cutting measures, improved capacity utilization rates and increased top-line growth. This leads to an anticipated core result of 11.9% of net sales by FY32. This positive trajectory is further reflected in the rise of profitability KPIs. We project core RoA to reach 9.1%, surpassing historical levels and signaling a return to more efficient utilization of core assets, thereby returning to a competitive level. RoE is expected to reach 10.5% by FY32, thereby surpassing historic returns. However, the projected development further indicates that with decreasing net debt levels RoE decreases, thereof showcasing a potential drawback for equity holders in Vetropack's capital structure strategy by missing out on excess returns on externally raised capital. ROIC is projected to reach 10.5% by FY32, surpassing our WACC estimate (more detailed in the cost of capital chapter). This suggests that Vetropack will transition from a value-destroying to a value-creating state. Lastly, Vetropack's management aims for a ROOCE level of 20% in the medium term. However, based on the core business development, we find this goal overly optimistic, as we project this KPI to reach 9.8% by FY32, while never having surpassed the 10% threshold in the past. We assume that Vetropack may be forecasting stronger growth or potentially including further M&A acquisitions, however, we caution against relying on this management statement.

Exhibit 42: Core result [% of Net sales]



Source: Own analysis

Exhibit 43: Return ratios



Source: Own analysis

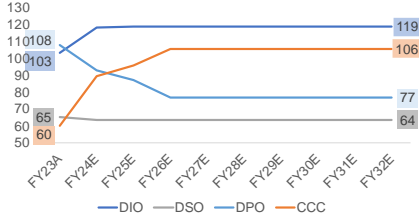
Balance sheet related

▪ Working Capital

Inventories are expected to gradually normalize towards a stable historical level of 119 days in FY26 and will remain there onwards. This is in line with the historical average of its peers of 123 days. Accounts payables are similarly expected to gradually normalize towards a historical stable level of 77 days. This is significantly

¹⁰ OECD

Exhibit 44: Trade working capital [CCC]

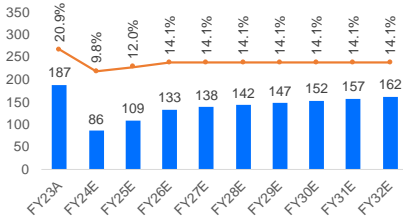


Source: Own analysis

below the historical peer average of 112 days. However, we expect Vetropack to return to historical levels to remain its strong partnerships with suppliers, potentially securing better conditions and showing of their financial strengths. Accounts receivables are expected to remain stable at their historical average of 64 days, which is in line with the industry average of 64 days. Altogether, the CCC is expected to normalize until FY26 towards 106 days which is in line with the stable historical average of 104 but remains above the peer average of 72 days. This implies significant higher trade working capital requirements and therefore more funds being tied up in day-to-day operations, which could lead to reduced availability of cash for investments subsequently negatively affecting returns. Operating cash is assumed to cover one month of annual expected operational expenses according to academic guidance.

▪ CAPEX

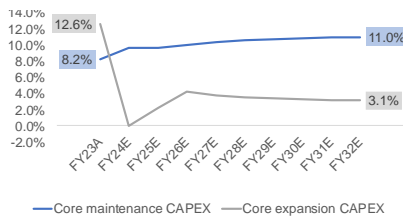
Exhibit 45: Core CAPEX [% of Net sales]



Source: Own analysis

As previously discuss, Vetropack wants to postpone significant CAPEX investments for an unforeseeable time. Thus, potential M&A acquisitions are not considered. Additionally, we expect Vetropack to only invest CAPEX close to their maintenance capex level in FY24 before gradually increasing towards its historical core level of 14.1% in FY26, from where it remains stable. This is in line with the historical peer average of 14.1% as well as the management guidance to further invest in innovations and retrofitting plants and production lines. Thus, we expect maintenance capex to be between c. 10-11% and expansion capex to be between 3-4% (in line with historical averages). Maintenance CAPEX for tangible assets is derived from a granular forecast of the underlying asset structure and their respective depreciation rates based on operational developments. Maintenance CAPEX for intangible assets (software) is kept stable as we see Vetropack continuing to develop and roll out HPPM.

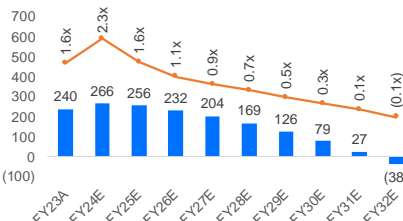
Exhibit 46: Maintenance and expansion core CAPEX [% of Net sales]



Source: Own analysis

▪ Capital structure

Exhibit 47: Net debt [x of core EBITDA]



Source: Own analysis

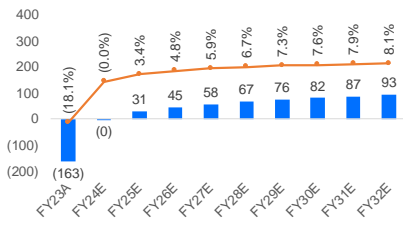
Debt is forecasted as a variable depending on the additional funding needed in excess of operational cash generation to fund invested capital increases. For this, excess liquid funds were set to zero when debt is required.¹¹ This approach yields a development towards the historical treatment of debt from Vetropack, reaching a positive net debt level by FY32. This aligns with our target capital structure assumptions, based on historical averages and management guidance.

Cash flow related

We anticipate Vetropack to have free cash flow from core activities being close to zero in FY24. This is due to subdued core results, escalating depreciation and

¹¹ McKinsey – Measuring and managing the value of companies

Exhibit 48: Core cash flow [% of Net sales]



Source: Own analysis

growing working capital requirements which are offset by low capex investments. Moving forward, Vetropack is expected to demonstrate robust free cash flow generation, projected to achieve 8.1% of net sales by FY32, aligning with the management's target to achieve positive cash flow post-investments and dividends. Regarding dividends, we expect a stable payout for the next three years, followed by adjustments to align with the historical average of distributing 1/3 of the prior year's total income. We believe Vetropack will maintain this dividend strategy to reflect their confidence in the company's financial robustness. Discussions on cash flows from non-core business and financing activities are omitted, as they do not directly impact the core enterprise value.

Valuation

Cost of Capital

- Cost of Equity (CoE)

To calculate the CoE, the capital asset pricing model was deployed. All utilized values are shown as of May 06th, 2024 or their last available update. Given Vetropack's large share of operations across various European countries, a 10-year AAA Government Bond in Europe was selected as the risk-free rate¹². For the market risk premium, we used a production-based weighted average, based on Damodaran¹³, due to Vetropack's close business practices of max. 400km in the vicinity of the respective production site. For the unlevered beta estimation, the daily returns of the Euro Stoxx 600 were regressed against Vetropack's daily returns over the last two years. The thereof resulting unlevered equity beta amounts to 0.91. This puts Vetropack in the range of its competitors, however, above the median and average, which indicates a slightly higher risk of business. Combined, these three components yield an **unlevered CoE of 8.96%**. As previously mentioned, we expect Vetropack to reverse their current elevated capital structure. Therefore, we employed a target net-debt-to-equity ratio of 0.04, based on Vetropack's historic average of net-debt-to-market-capitalization. We further utilized a debt beta of 0.17¹⁴. The debt beta refers to a BB-credit rating which was constructed with the Altman Z¹⁵-score and its respective classification¹⁵ and lies within the assumptions of leading financial platforms. Combined, this yields a re-levered equity beta of 0.94, resulting in a **levered CoE at 9.16%**.

- Cost of Debt

Vetropack has reported debt carrying interest rates ranging from 0.77% to 14.00%.

¹² ECB

¹³ Damodaran, NYU as of 01/2024

¹⁴ Stanford GSB Working Paper „Risk in Capital Structure Arbitrage“

¹⁵ Research gate

Exhibit 49: Credit rating benchmark

Benchmark	Value
Bloomberg	BB
Refinitiv	BB
Constructed	BB
Risk rating	BB

Source: Bloomberg, Refinitiv, own analysis

However, the company has not disclosed specific re-levering rates or debt amounts associated with each interest rate. To construct the CoD before tax shields, we utilized a high-yield bond from BB-rated European companies of 6.22%¹⁶, a Europe 10-year corporate default rate for BB-rated companies of 5.98%¹⁷ and a European loss-given default for European BB-rated companies of 63.00%¹⁸. Using the production-based average statutory tax rate of 19.95%, the **after-tax CoD** for Vetropack is calculated to be **4.69%**.

▪ Weighted Average Cost of Capital

Vetropack's estimated WACC is composed of the weighted levered CoE of 9.16% and after-tax CoD of 4.68%. These components are weighted with a target net-debt-to-capital ratio of 0.03. As a result, Vetropack's **estimated WACC** is calculated to be **9.03%**.

Exhibit 50: Cost of capital components

Component	Value
Risk-free rate	2.62%
Country/region risk premium	6.98%
Unlevered equity beta Vetropack	0.91
Unlevered cost of equity	8.96%
Target net debt / equity	0.04
Debt beta	0.17
Re-levered industry beta	0.94
Levered cost of equity	9.16%
Cost of debt (pre-tax)	5.85%
Tax-rate	20.0%
Cost of debt (after-tax)	4.69%
Target net debt / enterprise value	0.03
WACC	9.03%

Source: Own analysis, see footnotes

WACC		Levered cost of equity				
		8.16%	8.66%	9.16%	9.66%	10.16%
	(0.17)	8.76%	9.34%	9.93%	10.51%	11.10%
	(0.07)	8.41%	8.95%	9.48%	10.02%	10.55%
Target ND/EV	0.03	8.06%	8.55%	9.03%	9.52%	10.00%
	0.13	7.71%	8.15%	8.59%	9.02%	9.46%
	0.23	7.37%	7.75%	8.14%	8.52%	8.91%

A sensitivity analysis reveals that Vetropack's WACC is significantly more impacted by the levered CoE than by the after-tax CoD. This finding highlights the importance of equity cost considerations in Vetropack's financial strategy. Given Vetropack's conservative approach towards debt, the company faces a high CoE, which could be mitigated by adopting a more debt-friendly capital structure policy. This strategy would further lower the overall cost of capital, enhancing financial flexibility and improving returns through e.g., tax-shields.

Intrinsic valuation

As an intrinsic valuation method we applied the discounted cash flow (DCF) method, which is based on the operating model assumptions and the thereof resulting unlevered free cash flow from core activities. To discount the forecasted cash flows until FY32, a mid-year convention approach with the computed WACC of 9.03% has been used. Furthermore, to derive the terminal value (TV), the Gordon Growth Model has been applied. The perpetual growth is composed from five factors and yields an equally weighted average of 2.20%, being in line with the competitors long-term growth estimates. Based on these assumptions and considerations, the **core business enterprise value (EV)** lies at **c. CHF 1,064.6m**. To get Vetropack's combined EV, we add the expected non-core invested capital value FY24 of CHF 35.5m, yielding a **total EV of CHF 1,100.1m**.

Exhibit 51: Perpetual growth rate

Category	Factor
Competitor guidance [as of 2024]	2.20%
Real GDP OECD expectations Europe [2032 - 2060]	1.42%
Inflation target ECB [2024 - 2050]	2.00%
Historical inflation average in Europe [1990 - 2023]	2.69%
Vetropack historical CAGR [1990 - 2023]	2.71%
Equally weighted average	2.20%

Source: Competitors, OECD, ECB, Company information

¹⁶ FRED

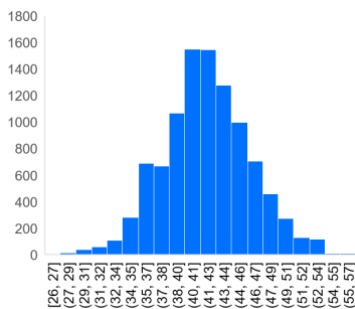
¹⁷ Standard & Poors

¹⁸ ION Analytics

After subtracting **net financial debt**, which is projected to stand at **CHF 266.2m** an **equity value of CHF 834.0m** is derived. This valuation suggests an **implied share price of CHF 42.07**. To explore the impact of varying perpetuity assumptions on the implied EV, a sensitivity test has been conducted, showcasing that a lower WACC (e.g., through a higher debt ratio) or a higher terminal growth rate (e.g., through M&A acquisitions) can improve the EV.

Core EV		WACC				
		8.0%	8.5%	9.0%	9.5%	10.0%
Terminal growth rate	1.7%	1,188.3	1,094.5	1,013.8	943.6	882.0
	2.0%	1,223.6	1,123.8	1,038.3	964.3	899.7
	2.2%	1,261.9	1,155.3	1,064.6	986.5	918.6
	2.5%	1,303.6	1,189.5	1,093.0	1,010.3	938.7
	2.7%	1,349.2	1,226.6	1,123.5	1,035.8	960.2

Exhibit 52: Monte Carlo simulation



Source: Own analysis

We performed a Monte Carlo simulation to gain a more comprehensive understanding of the range of potential outcomes for our estimated share price. Variables with a significant influence on our result were selected, such as revenue, energy-, personnel expenses and material growth. 10,000 iterations were conducted on the DCF analysis with the selected drivers as variable inputs. A median share price of CHF 41.8 and an average share price of CHF 42.0 were attained with a standard deviation of 4.3. This result is directly in line with our DCF share price of CHF 42.07 and supports our intrinsic value analysis.

Scenario analysis

Best and worst case scenario

To consider potential differences from our assumptions, unrelated to extreme events, we applied several deviating projections from the base case. For sales, we incorporated an annual one p.p. higher/lower growth rate. Material expenses growth are adjusted from FY26 onwards with a 0.3 p.p. difference due to e.g., changing supplier contracts or market conditions. Similarly, energy expenses are expected to fluctuate by 0.3 p.p. due to e.g., changes in the political landscape or different developments of renewables in the overall energy source mix. Personnel expenses are expected to depend on a 0.4 p.p. higher net sales per FTE development due to e.g., even higher efficiencies being realized from the updated production processes and lines. In the worst-case scenario, we expect Vetropack to reach the level of wage increases. Other expenses are expected to reach their 20%, and 80% respectively, percentile of the utilized historical forecast assumption period. CAPEX levels are expected to develop similar to the base case scenario to stay competitive while debt adjusts accordingly with the growth requirements from these assumptions. These scenarios reflect the low and high point of our DCF valuation in the football field.

Echovai market disruption

Although we already incorporated the gradual incorporation of Echovai in our base case scenario, we see a potential disruption of the Market by Echovai becoming the new market standard. In this case, we expect higher demand from the market and therefore an overgrowth of 1.5 p.p. in FY24/FY25, 1.0 p.p. in FY26/FY27 and 0.5 p.p. in FY28/FY29 before competitors are fully catching up. As main cost drivers, we expect material costs to grow with a 0.3 p.p. lower growth rate from FY26 onwards due to Echovai needing less material when being produced alongside a favorable raw material mix. Similarly, energy expenses are expected to develop with a 0.3 p.p. lower growth margin due to less energy being needed when producing Echovai due to its improved production process. We do not expect a significant effect on personnel expenses. Other expense items are also expected to remain at base level, except for transport costs and packaging material costs, which are expected to develop with their respective 80% percentile of historical ratios utilized for the base case forecast. This is due to Echovai's lighter weight and improved stacking and storage characteristics. We expect CAPEX levels to remain similar, internally changing the investments more towards Echovai related assets. Debt adjusts accordingly with the growth requirements from these assumptions. With Echovai disrupting the market, Vetropack sees a significant increase in profitability and core cash flow, significantly catapulting the expected core EV to CHF 1,252.2. After adding the non-core value (CHF 35.0) and net debt (CHF -263.4), the expected price per share amounts to CHF 51.6, indicating an implied premium of 67.1%.

Appendix

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032
	Act	Act	Act	Act	Act	Act	Act	Act	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
Core																	
Net sales from goods and services	601.7	631.5	690.7	714.9	662.6	816.5	899.4	898.8	880.8	912.7	943.3	975.3	1,007.2	1,040.3	1,075.3	1,109.9	1,145.7
% growth	-	5.0%	9.4%	3.5%	(7.3%)	23.2%	10.2%	(0.1%)	(2.0%)	3.6%	3.4%	3.4%	3.3%	3.3%	3.4%	3.2%	3.2%
COGS	(379.6)	(386.7)	(413.8)	(417.2)	(383.1)	(513.5)	(603.0)	(585.0)	(610.5)	(592.1)	(574.5)	(580.0)	(592.4)	(603.2)	(619.3)	(636.7)	(655.1)
thereof material expenses	(100.6)	(100.8)	(109.8)	(116.0)	(111.9)	(128.2)	(135.6)	(147.3)	(149.2)	(151.9)	(154.5)	(162.2)	(170.2)	(178.5)	(187.3)	(196.5)	(206.2)
thereof energy expenses	(90.0)	(88.9)	(95.7)	(94.6)	(89.1)	(143.5)	(252.2)	(241.7)	(211.4)	(181.2)	(150.9)	(147.8)	(141.5)	(136.4)	(135.2)	(133.9)	(132.7)
thereof personnel expenses [COGS]	(78.9)	(83.3)	(89.0)	(94.2)	(93.0)	(102.0)	(98.6)	(106.0)	(103.4)	(106.9)	(110.2)	(113.4)	(116.5)	(119.6)	(123.0)	(126.3)	(129.7)
thereof changes in inventory	(0.1)	(7.7)	(4.1)	2.4	15.4	(8.3)	21.4	40.1	(4.2)	(4.2)	(4.2)	4.7	2.9	4.8	5.6	5.7	5.3
thereof other COGS items	(110.0)	(106.0)	(115.2)	(114.8)	(104.5)	(131.5)	(138.0)	(130.1)	(142.3)	(147.9)	(154.6)	(161.4)	(167.2)	(173.2)	(179.4)	(185.6)	(191.9)
Core gross profit	222.1	244.8	276.9	297.7	279.5	303.0	296.4	313.8	270.3	320.6	368.8	395.3	414.8	437.1	455.9	473.3	490.5
% of Net sales	36.9%	38.6%	40.1%	41.6%	42.2%	37.1%	33.0%	34.9%	30.7%	35.1%	39.1%	40.5%	41.2%	42.0%	42.4%	42.6%	42.8%
% growth	-	10.2%	13.1%	7.5%	(6.1%)	8.4%	(2.2%)	5.9%	(13.9%)	18.6%	15.1%	7.2%	4.9%	5.4%	4.3%	3.8%	3.6%
SG&A	(122.7)	(123.8)	(138.1)	(144.2)	(139.9)	(153.1)	(158.6)	(171.8)	(166.1)	(170.0)	(173.5)	(178.9)	(184.2)	(189.8)	(195.6)	(201.4)	(207.3)
thereof personnel expenses [SG&A]	(63.2)	(66.8)	(71.4)	(75.5)	(74.5)	(81.7)	(79.0)	(84.9)	(82.9)	(85.7)	(88.3)	(90.9)	(93.3)	(95.9)	(98.6)	(101.2)	(103.9)
thereof other administrative and opex	(59.5)	(57.0)	(66.7)	(68.7)	(65.4)	(71.4)	(79.6)	(86.9)	(83.3)	(84.3)	(85.1)	(88.0)	(90.9)	(93.9)	(97.1)	(100.2)	(103.4)
Other income [core share]	8.9	7.0	8.3	8.4	9.0	11.0	9.9	12.6	10.5	10.9	11.2	11.6	12.0	12.4	12.8	13.2	13.6
Core EBITDA	108.3	128.0	147.1	161.9	146.6	160.9	147.7	154.6	114.7	161.4	206.6	228.1	246.2	259.7	273.1	285.1	296.9
% of Net sales	18.0%	20.3%	21.3%	22.6%	22.4%	19.7%	16.4%	17.2%	13.0%	17.7%	21.9%	23.4%	24.1%	25.0%	25.4%	25.7%	25.9%
% growth	n/a	18.2%	14.9%	10.1%	(8.2%)	8.3%	(8.2%)	4.7%	(25.8%)	40.8%	28.0%	10.4%	6.4%	7.1%	5.2%	4.4%	4.1%
Depreciation of tangible assets [core]	(53.9)	(61.2)	(69.3)	(74.7)	(73.4)	(81.1)	(70.3)	(72.4)	(84.2)	(87.0)	(92.5)	(99.4)	(105.8)	(110.5)	(115.1)	(119.7)	(124.4)
Amortisation of intangible assets [core]	(7.9)	(6.2)	(3.1)	(2.0)	(2.7)	(2.2)	(1.8)	(1.6)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)	(1.4)
Core result before taxes	46.5	60.6	74.7	85.2	72.5	77.6	75.6	80.6	29.1	72.9	112.6	127.2	135.3	147.8	156.6	163.9	171.0
% of Net sales	7.7%	9.6%	10.8%	11.9%	10.9%	9.5%	8.4%	9.0%	3.3%	8.0%	11.9%	13.0%	13.4%	14.2%	14.6%	14.8%	14.9%
% growth	n/a	30.3%	23.3%	14.1%	(14.9%)	7.0%	(2.6%)	6.6%	(63.9%)	150.7%	54.3%	13.0%	6.4%	9.3%	5.9%	4.7%	4.3%
Adjusted statutory taxes	(9.3)	(12.1)	(14.9)	(17.0)	(14.5)	(15.5)	(15.1)	(16.1)	(5.8)	(14.6)	(22.5)	(25.4)	(27.0)	(29.5)	(31.2)	(32.7)	(34.1)
Tax adjustments	1.6	(0.6)	0.8	3.2	9.4	3.0	0.6	(0.0)	-	-	0.0	(0.0)	0.0	(0.0)	(0.0)	0.0	(0.0)
Core result	38.8	47.9	60.6	71.4	67.4	65.2	61.1	64.5	23.3	58.4	90.1	101.8	108.3	118.3	125.4	131.2	136.9
% of Net sales	6.4%	7.6%	8.8%	10.0%	10.2%	8.0%	6.8%	7.2%	2.6%	6.4%	9.6%	10.4%	10.8%	11.4%	11.7%	11.8%	11.9%
% growth	-	23.4%	26.5%	17.9%	(5.6%)	(3.4%)	(6.2%)	5.5%	(63.9%)	150.7%	54.3%	13.0%	6.4%	9.3%	5.9%	4.7%	4.3%
Non-core																	
Income from non-core activities	6.7	7.3	7.5	8.3	18.0	7.1	18.6	14.1	7.7	7.9	8.2	8.5	8.7	9.0	9.3	9.6	10.0
Expenses from non-core activities	(1.8)	(1.6)	(3.1)	(1.6)	(1.4)	(1.2)	(1.8)	(2.5)	(1.8)	(1.9)	(2.1)	(2.2)	(2.3)	(2.5)	(2.6)	(2.7)	(2.9)
Depreciation and impairments of tangible : Extraordinary result	(1.4)	(1.3)	(1.2)	(1.0)	(0.9)	(1.1)	(3.2)	(1.7)	(0.9)	(0.9)	(0.9)	(0.8)	(0.8)	(0.8)	(0.7)	(0.7)	(0.7)
Non-core result before taxes	3.5	4.4	3.2	5.7	15.7	4.8	(17.8)	9.4	4.9	5.1	5.3	5.4	5.6	5.8	6.0	6.2	6.4
% growth	n/a	25.7%	(27.3%)	78.1%	175.4%	(69.4%)	(470.8%)	(152.8%)	(47.7%)	3.6%	3.4%	3.4%	3.3%	3.3%	3.4%	3.2%	3.2%
Adjusted statutory taxes	(0.7)	(0.9)	(0.6)	(1.1)	(3.1)	(1.0)	3.6	(1.9)	(1.0)	(1.0)	(1.1)	(1.1)	(1.1)	(1.2)	(1.2)	(1.2)	(1.3)
Tax adjustments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-core result	2.8	3.5	2.6	4.6	12.6	3.8	(14.2)	7.5	3.9	4.1	4.2	4.4	4.5	4.6	4.8	5.0	5.1
% growth	n/a	25.7%	(27.3%)	78.1%	175.4%	(69.4%)	(470.8%)	(152.8%)	(47.7%)	3.6%	3.4%	3.4%	3.3%	3.3%	3.4%	3.2%	3.2%
Financial																	
Financial income	3.3	0.7	0.6	0.9	0.6	0.8	0.5	1.1	3.0	2.4	2.3	2.2	2.2	2.1	2.0	2.0	1.9
Financial expenses	(0.3)	(0.5)	(0.6)	(0.4)	(0.3)	(1.5)	(4.4)	(8.9)	(9.2)	(10.5)	(11.3)	(10.5)	(8.4)	(5.9)	(3.1)	(0.8)	0.0
Net of currency exchange gains/losses	(1.5)	7.3	(3.8)	(4.1)	1.2	(5.8)	(3.8)	(3.1)	-	-	-	-	-	-	-	-	-
Financial result before taxes	1.5	7.5	(3.8)	(3.6)	1.5	(6.5)	(7.7)	(10.9)	(6.2)	(8.1)	(9.0)	(8.2)	(6.2)	(3.8)	(1.1)	1.1	1.9
Adjusted statutory taxes	(0.3)	(1.5)	0.8	0.7	(0.3)	1.3	1.5	2.2	1.2	1.6	1.8	1.6	1.2	0.8	0.2	(0.2)	(0.4)
Tax adjustments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Financial result after taxes and before min	1.2	6.0	(3.0)	(2.9)	1.2	(5.2)	(6.2)	(8.7)	(5.0)	(6.5)	(7.2)	(6.6)	(5.0)	(3.0)	(0.8)	0.9	1.5
Minority interest from group companies	(0.2)	(0.4)	(2.0)	(0.7)	-	-	-	-	-	-	-	-	-	-	-	-	-
Financial result	1.0	5.6	(5.0)	(3.6)	1.2	(5.2)	(6.2)	(8.7)	(5.0)	(6.5)	(7.2)	(6.6)	(5.0)	(3.0)	(0.8)	0.9	1.5
Core result	38.8	47.9	60.6	71.4	67.4	65.2	61.1	64.5	23.3	58.4	90.1	101.8	108.3	118.3	125.4	131.2	136.9
Non-core result	2.8	3.5	2.6	4.6	12.6	3.8	(14.2)	7.5	3.9	4.1	4.2	4.4	4.5	4.6	4.8	5.0	5.1
Financial result	1.0	5.6	(5.0)	(3.6)	1.2	(5.2)	(6.2)	(8.7)	(5.0)	(6.5)	(7.2)	(6.6)	(5.0)	(3.0)	(0.8)	0.9	1.5
Total result	42.6	57.0	58.1	72.4	81.2	63.8	40.7	63.3	22.3	56.0	87.2	99.6	107.8	120.0	129.3	137.1	143.5

