A Work Project, presented as part of the requirements for the Award of a Master’s degree in Finance from the Nova School of Business and Economics.

Private Equity Challenge: Analysis of Vidrala as an LBO Target

Diogo Salvador da Cruz Camacho (28851)

Work project carried out under the supervision of:
Professor Fábio Santos

03-01-2021

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Abstract: The goal of this thesis is to assess Vidrala as a potential leveraged buyout target. Market and company overviews were performed to evaluate the company´s positioning and financial performance, as well as future trends within the glass packaging industry, the respective end-markets and other packaging solutions. This analysis was used to select the most suitable investment strategies and quantify the resulting business plan in financial terms. Finally, a valuation using several methods was conducted from which a capital structured was designed and potential returns calculated. This part will cover in detail the Financial Analysis and Investment Thesis of the project.

Keywords: Private Equity, Leveraged Buyout, Glass Packaging Market, Vidrala

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Vidrala's presence in a mature market with stable and predictable cash flows makes for a very attractive M&A target

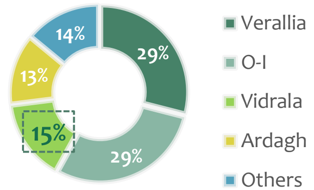
Company Overview

- Founded in 1965, Vidrala currently has **8 factories** spread across **5 countries**, being a dominant player in the Western European Market and serving approximately **1 600 customers**
- The management team has **created a strong player** in the respective geographies **through several successful M&A transactions**
- Vidrala has been showing a **stable and predictable cash flow generation** and a **leverageable balance sheet**

Industry Overview

- Being highly **dependent on the respective end markets**, this industry's main drivers are **population growth, urbanization**, the sustainability trend and the **premiumization** of the end markets, with the latter **increasing the penetration rate of glass** over other packaging options

Main competitors in Western Europe



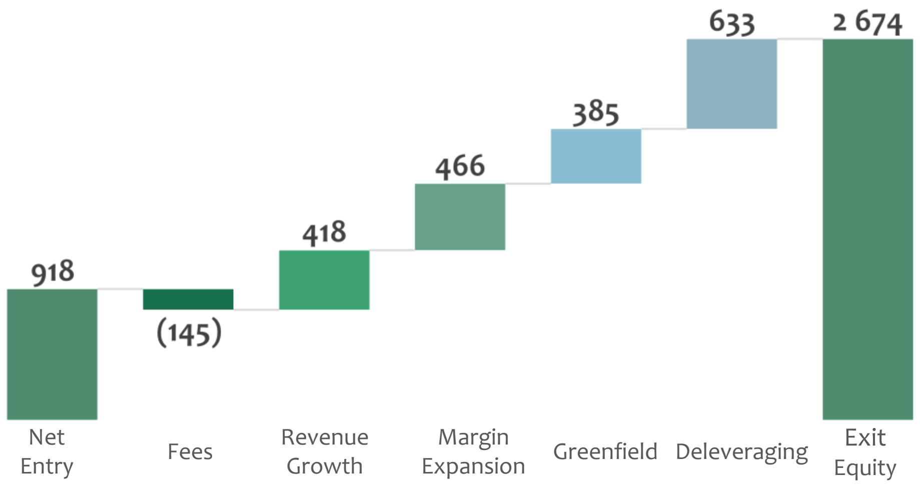
Investment Rationale

- Following the industry trend and company strengths, **M&A consolidation** creates value by **increasing exposure in key geographies** and **diversifying product portfolio**
- Leveraging the company's focus on **automation** and **increasing usage of cullet** allows to increase EBITDA margins of the company
- Using excess cash to **develop factories in glass net importing countries** adds more value than deleveraging further

Entry

- **Entry will be priced at 7.5x EBITDA**, according to the relative valuation. Overall, the acquisition of Vidrala and its target Zignago Vetro plus banking and due diligence fees results in a cost of **€ 2.67Bn**
- The capital structure is composed by **66% of debt and 34% of equity**, optimizing returns and respecting covenants
- Management team will represent **10%** of the institutional investment contributing with **€ 6.3M**, twice its fixed annual salary

Value Creation (in million €)



Exit

	Money Multiple	IRR
Inst. Investors	2.8x	23.6%
Mang. Team	20.9x	83.7%

- The **exit strategies** considered most suited for the deal are **IPO** due to deal-size and **Strategic Sale** due to potential synergies and consolidation trend

By investing in strategic acquisitions Vidrala has become one of the main players in the Western European market

Company profile

- Vidrala is **a leading producer of glass containers** for the **food & beverage industries**
- It also **provides packaging services** such as beverages filling and logistic activities, which account for less than 10% of revenues
- Sales by product segment in 2019:

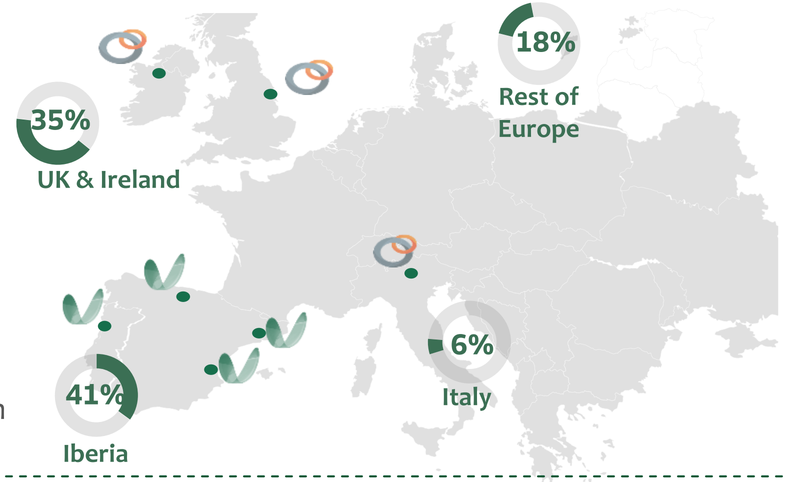
Wine	Beer	Food	Spirits	Soft Dtinks	Others
35%	30%	10%	9%	9%	7%

- Its strategy is to be the European low-cost producer, always **focused on customers** and **competitiveness**, through **sustainable** and **cost-efficient** processes

Outreach and sales by region

It currently operates through:

- **8 factories** in
- **5 countries**, producing around
- **8 billion containers** per year
- Serving **1 600 customers** and
- Retaining **15%** of the Western European market



1965-1967	1967-1981	1981-1998	1998-2003	2003-2015	2015-2019
25,000 tons	130,000 tons	450,000 tons	805,000 tons	950,000 tons	1,600,000 tons
1965 – The company was installed in Llodio, (Alava – Spain) in 1965 **1966 -** Creation of Vidrierías de Álava S.A. Its manufacturing activity began in 1966 with one furnace, two machines **1967 –** Begins exporting	**1977-** Beginning of press & blow production of light bottles makes Vidrala the technological leader of the national market **1981-** Transformation of furnaces, generating **an energy saving of 50%,** maintaining productive capacity. Corporate name changed to Vidrala S.A.	**1985 - Vidrala's shares** were launched on the stock market **1989 -** Crisnova, a 100% subsidiary of Vidrala, started its activity in Caudete **1995 - Third Aiala's furnace** was built up **1998 - Second Crisnova´s furnace** came into operation	**2001 -** Approval of the Strategic Plan of corporate growth **2003 – Beginning of Internationalization process:** Entry into Portuguese market with acquisition of Ricardo Gallo Vidro de Embalagem	**2005 –** Acquisition of a new plant in Spain and entry in **Italian** Market through acquisition of a factory **2007 –** Entry into **Belgian market** through acquisition of La Manufacture du Verre **2015 –Entry into UK and Ireland** markets through the acquisition of Encirc Limited	**2015 –**Vidrala becomes 4th largest European player, and offers a complete range of services **2017 -** Acquisition of a new factory in Portugal (Santos Barosa) **2019 –** Sale of La Manufacture du Verre, ending the presence in the Belgian Market

- Production Capacity - Establishment - Organic Growth - Acquisitions

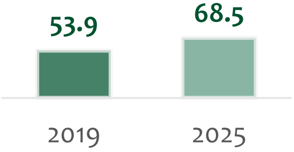
Sources: Company´s Published Reports

vidrala

Considering market trends, glass will have an important role in the future of packaging

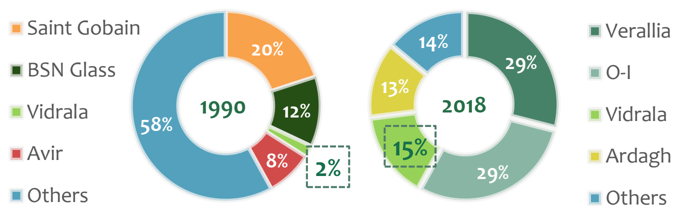
Glass bottles and containers Market

Global market size (in billion €)



- **It is expected to grow at a CAGR of 4.1%** between 2020 and 2025
- **Asia pacific is the biggest market ,** followed by **Europe**, where Germany, France and Russia account for a significant part of the revenues
- The market is competitive and increasingly concentrated

Main competitors in Western Europe



- The majority of glass packaging consumption is made by the **alcoholic beverages industry**, with beer contributing with the greatest volume

Key Trends

Increasing concerns about the environment are leading consumers towards more **sustainable choices** Glass is 100% recyclable	**Premiumization** People are looking for higher quality products, and do not mind paying a premium Glass allows for attractive design	Healthier consumers demand **healthier products** Glass has no affinity, guarantees quality

Growth Drivers

- Increasing urban population and purchasing power
- Growing demand for alcoholic beverages, especially for beer
- Growing number of policies to reduce the use of plastics
- Increasing wine trade
- Fast growing pharmaceutical and cosmetics segments

Value Chain

SUPPLIERS → PACKAGING MANUFACTURING → PRODUCTS MANUFACTORING → DISTRIBUTION → RETAIL

KEY PLAYERS

CIRCULAR ECONOMY

USER

CULLET

Glass Discarded in Production

Municipal Waste Collection

COLLECTION AND TREATMENT

RECYCLING

Sources: Statista, Company's publications, Mordor Intelligence, Passport

Net importers of glass in Eastern Europe and North Africa represent the best opportunities for a greenfield expansion

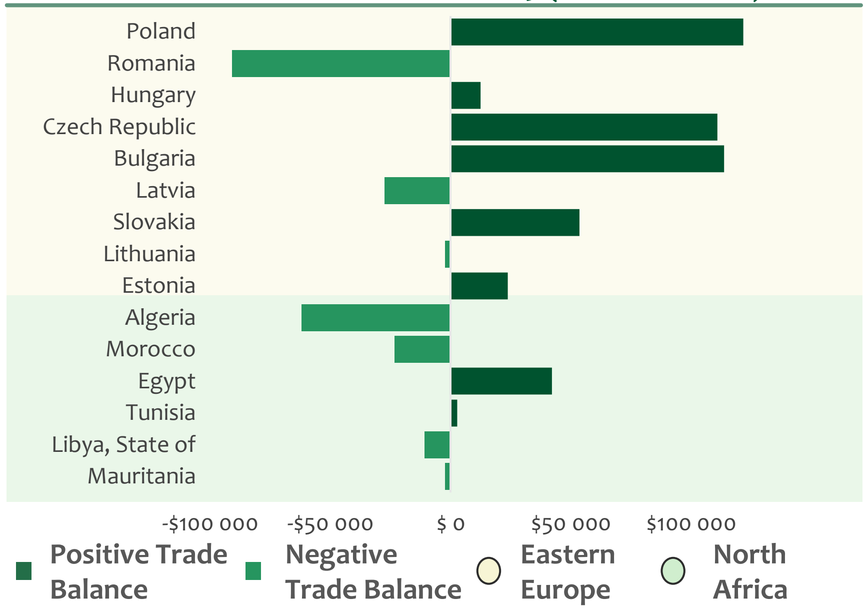
Entering New Markets

End Markets size (in million €) and growth

	Western and Central Europe*	North Africa	Eastern Europe	Northern Europe
Alcoholic drinks	208 530	3 221	57 215	32 728
CAGR 2019-2023	*2.5%*	*6.5%*	*4.4%*	*2.3%*
Non-Alcoholic drinks	137 137	18 501	19 400	10 440
CAGR 2019-2023	*2.5%*	*11.5%*	*6.3%*	*3.3%*
Food	639 913	131 212	323 516	81 077
CAGR 2019-2023	*1.9%*	*8%*	*2.4%*	*1.7%*
Beauty and personal care	58264	9 861	19 000	6 021
CAGR 2019-2023	*1.9%*	*3.1%*	*2.7%*	*2%*
OTC Pharmaceuticals	101 533	1 249	3 594	1 278
CAGR 2019-2023	*3.7%*	*2%*	*3.1%*	*3.1%*

* Does not include Portugal, Spain nor Italy

Glass Trade balance in 2019 (USD thousand)



Why Beauty and Personal care?

Mainly driven by **consumer spending**, the market is growing as beauty products increasingly make part of daily routines. High growth opportunities, especially for **prestige and luxury products**, account for 25% of revenues. In UK, Italy and Spain, where Vidrala already operates, the share of people that buys these products is **28%, 22%** and **21%**, respectively

People are looking for **visually appealing, sustainable and more natural products**, with a packaging that allow them to see its quality

Why Pharmaceuticals?

Increasing consciousness about health and access to health care are driving the demand for pharmaceuticals up, particularly in middle income countries where it is growing at a faster pace

Countries where Vidrala currently operates have **high access to medicine**. Glass is one of the **main packaging solutions** for medicine and drugs, allowing the products to keep their properties and contributing to sustainability

Trade balance of the countries allow us to deepen our analysis regarding which markets to entry, since it shows us where demand is larger than what is being produced by the local producers

- In Eastern Europe: **Romania and Latvia** seem to be the regions where there is greater room for more producers
- Regarding North African countries, there seems to be a lot of opportunities: Algeria, Morocco and Libya. However, in these countries a thorough analysis regarding **political and economical stability** needs to take place

Sources: Trade Map, Statista

1

- **From 2012 to 2019 revenue more than doubled: CAGR 12%**
- M&A activity accounted for more than 70% of the revenue increase in the period
- Encirc acquisition was the first expansion outside of continental Europe
- Vidrala is committed to invest in the companies purchased to guarantee improvement and sustainability
- Vidrala's targets usually are recognized by investment in development and in strong customer relationships

2

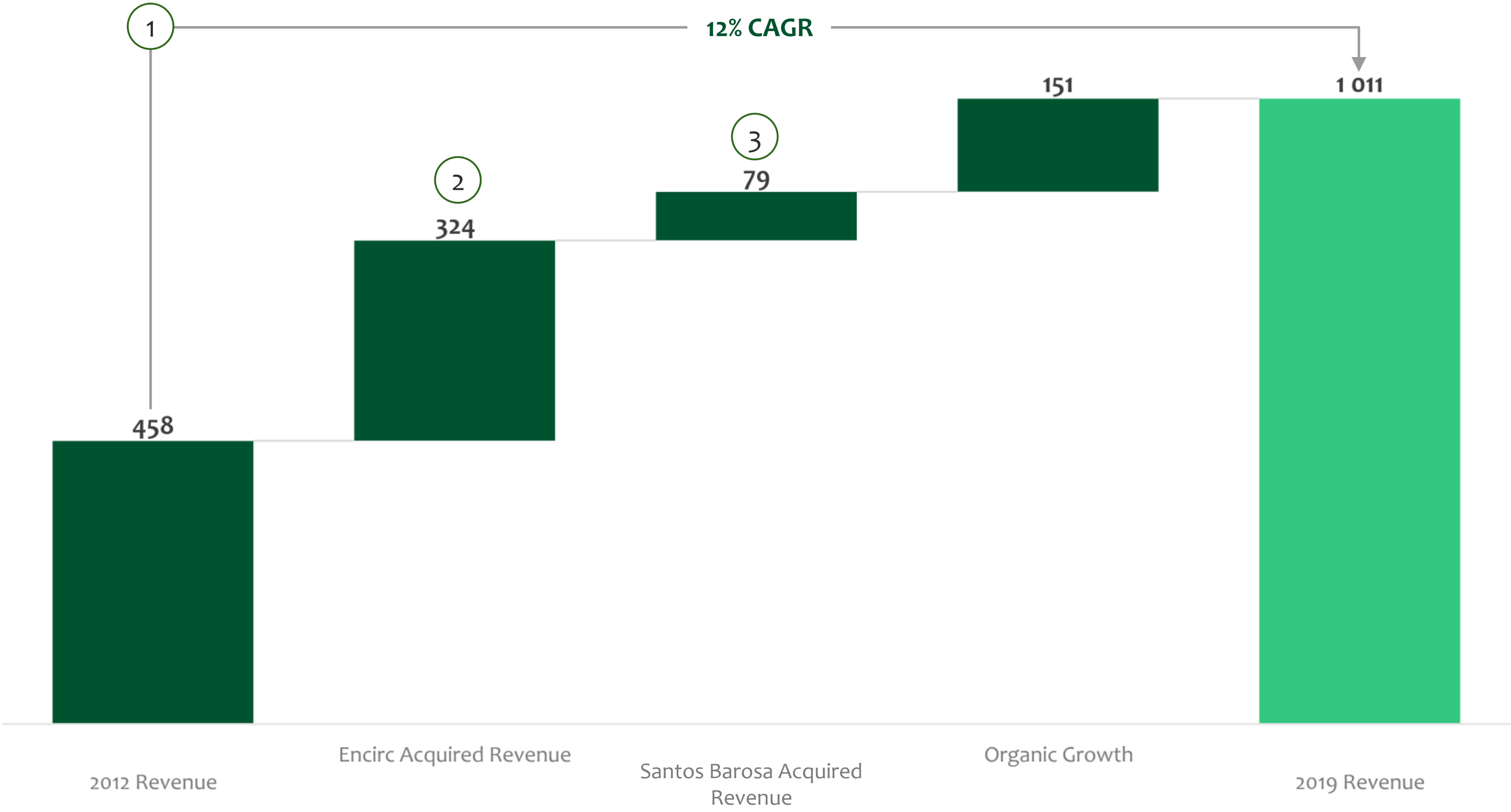
- Encirc was acquired in 2015 with a valuation (EV) of € 408.6M (6.8x EBITDA multiple)
- In 2017 Vidrala started investing £ 100M in new furnaces to "help **fuel the sustainability strategy**". These furnaces with a minimum life span of 12 years were expected to secure £ 317M in value added each year. This action will continue until 2021
- The company kept its image, website and senior management. Vidrala therefore recognizes the value and brand power that this firm has in the UK & Ireland market

3

- Santos Barosa was acquired in 2018 with a valuation (EV) of € 252.7M (7.7x EBITDA multiple)
- After the acquisition, according to BPI estimates, Vidrala became the 2nd Largest glass packaging player in Portugal (above BA glass and below Verallia).
- According to Vidrala, Santos Barosa had at the time an EBITDA margin of 25.1%

M&A activity is the most relevant driver of revenue growth

Revenue Growth
(in million €)



Sources: Vidrala and Encirc's website, Jornal de Negócios

M&A Activity is boosting growth and margins

1

- Vidrala has been actively participating in M&A by acquiring manufacturing sites in strategical locations
- In 2015 Vidrala acquired its **UK & Ireland divisions** which added over **€ 300M** in revenue. Organic growth rate was 2.3%
- In 2017 Vidrala completed another acquisition, **Santos Barosa** in Portugal, adding over **€ 140M** in revenue
- In 2019 the **Belgium site was sold** to Carlyle Group Owned, Saverglass
- Vidrala's strategy focuses on **cost optimization** and **product mix diversification**

2

- The acquisition of the UK & Ireland divisions hurt Vidrala's margins as these divisions had **significantly higher costs** compared to others. In 2015, UK & Ireland had EBITDA margins close to 18% while other segments had close to 21%, with the **Iberian Peninsula being the most profitable** at circa 30%. Currently, UK has margins closer to 25%

3

- Energy consumption, specifically, electricity and natural gas represent one of the largest cost drivers as this industry is **very energy intensive**
- Sales expense refers to **storage and transportation** costs regarding its logistic services, another large standalone cost driver

4

- Employee Expenses and External Services (more specifically, maintenance and Insurance) are the **two least variable** captions when analysing a fixed vs variable cost basis
- Overall, of 2019 costs, 31.1% of the total costs are considered **Fixed Costs**

Vidrala's Income statement key captions 2012-2019

in Million €	2012	2013	2014	2015	2016	2017	2018	2019
Revenues	**458**	**474**	**469**	**803**	**774**	**823**	**955**	**1 011**
Organic Growth Rate	N/A	*3.5%*	*(1.0%)*	*2.3%*	*(3.7%)*	*(3.8%)*	*16.1%*	*5.8%*
Inorganic Growth Rate	N/A	*0.0%*	*0.0%*	*69.1%*	*0.0%*	*10.2%*	*0.0%*	*0.0%*
COGS	(156)	(157)	(164)	(304)	(279)	(277)	(318)	(320)
Gross Profit	**301**	**317**	**304**	**499**	**495**	**546**	**637**	**691**
Gross Margin (%)	*65.8%*	*66.8%*	*64.9%*	*62.2%*	*64.0%*	*66.4%*	*66.7%*	*68.4%*
Employee Expenses	(100)	(100)	(96)	(166)	(166)	(175)	(190)	(198)
Other Expenses	(102)	(106)	(102)	(178)	(162)	(181)	(204)	(207)
Other EBITDA Adjustments	2	3	1	(3)	5	(1)	(2)	(25)
Adjusted EBITDA	**102**	**114**	**107**	**152**	**172**	**190**	**242**	**262**
EBITDA Margin (%)	*22.2%*	*24.1%*	*22.8%*	*18.9%*	*22.2%*	*23.1%*	*25.3%*	*25.9%*
NOPAT	**46**	**58**	**50**	**57**	**75**	**86**	**121**	**135**
NOPAT Margin (%)	*10.0%*	*12.2%*	*10.6%*	*7.1%*	*9.6%*	*10.4%*	*12.6%*	*13.4%*

1

in Million €	2018	2019
Revenues	**955**	**1 011**
Iberian Peninsula	567	597
UK & Ireland	334	351
Italy	54	63
Rest of European Union	–	–

3

in Million €	2018	2019
Other expenses	**(204)**	**(207)**
External Services	(46)	(45)
Electricity	(54)	(51)
Sales Expenses	(88)	(93)
Taxes	(6)	(5)
Other Operating expenses	(9)	(13)

Sources: Vidrala's annual reports

1
- Vidrala's business model requires it to have **large PP&E investments**, having the possibility to pose collateral for Financial Debt
- In 2015 the **acquisition of Encirc** increased the PP&E of Vidrala Group by adding 3 factories to its portfolio as well as in 2017 with the **Santos Barosa acquisition**

2
- In this industry, Net Working Capital is on the high side as the companies need to invest **significant portions in Inventories**. As they are a B2B business, receivables and payables account for a significant portion in the Balance Sheet
- Although the **NWC level has been increasing** over time, Vidrala has **improved its cash conversion cycle**

3
- Vidrala uses **less leverage than its peers** with Net Debt/EBITDA never surpassing 2.5x
- In the period under analysis, leverage is **only increased during M&A activity**
- As of 2020 H1 Net Debt/EBITDA is at 1.1x, showing that Vidrala is **ready for a leveraging process** for M&A activity in the future
- Under Spanish law, there is significantly more room for interest expenses, as it is still far from the **30% deductibility upper bound**

4
- Here are represented 80% of the total assets and liabilities
- In 2019, PP&E accounts for almost a half of total assets (**47%**), while trade receivables, goodwill and inventories also have a significant weight of **17%, 15%** and **13%**, respectively

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Vidrala's has a strong balance sheet with room for more leverage

Vidrala's Balance Sheet key captions 2012-2019

In Million €	2012	2013	2014	2015	2016	2017	2018	2019	
Total Assets	**695**	**700**	**669**	**1 200**	**1 096**	**1 405**	**1 407**	**1 458**	
Net PP&E	**345**	**331**	**326**	**657**	**593**	**683**	**684**	**692**	1
NWC excl. Cash	**102**	**128**	**130**	**239**	**201**	**173**	**198**	**217**	
Inventories	113	126	124	201	181	190	185	195	2
Trade and other receivables	97	106	106	205	194	206	219	249	
Trade and other payables	108	105	100	168	175	224	206	226	
Cash	**0,9**	**0,1**	**0,1**	**15,7**	**0,4**	**42,0**	**22,7**	**28,8**	
Total Liabilities	**357**	**325**	**265**	**724**	**621**	**877**	**797**	**735**	
Total Financial Debt	**160**	**118**	**68**	**420**	**323**	**529**	**434**	**364**	3
Net Financial Debt/(Cash)	**160**	**118**	**68**	**404**	**322**	**487**	**411**	**335**	
Net Debt/EBITDA	*1.5x*	*1.0x*	*0.6x*	*2.5x*	*1.9x*	*2.5x*	*1.7x*	*1.2x*	

4

in Million €	2012	2013	2014	2015	2016	2017	2018	2019
Total Assets	**695**	**700**	**669**	**1 200**	**1 096**	**1 405**	**1 407**	**1 458**
Total Current Assets	239	256	242	434	388	451	449	489
Total Liabilities	**357**	**325**	**265**	**724**	**621**	**877**	**797**	**735**
Total Current Liabilities	201	181	160	215	215	290	302	403
Assets/Liabilities	***1.9x***	***2.1x***	***2.5x***	***1.7x***	***1.8x***	***1.6x***	***1.8x***	***2.0x***
Current Assets/ Current Liabilities	***1.2x***	***1.4x***	***1.5x***	***2.0x***	***1.8x***	***1.6x***	***1.5x***	***1.2x***

in Million €	2018	2019
Finance income	3	1
Finance costs	(10)	(7)
Interest on Loans	(7)	(5)
Hedging Derivatives	(3)	(2)
Other Financial Costs	(1)	(0)

Sources: Vidrala's annual reports

Vidrala has stable and predictable Free Cash Flows

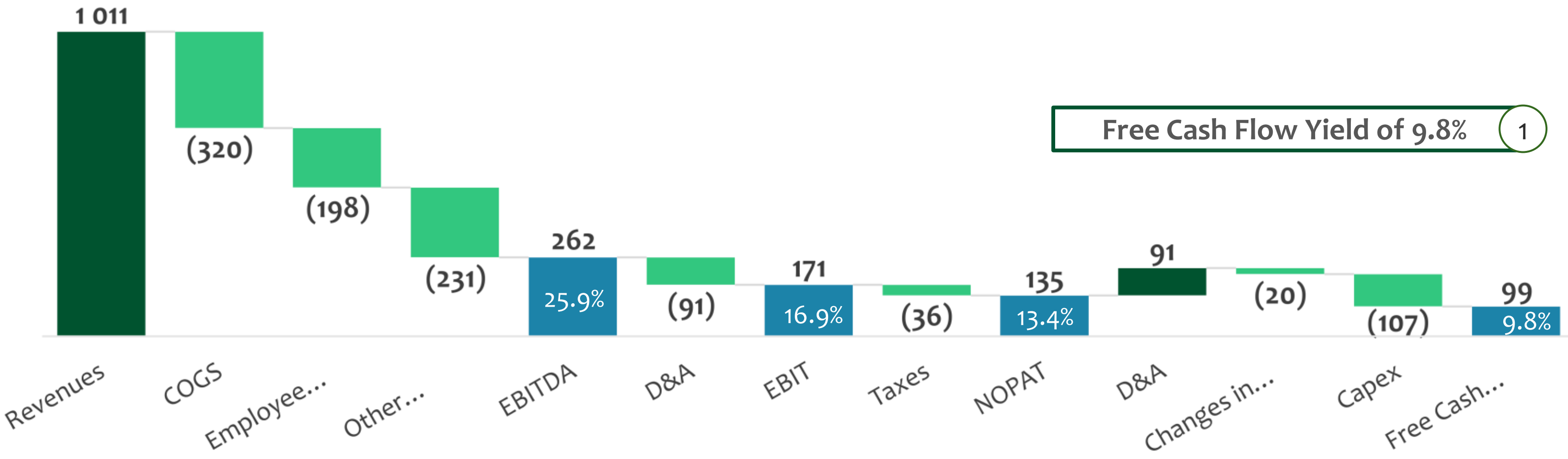
1

- 2019 adjusted Free Cash Flow was € **99M**. This is a **9.8% yield** over the total revenue
- After the Income statement side, Capex is the largest cost driver. This is explained by Maintenance Capex with Vidrala spending over € 100M in acquisition of PP&E

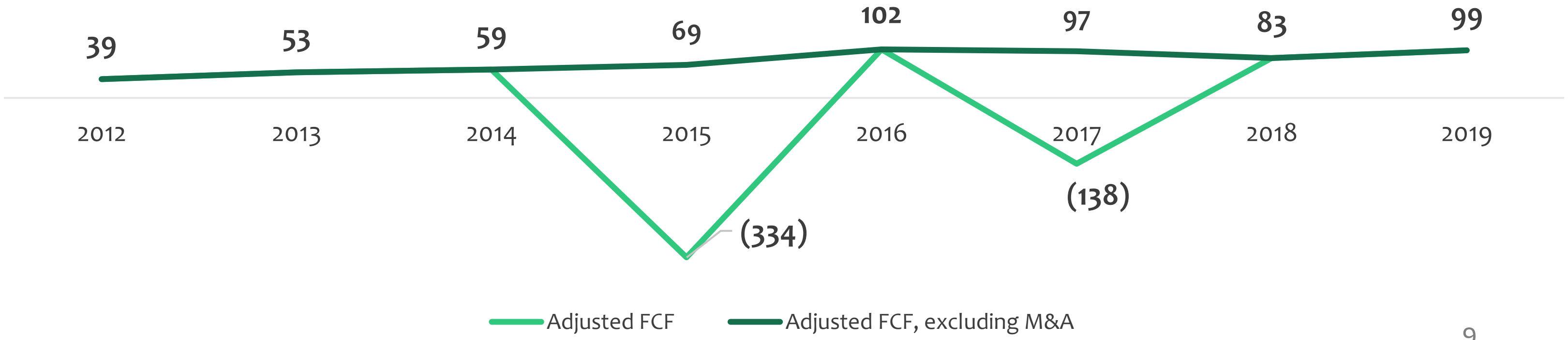
2

- Vidrala's FCF is stable and predictable, with only years of M&A activity having negative FCF
- If M&A transaction costs are excluded, FCF has a stable evolution at a **14.2% CAGR**
- The decrease in the 2017 and 2018 Adjusted FCF, excluding M&A transaction costs can be explained by an increase in Maintenance Capex in 2017 and in 2018, an increase in both Maintenance Capex and investment in NWC

Free Cash Flow 2019
(in million €)



FCF Evolution 2
(in million €)



Sources: Vidrala's annual reports

vidrala

Vidrala has the highest ROA among its peers

1

- The period between 2014 and 2019 shows a declining trend in the cash conversion cycle of the firm. The component that has contributed more towards this trend is **the decline in the holding period**, meaning the firm took less time to sell its inventories. There was also **an upward trend on the Payable period** since as the company scales up, it has more bargaining power with its suppliers
- Regarding Vidrala´s position compared to its peers, it is observed that smaller players like Zignago Vetro and Vetropack have the worst cycles

2

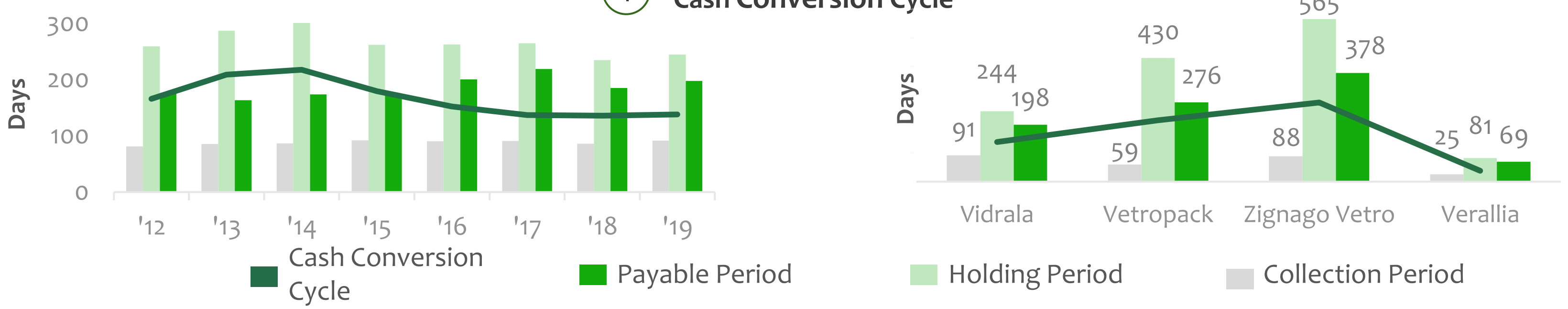
- In the last 5 years there was an increase in the Return on Assets of the company. This happened due to **improvements in the efficiency** translated in the operational margins but also, because of a positive trend in the capacity **of generating more sales with the assets of the company***
- The second graph shows that Vidrala presented in 2019 the biggest ROA. When looking at the Asset turnover, it is seen that the best companies were Verallia and Vetropack. However, in the operational margin these 2 players are not as good

3

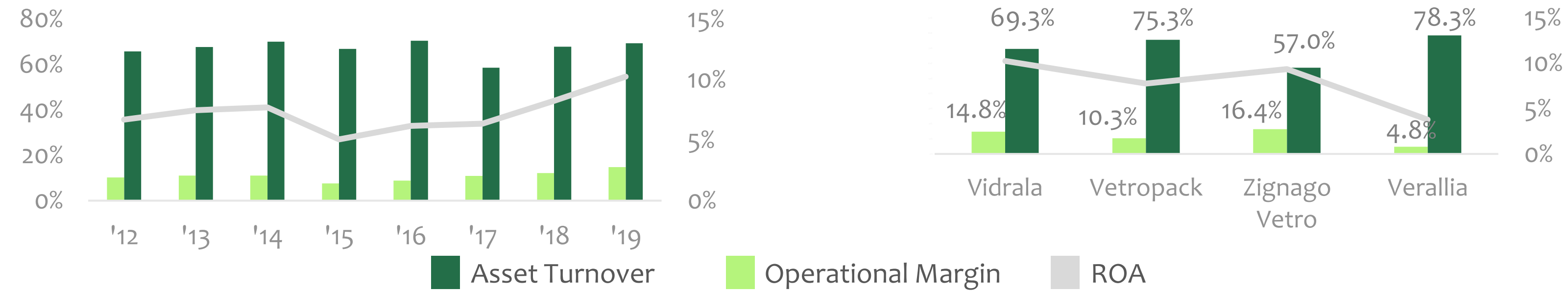
- The Return on Equity also shows an up-warding trend. This happened because although there has been a deleveraging of the company in the last 3-4 years, **the increases on Return on Assets more than compensated this negative trend in leverage**
- Verallia is the player with the lowest return on assets and the highest ROE, which is driven by the highest level of leverage within its peers

*The decline in Asset turnover in 2017 happened due to the acquisition of Santos Barosa, since it increased significantly the amount of assets the company had

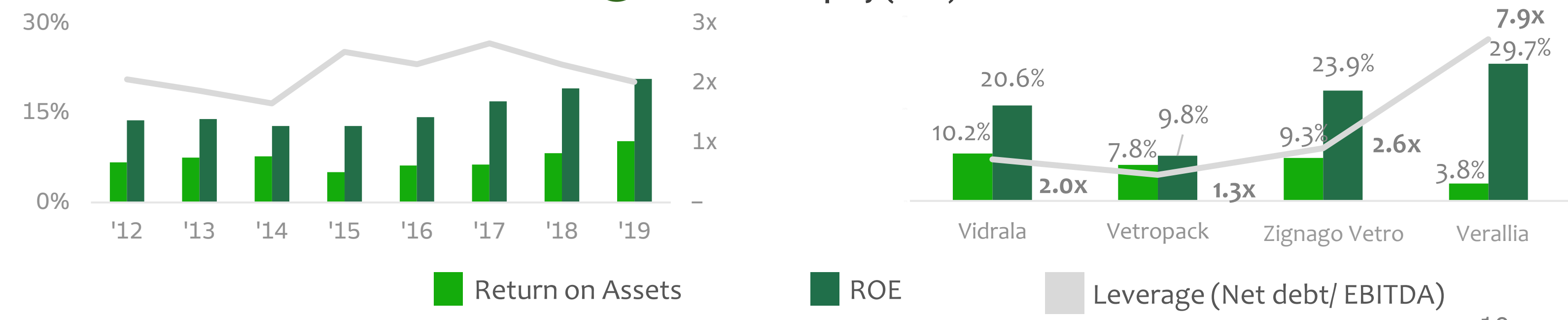
1 Cash Conversion Cycle



2 Return on Assets (ROA)



3 Return on Equity (ROE)



Sources: Vidrala's annual reports

Vidrala shows good margins, despite the low leverage

1

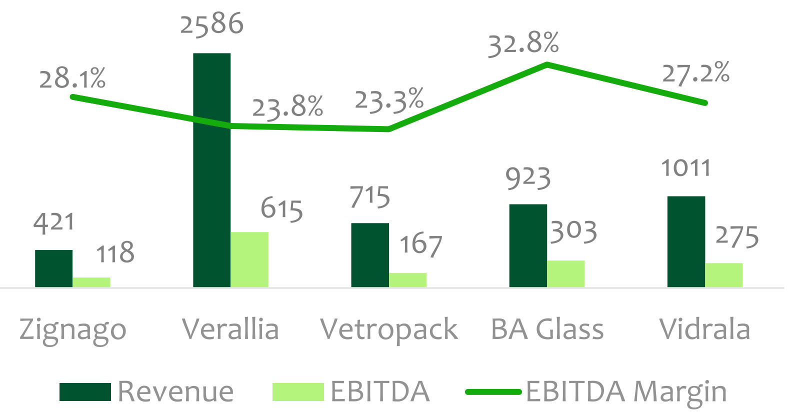
- Vidrala has good EBITDA margins, which have been improving consistently over the years
- EBITDA margin was 28.6% in the Iberian Peninsula, 19.1% in Italy and 24.8% in UK & Ireland
- There **can be room for operational improvement in the Italian segment.** Notwithstanding that, BA Glass has only a warehouse in Italy and production in countries such as Greece, Bulgaria in Romania

2

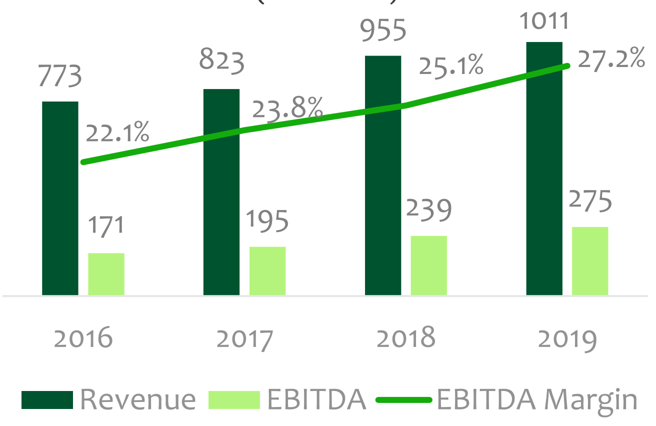
- Vidrala has the **lowest Net Debt/EBITDA ratio when compared with its peers.** (Vetropack excluded from the analysis as it appears to have negative net debt)
- Net Debt has been decreasing in the past years except in 2017 – due to the acquisition of Santos Barosa
- Vidrala shows a **great ability of generating stable cashflows,** on the one hand due to the continuously improving EBITDA margin and, on the other hand the net debt evolution. Both these reasons indicate Vidrala as a **possible LBO target**

1

EBITDA Margin 2019*
(in local currency millions)

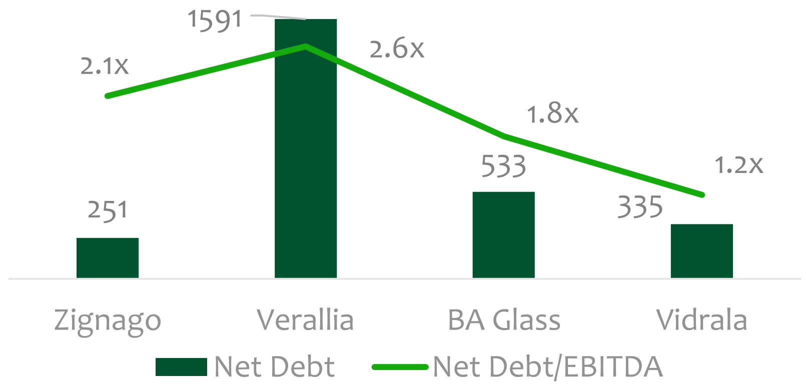


Vidrala's EBITDA evolution*
(in million €)

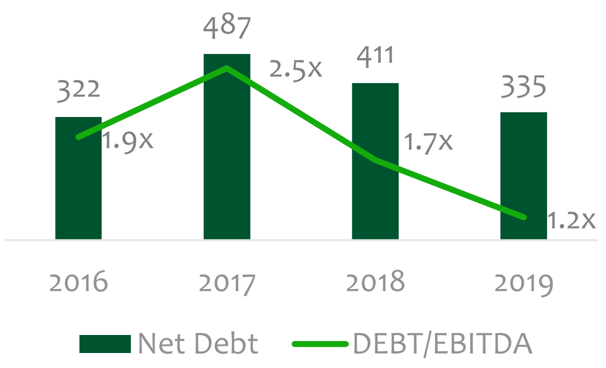


2

Net Debt/EBITDA 2019*
(in local currency millions)



Vidrala's Net Debt / EBITDA evolution*



Sources: *Companies' annual reports

Buy-and-Build, Operational improvements and Greenfield development are the most adequate strategies to create value for Vidrala

Deal Rationale

Strong Financials	Experienced Team	M&A Track Record	Consumer Trends
- Vidrala has a **leverageable Balance** Sheet with large assets to collateralize - Vidrala's **strong and predictable cash flow** generation allow M&A Activity - Good **competitive positioning** with large customer portfolio	- Management team has **high tenure** in the company with **deep industry knowledge** - Focus on **operational improvements** through M&A and it is observable in **revenue per employee** levels	- Two large **acquisitions in the past** 5 years with **successful integration and operational improvement** - Focus on product **portfolio diversification** and margins **optimization**	- General perception of **Glass as a safe** packaging material - **Premiumization** of beverages increases demand for glass packaging - Increasing consumer demand for **environmentally sustainable products**

Value Creation Strategies

Buy-and-Build

Horizontal Integration

Rationale

- Use Vidrala's high & stable FCF generation and Management Team's experience to **acquire targets in strategical geographies** and **diversify product portfolio**
- **Continue to consolidate the western Europe market position**

Synergies

- Increase of Automation
- Decrease of Sales Expenses
- Increase in usage of recycled glass
- Increase presence and improvement of Vidrala's division in Italy
- Increase product portfolio and new end market

Operational Improvements

- Continuation of the **automation trend**, in line with company´s **investment in R&D,** in areas such as robotics and big data, that until now have translated into the **highest revenue per employee among competitors**

- Savings in energy and COGS will be driven by: **increase in usage of cullet, increased use of renewable sources** and possible **recovery of heat to be re-used in the production process** (TASIO UE project)

Greenfield Development

- Building a new plant can bring several opportunities to grow. Vidrala will be able to **capture an important fraction of the market,** taking advantage of its experience and **efficiency to outperform current players**
- Adrian Curry, Encirc's general manager, has **experience in setting plants from scratch** and can contribute with his expertise

Market share gain, decreasing costs with synergies and a more diversified portfolio are the main reasons for a strategic acquisition

Horizontal Integration

Current Scenario

Vidrala already has an **important position in the Western European** market as a low-cost producer of containers for the food and beverage industries

Vidrala's core markets are Iberia, Italy and since the acquisition of Encirc also UK & Ireland

The group has been showing strong operational and financial results with a tendency to improve

However
The production of glass containers is a very **local business** and Vidrala could **benefit from being present** in more European countries and enlarging its product portfolio

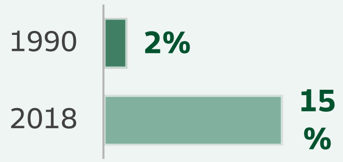
To
Unlock **growth potential** and **reduce risks** by diversifying its business

Opportunities

Increasing market share by exploiting room for consolidation

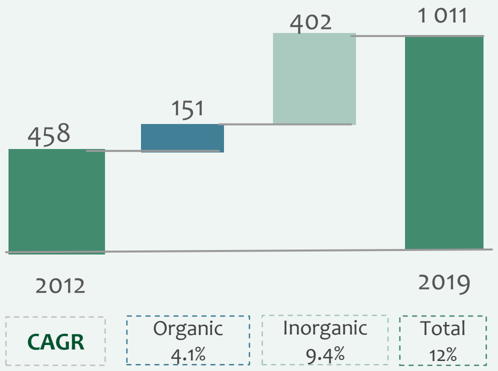
- The glass containers market is **increasingly concentrated** and Vidrala has been consolidating its position
- Increasing the number of customers to **keep diversifying the customer portfolio** while providing local services

Vidrala's market share in Western Europe



Taking advantage of a successful track record in M&A and management team expertise

Revenue growth between 2012 and 2019 in million euros



- Vidrala's acquisitions have cause the **most significant growth in the company's revenues**, a trend that should be exploit

Creating synergies to keep improving operational efficiency

- Vidrala's **COGS expenses** account for a **greater** percentage of sales when **compared to some of its peers**
- On the other hand, **Vidrala is better in terms of automation**. Showing a much greater revenue per employee, its processes can be implemented in the acquired company
- **Increase the amount of recycled glassed** used in the production of glass to **reduce costs and energy consumption**
- **Reduction in sales expenses**, in costs associated with storage and transportation in overlapping geographies

Sources: Vidrala

Plan A consists of acquiring Zignago Vetro, due its product portfolio and strong positioning in Western Europe

vidrala

Acquisition plans

Plan A – Zignago Vetro

Zignago Vetro is the best acquisition target for Vidrala since it checks most criteria the company defined in 2015 when acquiring Encirc:

- Customer diversification
- Different Product-Mix weights
- Consolidation of the **Western Europe market**
- Usage of higher cullet rates **due to already existent vertical integration**

In addition, Zignago Vetro has a more complete product portfolio than Vidrala, adding:

- Cosmetics and Perfumery
- Specialty Glass Containers

Zigango's presence in Italy can also be **leveraged to improve the overall performance of the group's operations in that country**

Zignago's ownership of joint ventures Vetri Speciali and Vetreco, 50 and 30% respectively, are not considered since these targets are not strategically fit

Plan B – Vetropack

If for any reason the acquisition of Zignago Vetro fails a Plan B is considered

Most criteria also check for Vetropack however, **with less influence in the Western Europe Market**

Vetropack also has a larger product portfolio than Vidrala:

- Pharmaceutical Packaging

Plan C – Smaller acquisitions

If the acquisition of Vetropack is not possible smaller acquisitions should be considered according to the **established criteria**

Note that probably these companies will not have recycled glass providers, and so**, in this case vertical integration should also be considered**

Why Zignago over Vetropack?

There are three main reasons to choose Zignago over Vetropack:

- **Core Markets**

Zignago Vetro has presence in a Western European Market where Vidrala is not (France)

- **Potential Deal Size**

Vetropack has a much larger EBITDA than Zignago (€ 170M vs € 79M) which would bring higher risk to the deal, albeit Zignago's EBITDA is still relevant

- **Better EBITDA margins**

Zignago Vetro has already better margins than Vetropack

Criteria for Other Targets

In case both deals fail it is important to define some criteria so that the deal succeeds:

Tier 1:

- Presence in Western Europe
- Product-Mix
- Operational Margins

Tier 2:

- Deal size or combined size of the companies acquired
- Cullet utilization rate
- Speed of the Due Diligence Process

Moreover, **vertical integration can also be considered** in order to increase the cullet utilization rates. One example could be **Eurovetro*,** which is only, 20 minutes away from Vidrala's facilities in Italy

Sources: Vidrala, Zignago Vetro, Vetropack, Eurovetro, Google Maps **Notes:** *Company profile in the appendix

vidrala

The targets considered will help Vidrala to consolidate its position in Europe

Horizontal Integration

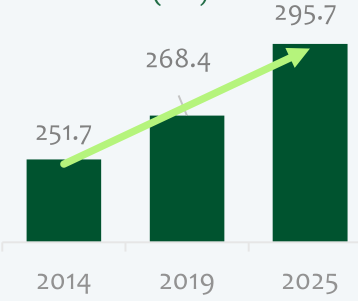
Targets	Business	Geographical Presence	Financials	Advantages / Disadvantages
PLAN A ZIGNAGO VETRO	Glass containers producer for **food, beverages, cosmetics** and **perfumery** industries and **specialty glass containers**	**France** **Italy** **Poland**  Also sells to other European countries and USA	In million € Ebitda FY21* 79.4 Ebitda margin FY21 24.8% Ebitda FY25 92.5 Ebitda margin FY25 25.9% Margin Uplift** +1.1 pp	+ Reducing overhead costs + Improving margins, especially in Italy, where both firms operate + Decrease risk through product diversification + Less capital required for the acquisition - EBITDA growth is not as high as Vetropack's - Feasibility of dropping existing Joint Ventures - Growth of Geographical market below the one presented by Vetropack
PLAN B vetropack	Glass containers producer for **food** and **beverages** industries. Also offers solutions for the **pharmaceutical** industry	**Austria** **Croatia** **Czech Republic** **Italy** **Slovakia** **Switzerland** **Ukraine** 	In million € Ebitda FY21 145.3 Ebitda margin FY21 22.4% Ebitda FY25 177.5 Ebitda margin FY25 23.6% Margin Uplift** +1.2 pp	+ Rapid market share gain and expansion to Eastern Europe + Improving margins, especially in Italy, where both firms operate + Decrease risk through product diversification - Significant amount of capital required to acquire the firm - Possible problems with EU competition regulatory authority - Does not follow as well as Zignago Vetro the criteria of Western Europe market consolidation - Lower EBITDA margin

Sources: Zignago Vetro 2019 annual report, Vetropack 2019 annual report

Notes:*excluding Joint-Ventures. **Margin uplift is defined as the increase in EBITDA margin from 2021 to 2025 in percentage points

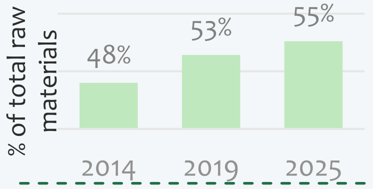
Automation and integration of big data will be the main operational improvements behind the increase in EBITDA margin

Revenue per employee
(in €)



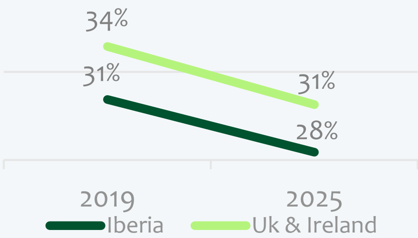
- Maintain the path of automation and digitalization of the production process with inclusion of robotics and bid data into making the production process as efficient as possible
- From 2014 to 2019, the company increased the ratio of revenue per employee from € 251.7 to € 268.4. In the upcoming years, the companies' investment in R&D will be maintained and push the **Vidrala Academy towards the goal of achieving a revenue per employee of € 295.7**
- This obviously **directly impacts the personnel expenses** and consequently key performance ratios such as the EBITDA margin

Rate of Cullet Inclusion



- As a member of the FEVE association, Vidrala has **committed to increase the % of cullet in its production process.** This will allow the company to **decrease the costs associated with electricity and raw materials** and to increase the capacity of each furnace, since the duration of the melting process also decreases with the usage of cullet*

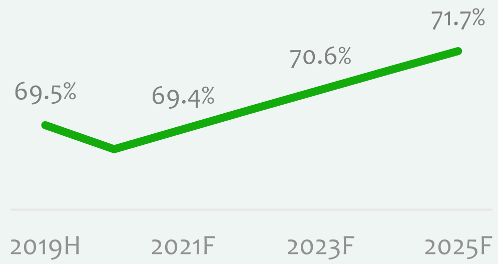
COGS as % of Revenue



- Investments are planned with the goal of increasing efficiency and consequently **reduce the weight of the raw materials in the cost structure** of the company. The investments in furnace upgrades promise to bring marginal decreases in the % of COGS relative to sales along the next years. At the same time, Investments in the UK & Ireland region are expected to push this segment of the company closer to the margins of the rest of the group and decrease the weight of the COGS to around 30% of revenues

In order to be able to achieve these improvements, Vidrala will have to keep investing in technology. This way, beyond the expansion capex, the levels of capex will be 16% higher (the average for the last 3 years) than the level of maintenance capex that is considered equal to depreciation

Vidrala Gross Margin



Vetropack Gross Margin 2019

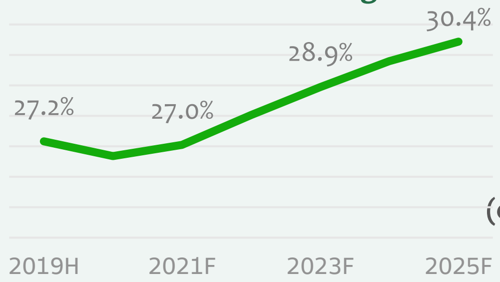
85.9%

Zignago Vetro Gross Margin 2019

82.1%

The efforts to include of Cullet and furnace upgrades will cause an increase on the gross margin of Vidrala, moving progressively closer to the gross margins of certain competitors/ targets of similar size to Vidrala

Vidrala EBITDA Margin



Vetropack Ebitda Margin 2019

23.3%

Zignago Vetro Ebitda margin 2019 (excluding joint ventures)

26.5%

The continuous investment regarding the integration of robotics and big data in the production process will continue to increase the revenue per employee and **will positively impact the EBITDA margin of the company**

Sources: *Research Gate, Impact of Glass Cullet on the Consumption of Energy and Environment in the Production of Glass Packaging Material

Although the industry is going through a consolidation proccess, Romania is suited for a greenfield development due to its glass trade balance, market size and growth

Investment and Timing

Investment required
€ 134.6 million

Construction of the plant will start in the **beginning of 2021**

Years until plant starts producing
1 year

Production capacity in

1st Year	2nd Year	3rd Year
50%	**70%**	**100%**

Investment and Timing

The location chosen to build the new plant was

2 Furnaces

300+ Employees

Criteria

- Romania is a **net importer of glass containers**
- It is an Eastern European country, giving Vidrala the oportunity to benefit from **big markets with higher growth rates**
- Its **proximity** to several other countries in this region that Vidrala may serve as well: Moldavia, Ukraine, Bulgaria, Serbia and Hungary
- **Lower** labor, land and production **costs**
- **Low tax rate**

Assumptions

Revenue- average revenue per furnace was used and an **assumption regarding the number of furnaces to build** was made according to the demand identified by the group according to the size of the market, growth rates and trade balance

Gross PP&E per plant- Average of the current GPP&E per furnace was used. Although **land might be cheaper in Romani**a, there is great uncertainty about other possible investments

Net Working Capital- Worst captions of last 4y of Vidrala were assumed as a starting point, with **improvements taking place over the years**

Employee Expenses- Calculated **according to Average Hourly manufacturing costs** in Romania (Eurostat), evolving according to inflation throughout the years. Contributions to Benefit plans calculated according to Vidrala standards

Key Financials

Millions of €	2021	2022	2023	2024	2025	2026
Revenues	-	53.2	85.1	109.6	113.0	117.4
Gross Profit	-	27.9	50.7	76.1	79.1	82.5
Gross margin	-	52.4%	59.5%	69.4%	70.0%	70.3%
EBITDA	-	9.2	27.1	48.7	51.0	53.5
EBITDA Margin (%)	-	17.3%	31.8%	44.4%	45.1%	45.6%
EBIT	-	(0,2)	17,6	39,2	41,6	44,1
EBIT Margin (%)	-	(0.4%)	20.7%	35.8%	38.3%	39.1%
NOPAT	-	(0.2)	14.8	33.0	34.9	37.0
Δ in Net Working Capital	-	(13.2)	(7.5)	(5.7)	(0.2)	(0.4)
CAPEX	(134.6)	(9.5)	(9.5)	(9.5)	(9.5)	(9.5)
FCF	(134.6)	(13.4)	7.3	27.2	34.7	36.6

Sources: Vidrala Annual Report, Glass International, Eurostat, IMF

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By acquiring Zignago Vetro, Vidrala can improve financial performance of its Italian division

Overview

Summary

Location:	Italy
Revenue:	€ 324M
Ownership:	Public

ZIGNAGO VETRO

Relevance

- Target with overlap on end markets where Italian division of Vidrala has weak presence
- Western Europe presence
- New end market exposure

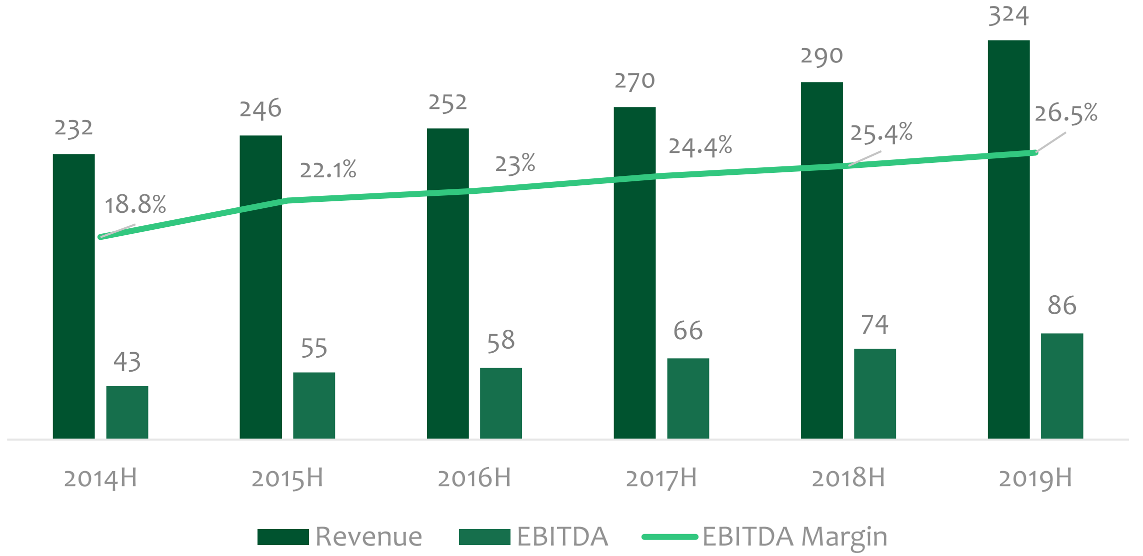
Current Management Team

Name	Role	Tenure
Roberto Cardini	CEO	10 years
Roberto Celot	CFO	13 years
Paolo Giacobbo	BOD Chairman	10 years

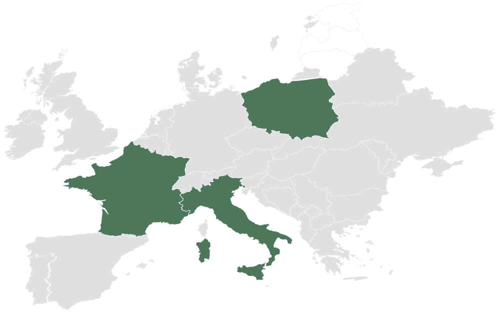
Largest Stakeholders

- Top 10 shareholders account for 5.5%

Historical Financials, in Million € – excluding joint ventures



Geographical Presence



Product Portfolio

- Food
- Beer
- Wine
- Beverages
- **Cosmetics & Perfumery**

Sources: Zignago Vetro Reports; Financial Times

Vetropack is the largest feasible target within addressable market criteria, creating synergies in geographical exposure and usage of cullet

Overview

Summary

Location:	Switzerland
Revenue:	€ 665M
Ownership:	Public

Relevance

- Target with overlap on end markets where Italian division of Vidrala has weak presence
- New end market exposure
- More experience in usage of cullet

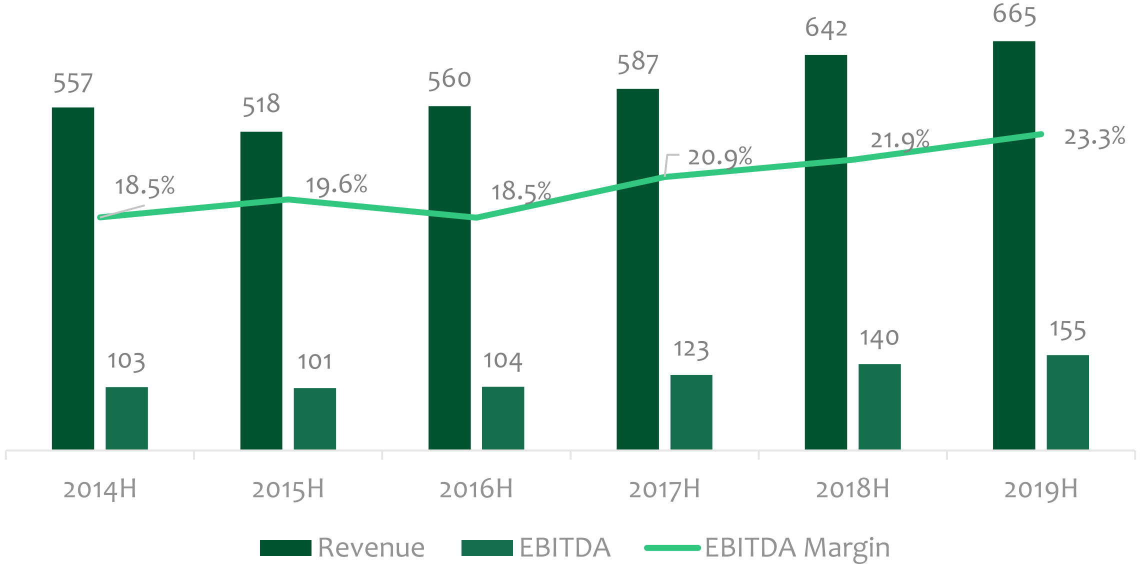
Current Management Team

Name	Role	Tenure
Johann Reiter	CEO	10 years
David Zak	CFO	18 years
Claude Cornaz	BOD Chairman	27 years

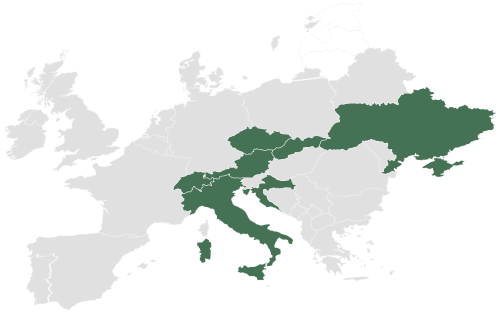
Largest Stakeholders

- Top 10 shareholders account for 18.1%

Historical Financials, in Million €



Geographical Presence



Product Portfolio

- Food
- Beer
- Wine
- Beverages
- **Pharmaceuticals**

Sources: Vetropack Reports; Financial Times

Eurovetro could be a solution to complement the acquisition of other non-considered horizontal expansion targets

Overview

Summary

Location:	Italy
Revenue:	€ 28M
Ownership:	Private

EUROVETRO

Relevance

- Glass waste management company with upscale potential, saving costs in the sourcing of cullet for Vidrala
- Increase of supply chain predictability of cullet

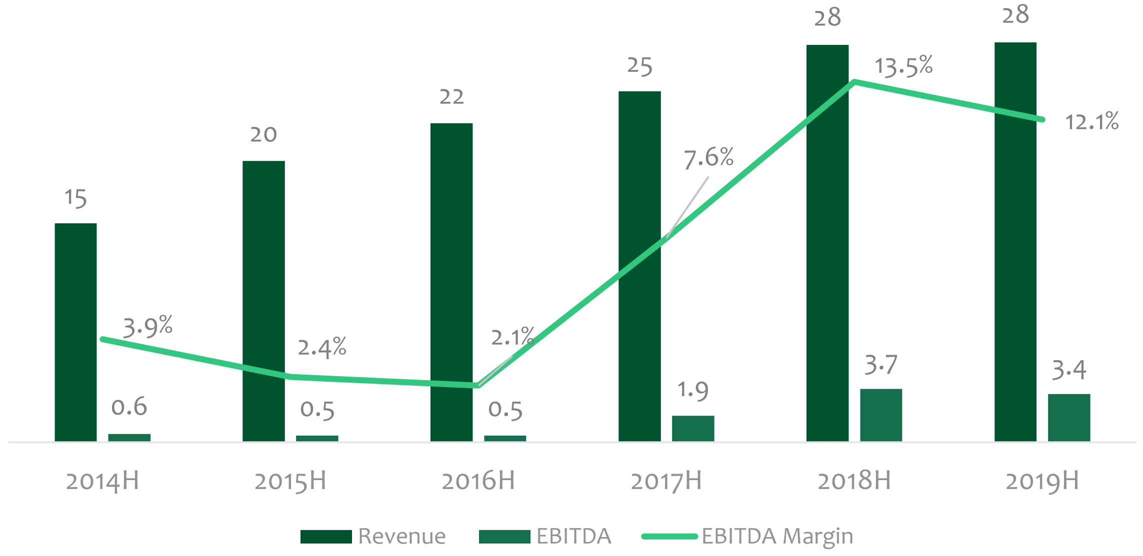
Current Management Team

Name	Role	Tenure
Pierluigi Galli	Everything	Founder
Patrizia Quadrelli	Board Member	Founder
Gabriele Zerbi	Board Member	Founder

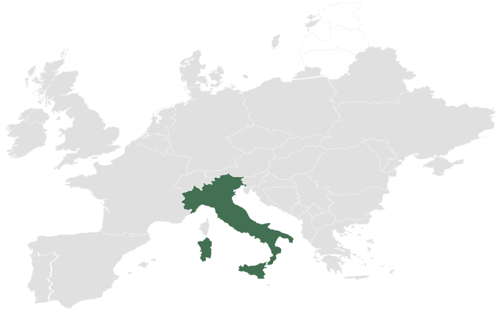
Largest Stakeholders

- Mr Pierluigi Galli – 80%

Historical Financials, in Million €



Geographical Presence



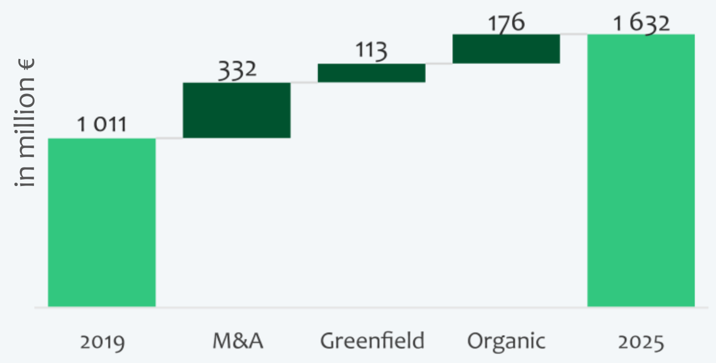
Product Portfolio

- Cullet
- Recycled Glass

Sources: Eurovetro website; Financial Times; Orbis

The Business Plan forecasts an additional € 621M in Revenue and € 247M in EBITDA

Top Line



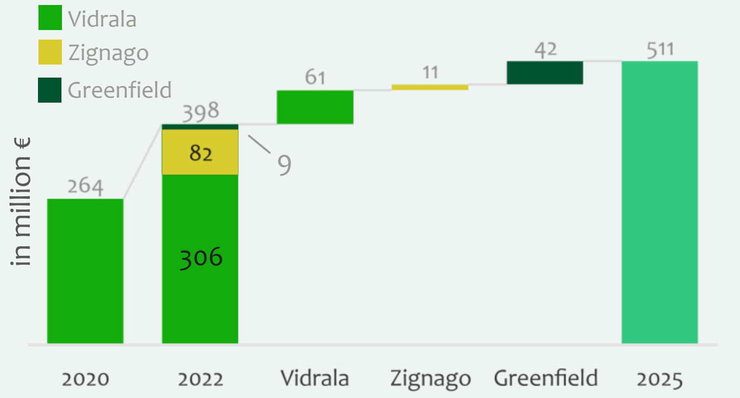
Organic Growth

- GDP Growth and share of Urban population are the **main growth drivers**
- Premiumization of alcoholic beverages increase demand for glass

Inorganic Growth

- Acquire an additional **€ 332M in 2022** in Europe to expand presence in Italian market and add exposure to the Pharmaceutical & Cosmetics end markets as well as other European Countries
- Leverage targets' connections with cullet providers to increase share of recycled glass

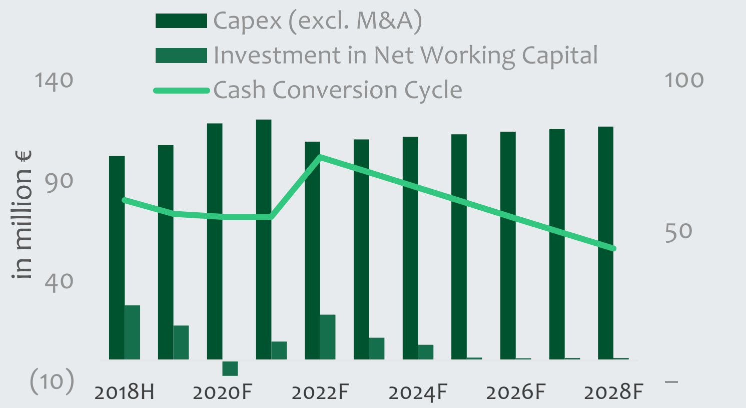
Bottom Line



Margin Uplift

- Main source of EBITDA Margin expansion comes from **COGS** as acquiring companies who use more recycled glass allow for lower COGS and accelerate the glass production process
- By using a higher share of recycled glass in the manufacturing process, Vidrala **reduces Electricity costs** as glass takes less time in the furnaces to be complete
- Finally, by introducing Vidrala's significantly more automated process to its target, it allows to **reduce Employee Expenses** in the acquired targets

Expansion



Capex

- Maintenance CAPEX is **expected to remain at historical levels**, with a slight increase for Vidrala's current schedule

Net Working Capital

- Investment in Net Working Capital is expected to follow the historical **correlation with company growth**
- Furthermore, **inventory synergies** are expected to be introduced by increasing the business scale. Using a conservative forecast of a 2.5% yoy improvement, CCC is expected to **decrease down to 44 days in 2028**

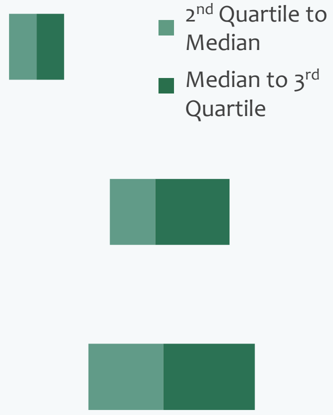
Values in M EUR

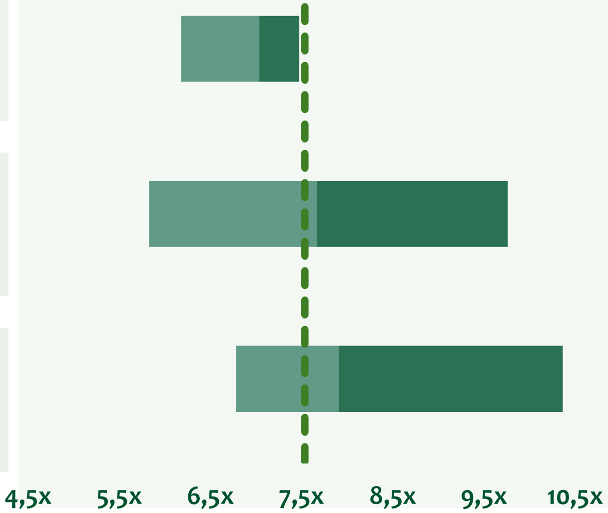
Combining several valuation methodologies resulted in a multiple of 7.5x, which correspond to an enterprise value of € 2Bn for Vidrala

vidrala

Method	Vidrala´s Entry multiple and Enterprise Value
LBO Valuation **7.6x** 7.3x-7.9x	
Share Price **8.9x** 8.4x-9.7x	
DCF model **8.9x** 8.1x-9.9x	
Past Transactions **7x** 6.2x-7.5x	
EV/EBITDA cycle **7.7x** 5.8x-9.8x	
EV/EBITDA **7.9x** 6.8x-10.4x	

Entry Multiple
7.5x
Vidrala’s entry EV
€ 1.99Bn





Methodology

Reality Check

LBO Valuation

The LBO method **reflects the entry multiple** that by considering the exit proceeds **allows the fund to obtain the target return** (20%-30%)

Share Price

The share price analysis is a **reality check** for the entry multiple as it reflects the company’s market value. To perform this valuation, **data from the last two years** was used

DCF Model

For the DCF model valuation, it is considered Vidrala’s predicted **free cash flows without synergies**, a WACC of 6.5% (Bloomberg Estimate) and a perpetual growth rate of 0.5%, which are then used for sensitivity

Relative Valuation

Past Transactions

This method includes information from **8 past transactions from the last 6 years**, which were considered relevant for our valuation. However, it is important to stress that some **deals’ sizes were smaller** than the current one

EV/EBITDA Cycle

This method was used in order to understand how the multiple has **been evolving over time.** For this purpose, the next twelve months EV/EBITDA multiples from the last 10 years were retrieved

EV/EBITDA

Current next twelve months EV/EBITDA helps measuring the enterprise **value of peers in relative** terms. It does not take into consideration the capital structure, reflecting mainly the **operational performance**. Vidrala and Zignago Vetro’s multiples are way **above the average of 7.9x (10.2x and 11.2x** respectively). While these companies may be more competitive and should have an above the average entry multiple, it does **not seem reasonable** to assume their current trading multiples to enter in the project

Entry debt is assumed to account for 66% of the capital structure, representing 5.12x the EBITDA for the both firms

1 Vidrala is assumed to be acquired for **€ 1.99Bn** at the end of 2020 and Zignago Vetro one year later for **€ 598.6M**, with the same entry multiple of 7.5x. Adding 3.36% in fees, it results in a **total investment of € 2.67Bn**

2 Taking into consideration the capex requirements for the project and the future cash flow generation, the capital structure is expected to be composed by **65.7% of debt** and **34.3% of equity (5.12x the Sum of EBITDA of Vidrala and Zignago).** These figures show lower leverage when compared with deal of Apollo which took place in 2015

3 Considering the entry levels of each company separately: Vidrala is acquired with **63.6% of Debt** and **36.4% of Equity**, while Zignago Vetro is acquired with **72% of Debt** and **27% of Equity**

4 The Management Team receives **ownership of 10%** of the Ordinary Shares. For that, they pay **2x their fixed component of the annual salary** at entry (to guarantee they have "skin in the game"). The Institutional Investors figure is computed maintaining the price paid per % of ownership equal to the management team. The Fixed Return Instrument accounts for the rest of the equity and has a **hurdle rate of 10%**. The second capital call is done through an FRI in order not to dilute the Management Team

Sources of Funds (2)

Debt	In million €	EBITDA Vidrala x	% of Total
Vidrala			
Senior debt	1 054.3	**5x**	**39.5%**
Subordinated debt	263 .6	**1x**	**9.9%** (3)
Zignago Vetro		EBITDA Zignago x	
Senior debt	436.7	**5.5x**	**16.3%**
Total debt	**1 754.6**		**65.7%**

Equity	In million €	EBITDA Vidrala x	% of Total
Vidrala			
FRI	692.7	**2.63x**	**25.9%**
Ordinary Equity	63.2	**0.2x**	**2.4%**
Inst. Investor	56. 9		
Sweet Equity	6.3		
Zignago Vetro		EBITDA Zignago x	
FRI	161.9	**2.04x**	**6.1%**
Total Equity	**917.8**		**34.3%**
TOTAL SOURCES	**2 672.4**	**7.79x**	**100%**

(4)

Uses of Funds (1)

Enterprise Value	In million €	% of Total Uses
Vidrala EBITDA 2020	263.6	
Zignago EBITDA 2021	79.4	
Entry Multiple	7.5x	
Total EV	**2 585.6**	**96.64%**

Fees	In million €	% of Total Uses
DD Fees	25.9	1.0%
Advisory Fees	25.9	1.0%
Banking Fees	35.0	1.36%
Total Fees	**86.8**	**3.36%**
TOTAL USES	**2 672.4**	**100%**

Notes: A more detailed version of Sources in Uses is available in Slide 69 of Additional Considerations

Assuming an Exit in 2025, the Institutional Investors are expected to obtain a money multiple of 2.8x and an IRR of 23.6%

Exit Waterfall (in million €)

- After an Investment period of 5 years, the Exit is planned for 2025. At this point the sum of the **EV and Cash adds up to € 3.9Bn**
- At Exit, fees were considered lower in percentage of the Total deal since there are lower due diligence requirements, banking and advisory fees. The total amount of Debt which is still left to amortize from both Debt calls is close to **€ 1.1Bn**, and there is still a total of approximately **€ 2.7Bn** left to be distributed to the Fund and the Management Team. The ordinary shares were distributed at exit according to a 90/10 split (10% to the management team)

Institutional and Management Returns

- **Institutional Investors:** The institutional investors enter the deal with a total of € 911M, divided into FRI (€ 855M) and Ordinary Shares (€ 57M). At exit, the institutional investors are expected to get a total of **€ 2.5Bn**, yielding a **MM of 2.8x and an IRR of 23.6%**
- **Management Team:** The management team pays a total of € 6.3M for 10% of the Ordinary shares. After 5 years they are expected to receive € 132M. The payoff to the management team is expected to yield an **IRR of 83.27% and a money multiple of 20.9x.** The 2nd capital call to acquire Zignago (€ 162M) is done with a Fixed Return Instrument to **avoid dilution Management team**

Money Multiple

Exit Multiple	2024	2025	2026
7.0x	2.19x	2.54x	2.88x
7.5x	2.43x	**2.79x**	3.14x
8.0x	2.67x	3.04x	3.40x

IRR

Exit Multiple	2024	2025	2026
7.0x	22.7%	21.3%	19.9%
7.5x	26.0%	**23.6%**	21.7%
8.0x	29.1%	25.8%	23.3%

	Entry Proceeds	Recap.	Exit Proceeds
Inst. Investors			
Fixed Return Instrument	€ 693M	€ 162M	€ 1 353M
Inst. Investor Shares	€ 57M		€ 1 189M
Returns Management			
Sweet Equity	€ 6M		€ 132M

vidrala

Due to the deal size IPO and Strategic Sale are the most relevant exit strategies

	Advantages	Disadvantages	Potential Buyers	Relevance
IPO	• Both Vidrala and the main acquisition targets are already Publicly traded • Deal size won't cause any strain in taking company public	• Higher degree of uncertainty of returns due to being dependent on market conditions	BME X BOLSAS Y MERCADOS ESPAÑOLES	
Strategic Sale	• Follows trend of industry consolidation • Interesting target due to high degree of automation from Vidrala • Evidence of cross-continent M&A activity in this sector (CVC with BA Glass)	• Possible red flag from competition authorities due to excessive industry concentration • Higher difficulty to find buyers when compared with IPO	O-I ArdaghGroup	
Secondary Buyout	• Private Equity activity with highest dry-powder level in history ($2.5Tn) • Attractive target with stable cash flows and recent greenfield development at exit • Ability to partner with strategic buyer	• Deal size excludes many buyers, creating a large necessity for a club deal • Negotiations can lower the possibility of returns derived from multiple arbitrage	CVC CAPITAL PARTNERS APOLLO THE CARLYLE GROUP	
Sale in Parts	• Potential due to competitive concentration in western Europe • Clients may wish to vertically integrate some factories	• Loss of Synergies already present and obtained from acquisitions • Difficulty/work needed to find a buyer for each part	O-I ArdaghGroup GERRESHEIMER verallia BA Heineken	

Note: Heineken included since in a company report is mentioned to be a client both in Great Britain and in Continental Europe

By participating in Corporate M&A, Private Equity funds unlock growth potential faster than market trends, and can act as a bridge between ESG criteria and financial interests

Private Equity Role in Consolidation M&A

- With markets becoming more and more efficient, target returns for typical Private Equity funds of 20% to 25% IRR are becoming ever more difficult. Furthermore the current levels of dry powder in the market, are driving entry multiples up, making deals less attractive as the funds have an increased risk of exiting at a lower multiple than they started.
- On the other hand, with targets such as Vidrala that are industry leaders in efficiency and profitability, it becomes even harder to find any potential EBITDA uplift and thus making a deal more attractive. One way private equity funds have tackled the lack of additional operational improvements to be done is to participate in M&A deals and benefit themselves from the synergies the deals create. This was the group's idea and the core value creation strategy around Vidrala. It is not as simple as buying many parts and creating a larger company, one must be able to clearly identify and execute deal synergies, be it from cost reduction measures to increasing revenues. For this to happen, the fund must also be backed by a management team like Vidrala's, who have deep industry knowledge, but also a track record in M&A where synergies are clearly executed and value is created. Having done 3 very successful deals in the past 8 years and having such long tenures, Vidrala's management team is the one to source deals, identify and execute on synergies, creating value for both companies and also the investors.
- The Private Equity fund however also plays a key role in this game, which is deal financing. General Partners serve as a bridge between investors and targets who seek an injection of equity, acting as a sort of bank, but also bringing more value to the table, being able to finance succeeding M&A deals with the fund's equity, and also with by being able to bring levels of Debt the company hasn't used, at interest rates that are lower than the target has in practice. This is a key component of deals focused on industry consolidation as the target doesn't need to wait for debt levels to stabilize before going through a repeated leveraging process.
- Both combined allows for the target companies to go through the consolidation trend faster than competitors, as well as Private Equity funds achieving its targeted returns of above 20% IRR.

Bridge between ESG and Returns

- The glass packaging industry is a perfect example of how to align financial interests with ESG trends. Glass itself is more environmentally friendly than the selected competitor packaging solutions (e.g. plastic) because of not only its ability to keep the contents' chemical composition and being infinitely recyclable. However when looking more deeply into the production process of glass packaging, the group identified that it was very energy intensive (e.g. Vidrala spends 5% of revenues on energy), to levels that the amount of solar panels to make the whole process green would make the whole intention pointless.
- One big trend in the industry is the usage of more cullet In the production process, in other words, more recycled glass. This allows the company to use less energy in the production process as cullet takes less time to turn into molten glass, and achieving the same valuable product in the end. This is one example in the glass packaging industry of how to align financial incentives with more qualitative incentives to be green.
- Some Private Equity funds are nowadays trying to build this bridge even further by creating management team packages that are not only tied financial metrics like EBITDA but also with non-financial metrics like customer satisfaction, recycling rates, employee satisfaction, factors which will act both as a boost towards financial performance and allow the fund to exit at a premium by delivering a higher value proposition to the next buyer.