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## **Equity Valuation of Vista Alegre SGPS, SA**

Henrique de Deus Marques Morgado

Master in Finance

Supervisor:  
PhD Pedro Manuel de Sousa Leite Inácio, Assistant Professor  
ISCTE Business School

October, 2023



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BUSINESS  
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Department of Finance

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## **Resumo**

Esta tese pretende apresentar alguns dos mais utilizados métodos no processo de avaliação, com o objetivo prático de alcançar uma recomendação para o justo valor das ações da empresa Vista Alegre Atlantis SGPS SA, cotada na bolsa de valores Euronext – Lisboa.

O único modelo selecionado para o exercício foi o Valor Atual Ajustado (*Adjusted Present Value*). A escolha deste modelo deve-se principalmente à flexibilidade que oferece quanto à incerteza nas mudanças de estrutura de capital.

O preço da avaliação de 0,89€ sugere que existirá um positivo retorno para o investidor ao comprar e aguardar que esta valorize no mercado, uma vez que é expectável que o mercado ajuste e o preço da ação suba para o valor avaliado.

Por fim, é realizada uma análise de sensibilidade a alguns dos fatores baseados em suposições e previsões, chamando a atenção para os riscos da avaliação e à subjetividade do seu resultado.

**Palavras-chave:** Vista Alegre Atlantis, Avaliação de Empresas, Desconto de Fluxos de Caixa, Valor Atual Ajustado.

**JEL Classification:** G30 – Corporate Finance and Governance: General; G32 – Corporate Finance and Governance: Value of Firms





## **Abstract**

This thesis aims to present some of the most commonly used methods in the valuation process, with the practical objective of reaching a recommendation for the fair value of the shares of the company Vista Alegre Atlantis SGPS SA, listed on the Euronext - Lisbon stock exchange.

The sole selected model for this exercise was the Adjusted Present Value (APV). The choice of this model is primarily due to the flexibility it offers regarding uncertainty in capital structure changes.

The valuation price of 0.89€ suggests a positive return for the investor when buying and holding it, waiting to appreciate in the market. It is expected that the market will adjust, and the stock price will rise to the assessed value.

Finally, a sensitivity analysis is conducted on some of the factors based on assumptions and forecasts, highlighting the risks of the valuation and the subjectivity of the outcome.

**Keywords:** Vista Alegre Atlantis, Company Valuation, Discounted Cash Flows, Adjusted Present Value.

**JEL Classification:** G30 – Corporate Finance and Governance: General; G32 – Corporate Finance and Governance: Value of Firms



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## **Glossary**

APV – Adjusted Present Value

Capex – Capital Expenditures

CAPM – Capital Asset Pricing Model

CRP – Country Risk Premium

DFC – Discounted Cash Flows

EBIT – Earnings Before Interests and Taxes

EBITDA – Earning Before Interests, Taxes, Depreciations and Amortizations

EV – Enterprise Value

FCFE – Free Cash Flow to Equity

FCFF – Free Cash Flow to the Firm

FF3FM – Fama French Three Factor Model

Horeca – Hotels, Restaurants and Cafes

MRP – Market Risk Premium

PP&E – Property, Plant and Equipment

PV – Present Value

SME – Small and Medium Enterprise

TV – Terminal Value

VA – Vista Alegre

VAA – Vista Alegre Atlantis

WACC – Weighted Average Cost of Capital





## **1. Introduction**

Assessing the value of a business may have multiple applications and be conducted by different parties. It can be done from a business perspective as for a merger and acquisition decision, for a loan application, or simply by an individual attempting to enhance its gains on the market.

On the first part, it is presented some of the possible and perhaps most common valuation approaches. Every model comes with its set of assumptions, advantages, and disadvantages. This diversity can make it challenging to determine the most suitable model to employ. For the exercise of this project, the Adjusted Present Value (APV) model was chosen due to its capability on dealing with changes on the capital structure, by analysing different terms separately. Despite good practice when possible, other models were not used to support the result provided by the APV. For example, either because of their greater rigidity and complexity in cases of uncertainty, or due to the lack of publicly traded companies in the same industry.

Secondly, it is addressed the state of the global and European economies over the last years, along with the specific characteristics of the industry in which Vista Alegre operates. This is an important step to carefully understand historical results of the company.

In the following chapter, the company is presented. Firstly, its history, which clarifies the developed magnitude of Vista Alegre on the national and European markets, its values and culture. Secondly, how the business is composed today and its segments evolution. And by last, a future vision of the company for coming years.

Once all information gathered on the different levels mentioned above, the main assumptions that took place to meet the valuation objective are presented. The main computations to the achieved share price are as well demonstrated.

In the final section of the thesis, a sensitivity analysis will be conducted, calling for the imperative importance of assessment risk on any decision. This step is essential as it allows to evaluate how changes in assumptions would affect the value, thereby providing insights into which assumptions wield a greater influence on the share price.

## **2. Literature Review**

### **2.1. Valuation Overview**

The purpose of this work is to correctly determine what is the fair financial value of a company from a certain viewpoint. When evaluating a business there are multiple possibilities regarding its purpose. This may differ, for example, from managers taking strategic decisions with respect as to capital structure, mergers and acquisitions or investors measuring progresses, considering what stocks should they purchase or sell.

Damodaran (2012) exposes that through valuation many investors try to beat the market searching for opportunities that are not aligned with what they believe that should be the right value, ultimately leading to an efficient market state, i.e., reaching a true equilibrium value.

In the long-term perspective, Koller et al. (2015) points the combination of growth and Return On Invested Capital (ROIC) as the real value drivers. Nonetheless, not all managers can resist to the pressure and temptation of increasing their short-term results, abdicating the higher long-term value the company would have.

When it comes down to what methodology is more reliable to exercise a company valuation there is no universal agreement. Since there are several variables that need to be considered in the market, industry field and the company itself, there are various models that focus on different specific elements during the study. Young et al. (1999) mentions that there was an increasing study and development of methodologies, due to the distortion and masking of some aspects in exchange for the improvement of others from model to model.

Regardless of what approach is used, Damodaran (2012) points out it remains a large area for subjective judgements, on top of previous established assumptions. Therefore, even the strongest assessment can produce a worth estimation burden by a significant probability of deviation from the final quantitative result. Each model has its own assumptions, pros and cons leading to different degrees of heterogeneity between them, making it difficult to choose which one to use.

More than the inexistence of a perfect model for all situations, there may be situations where no model is perfect. To overcome this deadlock, it is usual to analyse more than one methodology when valuing a business. In their research, Cavezzali et al. (2015) state that different methods lead to similar levels of accuracy. Koller et al. (2015) also suggest the use of multiples of comparable companies or an economic-profit model to support Free Cash Flow to the Firm (FCFF) valuations.

## 2.2. Valuation Models

### 2.2.1. Discounted Cash Flows (DCF)

Despite the increase and development of other methodologies, the Discounted Cash Flows (DCF) approach seems to remain commonly viewed among the best practices to evaluation purposes. Even more, Damodaran (2012) argues that this approach is the foundation on which many other valuation approaches are built.

This method estimates the value of an investment based on its future cash flows. Fernandez (2007) mentions that methods based on discounting cash flows are the ones conceptually “correct”. It is possible to assess a company as a financial asset considering it as a cash flow generator. Then, it is only necessary to discount the cash flows to their present value to obtain the company’s value.

In line with the previous author, Damodaran (2006, p. 4) defines discounted cashflows valuation as “*the value of an asset is the present value of the expected cashflows on the asset, discounted back at a rate that reflects the riskiness of these cashflows*”. This riskiness can be viewed as the opportunity cost of return on other alternative investments that would carry a similar risk exposure, i.e., the cost of capital.

To emphasize the importance of this methodology, Koller et al. (2015) reinforce that “*anything that doesn’t increase cash flows doesn’t create value*”. The creation of value solely resides on the capability of healthy rates of return and growth to produce future cash flows.

Regarding its advantages, according to Berk and DeMarzo (2017) the DCF approach allows us to value a firm without explicitly forecasting its dividends, share repurchases, or its use of debt.

#### 2.2.1.1. Free Cash Flow to the firm (FCFF)

The Free Cash Flow to the Firm is an enterprise value approach of the many DCF valuation models, that presents how much cash the company generates.

As per Mota (2020) this approach can be formulated as:

$$FCFF = EBIT * (1 - t) + Depreciation \& Amortization \\ - Capex - \Delta Net Working Capital \quad (1)$$

Where:

EBIT = Earnings before Interests and Taxes;

t = Corporate tax rate;

Capex = Capital Expenditures.

This can be translated as the cash flow available to the company's suppliers of capital after all operating expenses have been paid and necessary investments in working capital and fixed capital have been made.

Only after the computation of the FCFF makes sense to move to the Enterprise Value (EV) calculation. The EV is the present value of the free cash flows available to pay all its investors. Which is the same as to say the present value of the firm's underlying business with its associated debt separated from any cash or marketable securities (Berk & DeMarzo, 2017)

Since the FCFF is available both to equity and debt holders, it would not make sense to discount the cash flows at the cost of equity or cost of debt. Alternatively, we should discount them at the Weighted Average Cost of Capital (WACC), which will be discussed further in more detail. Therefore, as presented by Damodaran (2012), the EV of a firm can be computed as follows:

$$Enterprise\ Value = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + WACC)^t} + \frac{Terminal\ Value_n}{(1 + WACC)^n} \quad (2)$$

Where:

$FCFF_t$  = Free Cash Flow to the Firm to year t

WACC = Weighted Average Cost of Capital

Terminal Value<sub>n</sub> = Value of Perpetual Cash Flows from year n

From equation (3), it is possible to notice that besides WACC there is another unknown element to calculate the EV, which is the Terminal Value (TV). Also known as continuing value, expresses the value of the future cash flows that were not forecasted in the explicit period. Often, the formula most favoured by academics is the perpetual growth model, where the perpetual growth of cash flows is assumed at a constant long-run value (g). From Berk and DeMarzo (2017) the TV can be calculated by:

$$Terminal\ Value_n = \frac{FCFF_{n+1}}{WACC - g} \quad (3)$$

The FCFF of the year  $n+1$  is already estimated by adding the estimated long-run growth rate to the FCFF value in the previous year ( $n$ ). It is understandable that the value of growth has a great impact in the results. Therefore, it is important to get a fortified growth assumption.

In order to define the growth rate, Koller et al. (2015) suggest that usually it should be close to the one of its industries; and it is rare to expect a company growing faster than the economy in which operates for long periods of time.

Also, an extremely important aspect is to initiate the TV only when the company has reached an equilibrium steady state by the end of the explicit forecast period. Once this feature is verified, the length of the explicit forecast period does not change the company's value. It only changes part of the value assigned to the explicit forecast to the continuing value (or vice versa). However, the longer we try to forecast, the higher the uncertainty. Having this in mind, the forecast period is typically 5 years, even though it may vary across industries (Koller et al., 2015).

### **Weighted Average Cost of Capital (WACC)**

As for the discount factor, as pointed out earlier, it would not make sense to discount the cash flows at the cost of equity or cost of debt since the FCFF is available both to equity and debt holders. Instead, the discount factor used in this DCF model is the Weighted Average Cost of Capital (WACC). According to Fernandez (2011) the WACC is a weighted average of the Cost of Debt ( $K_D$ ) and the required Return of Equity ( $K_E$ ), measured by its relative weight in the capital structure, composed by Debt ( $D$ ) and Equity ( $E$ ):

$$WACC = \frac{E}{D + E} * K_E + \frac{D}{D + E} * K_D * (1 - t) \quad (4)$$

In addition, the formula also contemplates the tax shield effect, being  $t$  the corporate income tax rate. This way the tax savings from interest payments are blended into the cost of debt itself. That is why the tax savings are ignored when calculating the FCFF, because in case they would be added, we would be counting the tax shield effect twice (Koller et al., 2015).

The same authors outline two aspects of the WACC. Firstly, in its essence, it must only be applied in sustainable static capital structure cases. And secondly, to apply the target weight of debt and equity to enterprise value using market values rather than book values, since it constitutes the

expected return on different investments with a similar risk.

### **Cost of Debt ( $K_D$ )**

The cost of debt represents the effective interest rate that a company pays on its debt obligations, such as issued bonds or bank loans. The higher the risk profile (default risk) of the company, higher it will be its cost of debt. Generally, two methods are presented in the literature to set the cost of debt: yield to maturity and debt rating.

Koller et al. (2015) says to calculate and use the yield to maturity of the company's long-term outstanding option-free bonds as a suitable proxy for investment grade-companies. But being a company a below-investment-grade debt, it is suggested to apply the APV discounted at the unlevered cost of equity, instead of WACC.

Alternatively, for companies which debt is barely traded and current market prices are not available, they are not used to determine the yield to maturity, but rather the use of debt rating. This method estimates the debt cost of a company comparing to the yield of rated bonds with similar maturities, defined by a rating agency.

Yet, many companies are not rated, which leaves us with two choices: taking conclusions through the analysis of recent borrowing history, or estimating a synthetic rating (Damodaran, 2012).

As previous mentioned, there is a tax advantage in WACC. This happens because the interest from debt is tax deductible. As Damodaran (2012) explains *“the tax benefit that accrues from paying interest makes the after-tax cost of debt lower than the pretax cost”*:

$$\text{After tax cost of debt} = \text{Pretax cost of debt} * (1 - \text{Tax rate}) \quad (5)$$

### **Cost of Equity ( $K_E$ )**

The cost of equity is an essential variable to calculate the WACC, and much more complex. There are enormous debates regarding how to estimate this cost properly. Two major possibilities to compute the required return to equity are the Capital Asset Pricing Model (CAPM) and the Fama-French Three Factor Model (FF3FM).

Introduced by Sharpe (1964, p. 425), the CAPM establishes a relationship between systematic risk and expected return of the stock. According to the author, an investor *“may obtain a higher*

*expected rate of return on his holdings only by incurring additional risk*". However, it is important to underline its assumptions: the market is in perfect equilibrium, where there are no symmetry of information and taxes or transaction costs.

Alternatively, Fama and French (1996), a developing theory of CAPM, defend that to explain the stock return is not enough to consider the beta of CAPM as the sole indicator of the market. The authors adjust the CAPM by adding the size and book-to-market factors into the equation. They suggest that the cost of equity is inversely related to the company's size and positively related to the book-market value ratio.

Despite the contributions of Fama and French (1996), Koller et al. (2015) consider that the FF3FM is only based on empirical evidence while the CAPM is stronger theoretically. They also suggest that the Fama-French model may be more appropriate to measure a set of industry betas rather than a single company. As such, they defend that CAPM continues to be more reliable. The formula for the CAPM stands as:

$$E(R) = R_f + \beta_L * [R_m - R_f] \quad (6)$$

Where:

E(R) = Expected return of investment

R<sub>f</sub> = Risk-free rate

β<sub>L</sub> = Levered beta

R<sub>m</sub> - R<sub>f</sub> = market risk premium, being R<sub>m</sub> the market return

By words, the beta (β) is a correlation measure of the stock's systematic risk reflected by changes in the overall market. The higher the beta, the higher the stock's returns volatility relative to the market.

### **Risk-free rate (R<sub>f</sub>)**

We can define the risk-free rate as the rate of return that one expects to earn with certainty for a given duration. This is an investment that carries zero risk to the investor. Many models engage the risk-free rate since it is the minimum return required for a rational investor for any other investment, even not knowing the investor's preferences (Berk & DeMarzo, 2017).

According to Damodaran (2012) there are two aspects for an asset to be considered risk-free. Firstly, there can be no default risk. Even the safest companies hold a minimum default risk, being

government securities the best alternative, though they are not completely risk free as well. Secondly, there can be no reinvestment risk, since there is no certainty at what rate it will be reinvested.

Likewise, Koller et al. (2015) advises the use of a single yield maturity that best reflects the cash flow streams and the use of bonds with the same currency of the company's cash flows. In case of a European company *“use the 10-year German government bonds, because they trade more frequently, and have lower credit risk than bonds of other European countries”*.

### **Market risk premium**

From the CAPM formula, the Market Risk Premium (MRP) is the difference between the expected return on a market portfolio and the risk-free rate. This is, investing in a market portfolio non-risk-free also translates to investing in more risk, so this measure gives what is the extra return demanded by the investor due to the increased (systematic) risk exposure.

How to compute this topic is being a financial hurdle, where there is no consensus. Despite its drawbacks, historical excess stock returns average remains the most utilized method (Mayfield, 2004).

According to Berk and DeMarzo (2017) the MRP has historically declined overtime, possibly due to the increase of participants in the markets, financial innovations that reduce diversification costs and lower volatility in the markets overtime, leading many to expect future MRP between 3 and 5%. In fact, Koller et al. (2015) suggests that a range around 5% is suitable.

### **Beta**

As previous mentioned, Beta ( $\beta$ ) is a measure of correlation and systematic risk between the stock and the market. The systematic risk of a security can be calculated by measuring the sensitivity of the security's return to the return of the market portfolio. As Berk and DeMarzo (2017) defines it: *“more precisely, the beta of a security is the expected % change in its return given a 1% change in the return of the market portfolio”*. Therefore, a beta of 1 means that the security's return will fluctuate with the market; a beta of 0 means that they are uncorrelated; and a negative beta that they are inversely correlated.

The unsystematic risk, this is the risk specific to the firm, is not considered in the CAPM, since it is assumed that an investor is forearmed with a diversifiable portfolio.



Mathematically, we can obtain the beta from this equation (Damodaran, 2012):

$$\beta_i = \frac{\text{Covariance of asset } i \text{ with market portfolio}}{\text{Variance of the market portfolio}} = \frac{\text{Cov}(R_i, R_M)}{\sigma^2(R_M)} \quad (7)$$

It is important to distinguish Levered Beta ( $\beta_L$ ) and Unlevered Beta ( $\beta_U$ ). According to Berk and DeMarzo (2017), the difference resides in the capital structure, such that the unlevered beta can be tracked by removing the debt effect from the levered beta. This way, a levered beta is the beta of a company that holds debt, while an unlevered beta does not have any.

From Damodaran (2012), assuming the risk of debt is carried by stockholders, then we can apply the Hamada formula:

$$\beta_L = \beta_U + \beta_U * (1 - t) * \frac{D}{E} \quad (8)$$

### **Country Risk Premium (CRP)**

In addition, to finish the computation of the CAPM, it is discussed if a Country Risk Premium (CRP) should be added.

No question that it is riskier to invest in some countries than in others, and investors in its turn demand higher rewards for countries with higher risks where a company is located or operates. Yet, here emerges one more controversy in the literature. The discussion point is if it makes sense to incorporate the CRP into the equation while others believe that this is already inborn.

Shortly, Damodaran (2013) presents the arguments against the CRP: the CAPM, where all assets face the same global equity risk premium, already captures this risk through higher betas and expected returns; this risk should be better reflected in the cash flows of the company rather than in its discount rate; and the CRP is diversifiable having a “global portfolio”.

Yet, the author also argues against each point presented above and shows empirical evidence as we should include the CRP into the cost of equity in riskier markets. Fernandez (2007) also supports this defending that those who argues that it is a diversifiable risk do a wrong treatment of country risk.

Kruschwitz et al. (2012) call for the attention of the increased use of CRP on discount rates through academia, investment banks and audit firms when it is not clear Damodaran’s CRP strong

theoretical basis, and not even empirical supported either. The authors go as far as to mention that “*it is possible that practitioners propose CRP simply to deal with certain problems*”.

Koller et al. (2015) clarify that it should be fine to add the CRP to discount the promised cash flows, but many make the mistake of adding it to the expected cash flows, accounting twice for the probability of a crisis.

### **2.2.1.2. Free Cash Flow to Equity (FCFE)**

Through the valuation method Free Cash Flow to Equity (FCFE) is possible to determine what value is available solely to equity shareholders. Instead of valuing a company in its entirety and for all the claimholders, as the FCFF does, the FCFE measures only the value attached to equity holders, after all its expenses, reinvestments, debt payments and its interest and tax obligations are cleared.

According to Damodaran (2006) it is possible indeed to accurately get to one through the other, as far as financial leverage assumptions remain consistent. The author formulates FCFE as the following:

$$\text{FCFE} = \text{Net Income} + \text{Depreciation} - \text{Capital Expenditures} - \text{Change in non-cash Working Capital} - (\text{New Debt Issued} - \text{Debt repayments}) \quad (9)$$

Since EBIT equals net income plus interest and taxes, related with equation 1, the FCFE can also be assessed by the following formula:

$$\text{FCFE} = \text{FCFF} - \text{Interest} * (1 - t) + \Delta \text{Net debt} \quad (10)$$

In the FCFE, as mentioned, it is measured only the cash flow available to the equity holders, so this time the discount rate must be the cost of equity, not the WACC as in the FCFF.

The simplest moment to put FCFE in practice is when evaluating a financial institution. Otherwise, some drawbacks may surge. While valuating a company, through assumptions and beliefs of what will occur in the future, it is easy to produce changes in the capital-structure of the company without noticing it when using this method. A second drawback, as operating and

nonoperating cash-flows are grouped as one, the nonoperating cash flows will also be discount of equity, which may lead to incorrect conclusions regarding its results (Koller et al., 2015).

### **2.2.1.3. Adjusted Present Value (APV)**

On previous approaches is necessary to assume that the company will maintain its capital structure ratio, which does not always happen. For example, in some cases companies decide to increase their debt to repurchase shares or pay down their debt over time. Either situation would affect not only the capital structure debt to value ratio, but it would also affect the cost of equity, since debt payments have priority.

A new approach is presented by Myers (1974), *“although the rules (of WACC) are reasonably robust, a more general “Adjusted Present Value” rule should, in principle, be used to evaluate investment opportunities”*.

Also a discount cash flow model, the APV approach consists in valuing the future cash flows of a project as if it was entirely financed with equity, and then considered all the benefits and costs of using debt. These can be interest tax shields, costs of financial distress, subsidies, hedges, issue costs, among other costs, according to Luehrman (1997).

Luehrman (1997) argues that APV always works when WACC does and sometimes when it does not, because it is more flexible, with fewer assumptions and provides more information to managers. The fact that WACC is more used or famous can be explained by being the standard valuation method and not for being the best. Despite the capacity of WACC to also be adjusted yearly, Koller et al. (2015) also say that it is complex and easier to get loose results.

From Damodaran (2006), in order to measure the enterprise value of the firm through the APV method there are three main steps: estimate the value of the unlevered firm by discounting the expected free cash flows to the firm at the unlevered cost of equity; then add the expect tax benefit from a given level of debt; and by last, take into account the impact of debt on the default risk of the firm and on expected bankruptcy costs:

$$\text{Enterprise Value} = \text{Unlevered Value of the Firm} + \text{PV of Expected Tax Shields of Debt} - \text{PV of Expected Bankruptcy Costs (11)}$$

As mentioned, the value of the Unlevered Firm ( $V_U$ ) is obtained by discounting the expected free cash flows to the firm at the Unlevered Cost of Equity ( $K_U$ ).

$$V_U = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + K_U)^t} + \frac{Terminal\ Value_n}{(1 + K_U)^n} \quad (12)$$

We can get  $K_U$  through CAPM using an unlevered beta, similarly to what was already discussed in FCFF method - Cost of Equity ( $K_E$ ). While no debt is considered  $K_U$  equals  $K_E$ , but once debt is no more ignored  $K_U < K_E$ . The required return of levered equity is higher than the required return to unlevered equity. The fact that the company bears debt in its capital structure leads the shareholders to demand a higher risk premium for its expected return, due to the increased risk they face (Fernandez, 2007).

The Present Value (PV) of debt tax shields is the present value of savings that are possible from the deductibility of interest payments, which leads to lower amounts of corporate tax needed to be paid by each year. Luehrman (1997) says that *“the interest deduction will reduce taxable income by the amount of the interest and so will reduce the tax bill by the amount of interest times the tax rate.”* However, Koller et al. (2015) note that if a company is highly leveraged, it may not be able to seize all the tax shield if there is not sufficient profit.

Complication arises when to discount the value of the tax shield, as there is no general agreement. Despite there is consensus between academics that we should discount it at a suitable risk rate, there is no consensus on what risk rate to use, which is the same as to ask: ‘how risky are tax shields?’. The usual method is the pre-tax cost of debt as discount rate, according to Damodaran (2006), explained by the fact that they are as uncertain as principal and interest payments. Nonetheless, as previous mentioned, it may happen to not be possible to use the tax shield on its entirety, and for that reason others suggest that the discount rate should deserve to be higher than the cost of debt (Luehrman, 1997).

Despite which discount rate is chosen, we can calculate the expected tax benefit in the following way (Damodaran, 2006):

$$\text{Present Value of Tax Benefits} = \sum_{t=1}^{t=\infty} \frac{\text{Tax Rate}_t * \text{Interest Rate}_t * \text{Debt}_t}{(1 + r)^t} \quad (13)$$

Also according to the author, if the PV of Expected Bankruptcy Costs was not taken into consideration, there would be only positive effects (tax shield) from the raise of debt in equation 11. Ultimately, the value of the company would increase just for increasing its debt. Also, with the increase of debt, it does not make sense to keep the same estimation of risk default and possibility of bankruptcy. Many compute the APV without taking this into consideration, therefore ending with an incorrect valuation escorted by an exaggerated positive result. The Expected Bankruptcy Costs can be illustrated as:

$$\text{PV of Expected Bankruptcy Costs} = \text{Probability of Default} * \text{PV of Bankruptcy Cost} \quad (14)$$

Despite the simplicity of the formula, it is a challenging step of the APV process since both items cannot be directly estimated.

To calculate the Probability Default there are two options: bond rating estimation or by a statistical approach. At the former, and the more used, at each level of debt is estimated a bond rating, which has an associated default probability based on empirical data. The later, also for each level of debt, concerns the probability of default based on specific characteristics of the firm.

According to Warner (1977), the impact of bankruptcy costs, this is costs of not meeting contractual obligations, is highly considerate to decide what is the ideal debt level in the capital structure to the firm. The author divides bankruptcy costs in two ways: direct and indirect costs. Classified as direct costs are *“lawyers' and accountants' fees, other professional fees, and the value of the managerial time spent in administering the bankruptcy”*. As for indirect costs, supported by Damodaran (2012), we can include lost sales and profits, loss of costumers, higher employee turnover and tighter supplier credit. The author still recommends to *“multiplying the probability of bankruptcy by the bankruptcy cost, stated as a percent of unlevered firm value.”* to calculate the expected bankruptcy cost.

Reindl et al. (2017) also estimates the bankruptcy cost as a percentage of the unlevered asset values, with a 20% cost average. They also provide an average per industry distress costs (cf. Appendix A).

### **2.2.2. Relative Valuation (Multiples)**

During the previous DCF valuations, there is “only one” company which deserves attention and the final result depends solely on the cashflows and characteristics of itself. In a relative valuation, or more commonly designated as “Multiples Valuation”, just as the name suggests this method values a company based on the value of others priced in the market. The idea is to compare the price of similar assets or products.

Multiples are a very useful method and widely used for different reasons, according to Damodaran (2012). Valuations through this method are much quicker than DCF and have fewer assumptions. They are also more direct and easier to understand, which is important when presenting information to others. And by last, as it is based on comparable firms, it is expected to display the current state of the market.

Due to the broad dispersion of results, Fernandez (2001) considers relative valuation as a useful tool in a second part of valuation after using another method. As well, Koller et al. (2015) also points out the relative valuation as a good confirmation of DCF valuation result, even contributing with a clarification of what is the value driver in such industry when analysed carefully.

However, the results from both valuations may differ due to an incorrect market pricing, since the sector or the peer group used can be over or under priced in the market. Alternatively, if those are priced correctly, most likely both valuations will present similar results. “The implicit assumption being made here is that firms in the same sector have similar risk, growth, and cash flow profiles and therefore can be compared with much more legitimacy” (Damodaran, 2006).

Evidently, two factors are incontestably decisive to apply this type of valuation: what comparable group and multiples should be used.

According to Koller et al. (2015), companies that operate in the same industry and present similar performance indicators should trade at the same multiples, with special emphasis on expected growth rates and ROIC. However, the more appropriate multiples to use also change according to the industry in question. Despite the same author state that commonly it is used between 8 and 15 comparable peers, Berk and DeMarzo (2017) defends that it is rather preferable to use less and very accurate than a larger but less effective that could result in broader values.

Fernandez (2001) and Damodaran (2006) divide the existent multiples into three major groups:

**Table 1**

Examples of Multiples by group

Multiples Based on the company's value (Enterprise Value Multiples)	-Enterprise Value to EBITDA (EV/EBITDA)
	-Enterprise Value to Sales (EV/Sales)
	-Enterprise Value to Unlevered FCF (EV/FCF)
Multiples based on capitalization (Equity Value Multiples)	- Price Earnings Ratio (PER)
	- Price to Cash Earnings (P/CE)
	- Price to Sales (P/S)
	- Price to Book Value (P/BV)
	- Price to Customer (P/Customer)
Growth-referenced multiples	- Price to Units (P/Units)
	- Price / Earnings to growth ratio (PEG)
	- Enterprise Value to EBITDA Growth (EV/EG)

Source: (Fernandez, 2001; Damodaran, 2006)

### 3. Economic Outlook

Following the subprime 2009 crisis, economies over the world were struggling with its impacts. For years to come, countries would face high levels of sovereign debt, unemployment and ultimately implement austerity measures. Later in the decade, the global economy gradually started to recover, and even if at different pace across countries, by 2018 low unemployment and steady growth rates prevailed (World Bank, 2019).

If there was any uncertainty that economies would not endure an expansion period for much longer, in 2020 a new crisis arises due to the COVID-19 pandemic. The pandemic had a profound impact on the global population, which had to find a new way of living through lockdowns and restrictions imposed by its governments. Although some fiscal incentives applied, businesses were closed and jobs were lost, leading to an economic recession in 2020 with a decrease of 6.1% real GDP in the Euro area and 3.2% globally. In 2021, especially on the first half of the year, new waves of the pandemic would surface and additional restrictions applied, but vaccination rates were also increasing. Later, restrictions were gradually lifted and the economy rallied with new living

dynamics. In 2021, the Euro area saw its real GDP growing 5.3% in line with the world's 5.9% growth rate (World Bank, 2023).

During the pandemic and lockdowns, as a natural reaction of macroeconomic policy, central banks loosened its monetary policies and decreased interest rates to encourage investment and support economic activity. Upon the measures taken to contain the spreading of the pandemic, at the economy's awake, the global supply and distribution chains were in a disruptive state that could not keep up with the surging demand. Thus, inflation rate was an immediate impact of the recover from the recession. Early in 2021, inflation began showing that would be far above the preferred 2% ideal target (cf. Appendix B) (OECD, 2023a). And if on one side the world was still dragging on the effects of COVID-19, on the other side inflation was pressuring and leading central banks to implement tighter monetary policies, i.e., raising interest rates attempting to cool price increases.

Worsening the global turmoil, in February 2022, Russia invaded Ukraine sparking a conflict with serious consequences. Along the military war between the two nations, political and economic sanctions were imposed among the great economic powers of the world. The international trade between Russia and the West got substantially blocked amid retaliations, which resulted essentially in the scarcity of important commodities and skyrocketing prices of energy and food. In face of inflation's aggravation, hitting 10% in October 2022, central banks continued applying even tighter monetary policies (World Bank, 2023).

The gradual increases in interest rates since August 2022 have yielded desirable effects, as inflation in some countries approached 4% by the end of May 2023 (cf. Appendix C) (OECD, 2023b). Although, it is important to underline that the full impact, even at other economic and social levels, may require time to materialize. Consequently, while forecasts indicate a gradual improvement in global economic conditions, uncertainties persist, specially intensified by geopolitical tensions.

#### **4. Industry Outlook**

For centuries that tableware and ovenware have played an important role in society. It serves practical purposes as cooking, eating, and drinking, but is also an important cultural item that reflects hospitality, etiquette, and cultural identity. Ceramic tableware is a popular choice due to its durability, aesthetics, and can be used for either casual or formal occasions. Also, opposed to cheaper plastic materials, does not contain harmful chemicals, it is easy to clean and eco-friendly.



On the ceramic segment, the European industry is highly fragmented, being composed by a large number of Small and Medium Enterprises (SME's) and employing around 27 000 employees in 2019 (European Commission, 2019). According to Eurostat (2023), Portugal is well positioned among the top European exporters (cf. Appendix D).

The increasing competitiveness from Asian countries has a significant impact on European ceramic manufacturers, whose have struggled to compete on price and have seen their market share decline in the face of cheaper imports. Since it is an industry that utilizes intensive labour, in order to compete in the utilitarian and decorative ceramics market, companies rely on brand quality and unique designs to be able to face the low-priced products from China and Thailand. Increasing their competitiveness will also involve an increase in skilled labour and a decrease in energy costs, as the industry has high levels of gas consumption.

In May 2013 the EU implemented the regulation n° 412/2013 (Council of the European Union, 2013), accusing China of exporting these products at artificially low prices, which has led to significant market disruption and damage to EU-based ceramic manufacturers. The regulation states that “the Council imposed a definitive anti-dumping duty on imports of ceramic tableware and kitchenware originating in the People’s Republic of China”. In 2019, through the regulation n° 2019/2131, the definitive anti-dumping duty was prolonged for additional 5 years (European Commission, 2019). Yet, the consumption market share of Asian products on the EU market is elevated, which represented 55% in 2019. Although there is a relative improvement, as in 2012 Chinese products represented 65%, it is debatable that these measures only provide temporary relief for European manufacturers and do not address the structural challenges faced by the industry (CWW, 2019).

On the national context, not being an exception to the EU structure, the ceramic industry also is mainly composed by SMEs. In 2022, the Portuguese general ceramic industry had 1092 companies, of which only 175 employed over ten or more workers. The evolution of the industry is extremely reliant on external markets, accounting for 75% of its revenues. Exports are mainly destined to the European market, but also to the US and Brazil. Furthermore, Vista Alegre (VA) assumes a leading position in the market as a producer of utilitarian and decorative ceramics and crystal (Sapo, 2023).

The gradual change in consumer habits is shaping the business model. As pointed out by Augusto (2017), millennials and Gen Z have shown a different approach to luxury tableware

consumption compared to previous generations. While luxury tableware was once seen as a status symbol, younger consumers habits are changing, being more interested in experiences over material possessions. For example, restaurants and cafes that offer different dining experiences with visually appealing spaces and tableware have become particularly popular. Overall, although luxury tableware remains an important aspect of the Horeca industry (hotels, restaurants and cafes), younger generations are redefining what luxury means and how it is consumed. The industry must adapt to these changing preferences to remain relevant and appealing to this demographic.

The Horeca industry was significantly impacted by the pandemic, as many of the establishments were forced to close or limit their operations. But while the industry adapted to the changing market demands by turning to take-out and delivery services, the demand for tableware was lower than pre-pandemic levels. Therefore, the tableware industry watched its sales through Horeca channel shrinking during 2020-2021.

## **5. Company Overview**

### **5.1. Company History**

It was the year 1824 when the founder José Ferreira Pinto Basto requested authorization from the king to set up a large earthenware, porcelain, glassware, and chemical processing factory, on his farm near Ílhavo (Aveiro). Only five years later, Vista Alegre was recognized with the Royal Factory title for its artistic and industrial success (Vista Alegre, 2022).

Some steps were taken towards mastering porcelain production and in 1832, Augusto Basto, son of José, went to France to study the composition of porcelain clay. Technological progress and local artisans, highly qualified by hired international master craftsmen, were also important drivers in porcelain production. After significant improvements, the company focused on porcelain production exclusively, ceasing its glassware production in 1880. Vista Alegre was the pioneer in porcelain production in Portugal.

The company started to witness a decline in its business at the end of the century, amid political and social crises throughout the country. Under the management of João Theodoro Ferreira Pinto Basto, in 1924, VA recovered its industrial development and artistic flair, leading to business growth. It preserved its dominant position among the most prestigious manufacturers in Europe due to the highly specialized manufacturing activities of the artisans and its traditions. The company also focused on establishing a higher engagement with contemporary artists and

cooperation with European peers. As a result, it expanded to new markets, exports increased and engagements with contemporary artists became more regular.

In the meantime, the tradition of producing exclusive pieces was started, and even a dinner set was produced for Her Majesty Queen Elizabeth II. In 1964, to manifest its long and rich history, it was inaugurated the Vista Alegre Museum, and in 1985 it was created 'The Collectors Club', as a reflection of its artistic richness and value in the art market. Also in 1985, the company opened the Vista Alegre Art and Development Centre (CADE) to encourage the creation of new pieces and decorations, as well as to promote painting and sculpture training.

VA participated in recognizable events such as the Universal Exhibition in London (1851) and Paris (1867). In the late 1980's, also displayed their art in locations such as at the New York Metropolitan Museum of Art and the Royal Palace of Milan, spreading the brand's reputation worldwide.

In 1997, Vista Alegre merges with the ceramic group Cerexport, and in 2001 takes place a second merger, this time with Atlantis. Atlantis constantly affirmed its presence internationally as the manufacturer of one of the purest crystals. This merger added back glassware and crystal to Vista Alegre (Vista Alegre Atlantis Group (VAA) – but commonly only referred as Vista Alegre (VA)) and resulted in the largest tableware group in Portugal. By last, in 2009, Visabeira Group acquired Vista Alegre through a public takeover offer of its representative share capital.

For its long and successful history, together with its social and artistic impact, VA it is an item of the Portuguese identity.

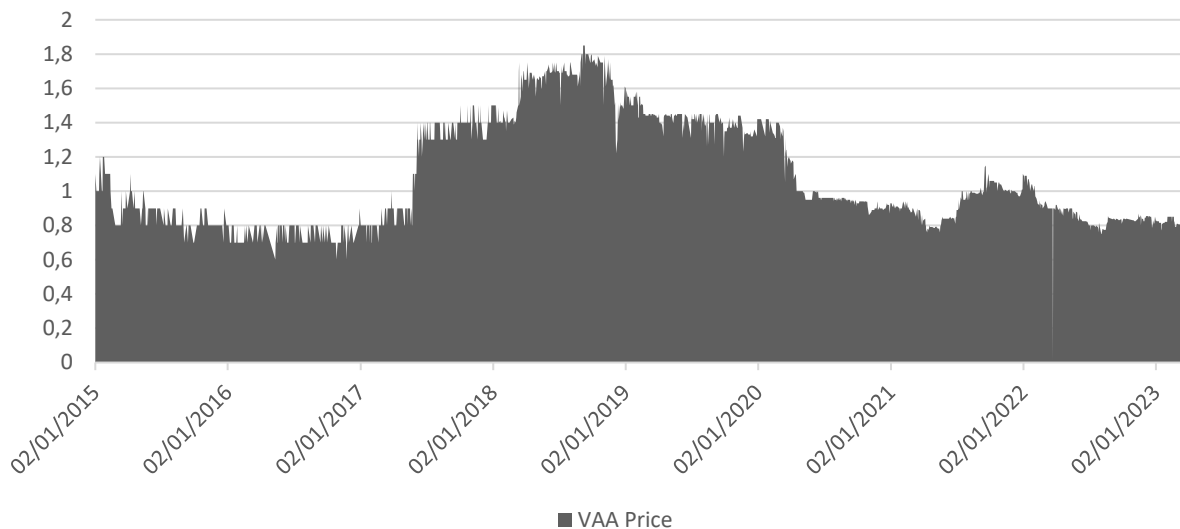
## **5.2. Group Structure, Share Capital, and Stock Market**

VA is predominantly owned by Visabeira Indústria, SGPS, SA, which in turn is owned by Grupo Visabeira, SA. In total, VAA's share capital and voting rights is 85.60% attributable to these entities. This represents 143,514,385 shares out of the 167,650,060 total shares, with the nominal value of 0.80€ each. Only 9.41% (15,780,432) are promptly accessible in the stock market (free float shares) (Annual Report 2022) (cf. Appendix E).

Vista Alegre has been listed on the Portuguese Stock Exchange (Euronext Lisbon) since 1987. Despite the public willingness over the past years, the company does not integrate the main Portuguese market index (PSI).

**Figure 1**

VAA – Historical Stock Price



Source: Bloomberg

During 2017, share price evolution performed rather well due to the results of the first trimester. After several years of weak results, this year consolidated the achievement of better results initiated at the end of 2015. The company signalled the continued growth in external markets as a key factor.

In December 2017 VA issued common shares, seeing its social capital growing 31% from 92M EUR to 121M EUR. Nonetheless, more than half was acquired by the Visabeira group, through its subsidiary Cerutil (Annual Report 2017). At the end of August 2018, following its long period of reorganisation, VA continued sending a positive signal to the market by announcing the acquisition of Cerutil and Bordalo Pinheiro from the owner group Visabeira, concentrating all ceramic holdings. Shortly after, share prices mounted to 1.85€, the highest since July 2007.

VA also planned a share offer in the market aiming to increase its free float up to 17%, cut on debt and strengthen its shares liquidity (CMVM, 2018), which ultimately would boost its opportunity to be admitted in PSI by beginning of 2019. However, by the end of the year the company communicated that the public offering would not be carried out due to “adverse international market conditions” (Annual Report 2018). From this point on, the stock price started declining, later exacerbated by the effects of COVID-19.

Looking to diversify its funding sources, as the public offering had been cancelled, in October 2019 VA announced the issue of 50M EUR of secured guaranteed bonds maturing in October 2024, from which 45M EUR at a fixed annual rate of 4.5% and the remaining 5M EUR at 3.5%, all near institutional investors (Vista Alegre, 2023). Most of the funding was strategically used to pay off other bank loans. Since 2010, VA was prevented from distributing dividends, not only due to poor results but also as a contractual condition tied to the bank loans for the restructuring of the group (Annual Reports 2019). Meanwhile, still no dividends have been distributed.

Only 2 months later, VA reached a share capital of 134M EUR, by successfully raising 15M EUR through the issuance of new common shares on the market (Dinheiro Vivo, 2019).

By last, the group is composed by 17 companies with a worldwide presence (cf. Appendix E). The following companies are responsible for the production of goods, while in general the remaining companies have the objective of goods commercialization and stablishing a local presence in international markets.

- Cerutil – Cerâmicas Utilitárias, SA, reference in the tableware and ovenware manufacture;
- Cerexport – Cerâmica de Exportação, SA, exercises the production of ovenware;
- Faianças Artísticas Bordallo Pinheiro, SA, is related to the production of faience;
- Faianças da Capôa – Indústria de Cerâmica, SA, also related to the production of faience;
- Ria Stone, Fábrica de Louça de Mesa em Grés, SA, and Ria Stone II, SA, consist in the production of tableware and domestic articles in stoneware, trade of articles stoneware, faience, and ceramics.

### **5.3. Business and Segments**

The classification of business segments could be defined in two different ways: either the utility of the product or its composition. On the utility side, the products could be defined as tableware, ovenware, cutlery or decorative. However, to the extent that annual reports are organized by kind of material that composes the product, this one will be followed through the entire analysis. It would not be possible to understand, as an example, what quantity of porcelain figures should be entitled to tableware or to decorative items.

Having mentioned the above, the company organizes its segment structure into four business segments, based on different types of materials produced: “Porcelain and related products”, “Stoneware” (which until 2020 was “Oven Stoneware” and “Tableware Stoneware”),

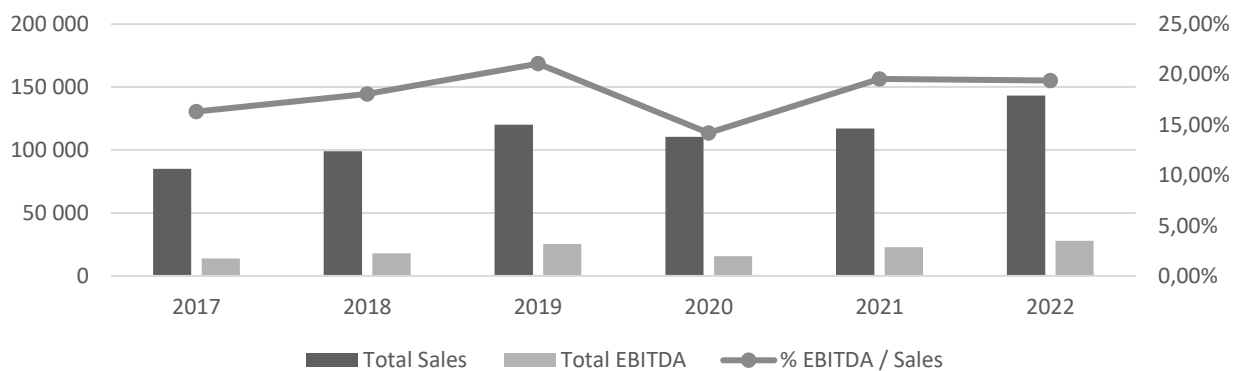
“Earthenware” and “Crystal and handmade glass” (cf. Appendix F). The first three elements have similarities in their production process and materials used, generating constant synergies in the different areas. It involves the production of objects using clay and firing them in a kiln, where the transformation of clay into ceramics occurs during the firing process.

As visible in Figure 2, the company consolidated the growing tendency, explained by improvements of processes, technology advances and facilities expansion. This was interrupted with the hitting of COVID-19 when sales dropped from 120M EUR to 110M EUR in 2020. It was still possible to achieve this level of sales due to the business growth in the online channel, defying the hard drop in the retail stores (lock-down policies).

The necessity of kilns (pottery ovens) is what consumes the most energy, as gas: Earnings Before Interests, Taxes, Depreciation and Amortizations (EBITDA) in 2022 was penalized in 15M EUR, since the costs of gas increased 5.5 times from 2021 (3.5M EUR) to 2022 (19M EUR). Besides the production costs (energy), the inflation pressure also has a direct impact on logistics and raw materials. Despite the exponential cost of energy, VA managed to recover its growing path and in 2022 total sales amounted to a new historical maximum of 143.3M EUR, and an EBITDA of 27.5M EUR.

**Figure 2**

Total Sales, EBITDA, and percentage of EBITDA/Sales from 2017 to 2022

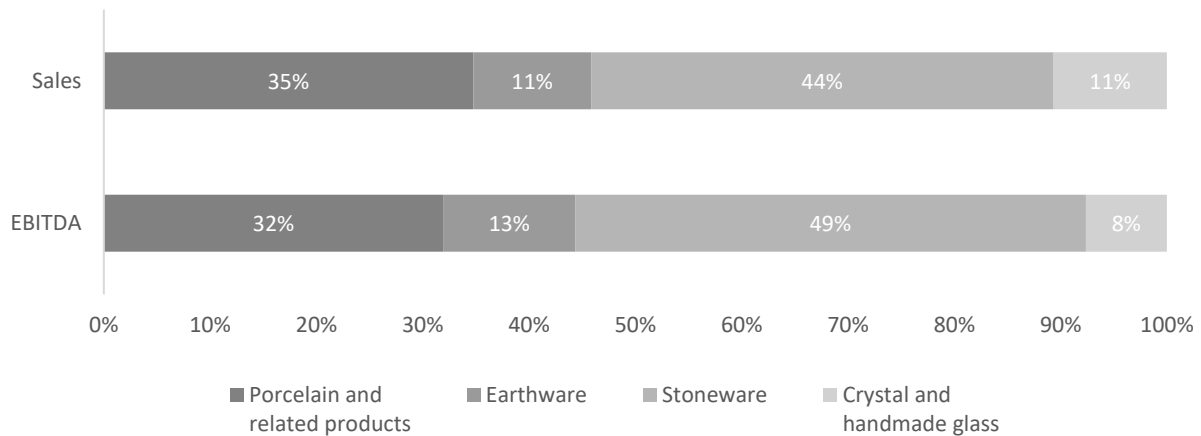


Source: Vista Alegre Annual Reports

In Figure 3, it is demonstrated the relative position of each segment per total sales and EBITDA. “Porcelain and related products” and “Stoneware” are the segments with notable weights.

**Figure 3**

Total Sales and EBITDA percentage per segment



Source: Vista Alegre Annual Reports

Further below, based on “VAA Prospeto de Oferta Publica de 2018” and Vista Alegre annual reports, follows some clarifications on each segment and its market conditions.

**5.3.1. Porcelain and related products**

Vista Alegre brand benefits from high national and international recognition, being considered a prestigious porcelain brand. The business area includes the domestic decorative subsegments, primarily intended for home use, both on the table and in decoration, and the hospitality subsegment aimed at the hotel and restaurant sector.

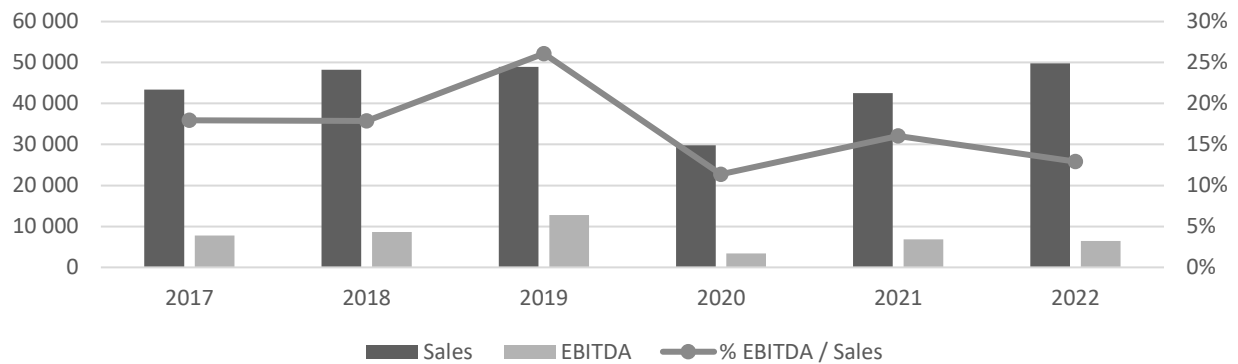
Any of these subsegments is competitive with European industry players being the main competitors of VAA in the mid-range and upper-mid-range ranges. In the lower mid-range segment, under a brand name “EMA”, the company competes with Asian producers who have been flooding the markets with large quantities of products at very low prices.

Over the years, innovation and development projects have been carried out to assess the best techniques for enhancing the quality of the pieces and materials used. Reflecting this strategy, the

factory in Ílhavo, with 200 years of history, is considered one of the finest and most well-equipped in the world's industry.

**Figure 4**

Porcelain and related products - Sales, EBITDA, and percentage of EBITDA/Sales from 2017 to 2022



Source: Vista Alegre Annual Reports

In 2019 occurred the final implementation of a new “first firing” kiln in the productive process, new specific equipment for the automated load and unload, and significant technological advances, which would have demonstrated better margin returns, would it not be the impact of gas prices.

By 2022, the porcelain and related products segment recovered its pre-pandemic level of sales, accounting closely to 50M EUR (35% of total sales).

The Portuguese (50%) and Spanish (12%) markets registered higher revenues on this segment, fruit of a long investment in exploring the HORECA and own retail channels. Other markets worth mentioning are Belgium, Brazil, and USA.

### 5.3.2. Stoneware

There is a high level of competitiveness, mainly facing challenges from imports from the East. However, the quality levels of VA products and market knowledge with manufacturing processes focused on maximization of energy resources have permitted its activity on the segment.

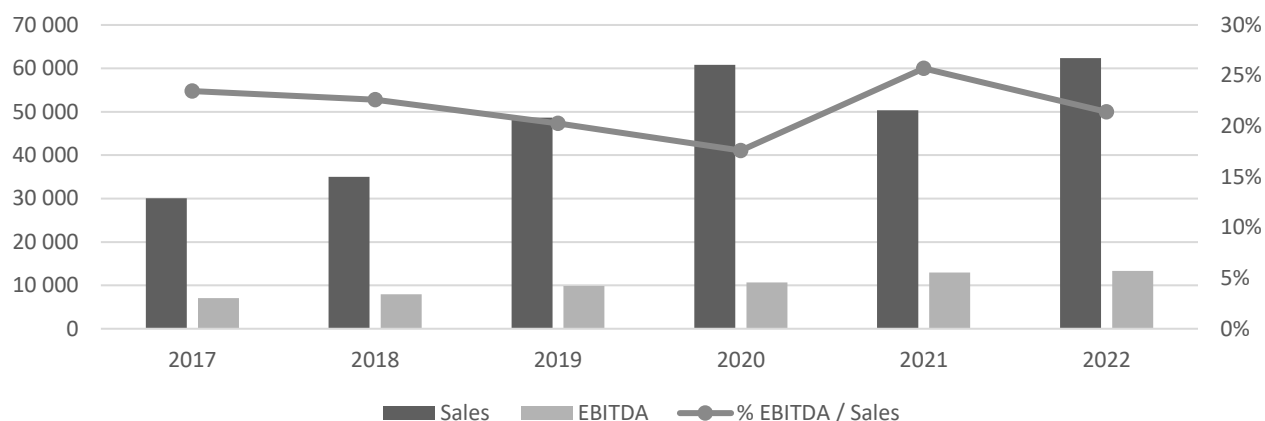
In 2017, to strengthen its position, VA pursued the acquisition of Cerutil. This manufacturing unit entered the tableware sector with stoneware pieces intended for table and oven.



Also, VA established a new subsidiary in 2012 - Ria Stone. Through innovative production techniques successfully positioned in the mass production market of stoneware, specifically targeting IKEA as a client. In 2019 finalized a plant expansion project to increase the capacity of the fabric by 60%, being its activity volume fully absorbed by IKEA at least until 2026. This arrangement represents half of the revenues of the stoneware segment.

**Figure 5**

Stoneware - Sales, EBITDA, and percentage of EBITDA/Sales from 2017 to 2022



Source: Vista Alegre Annual Reports

In 2022, the segment registered 62M EUR in sales and an EBITDA of 21%.

The principal markets were The Netherlands (29%), Germany (16%), France, Spain, and Italy with around 10% each, while Portugal only consumed 4.8%, which reflects the weight of IKEA in the business.

### 5.3.3. Earthenware

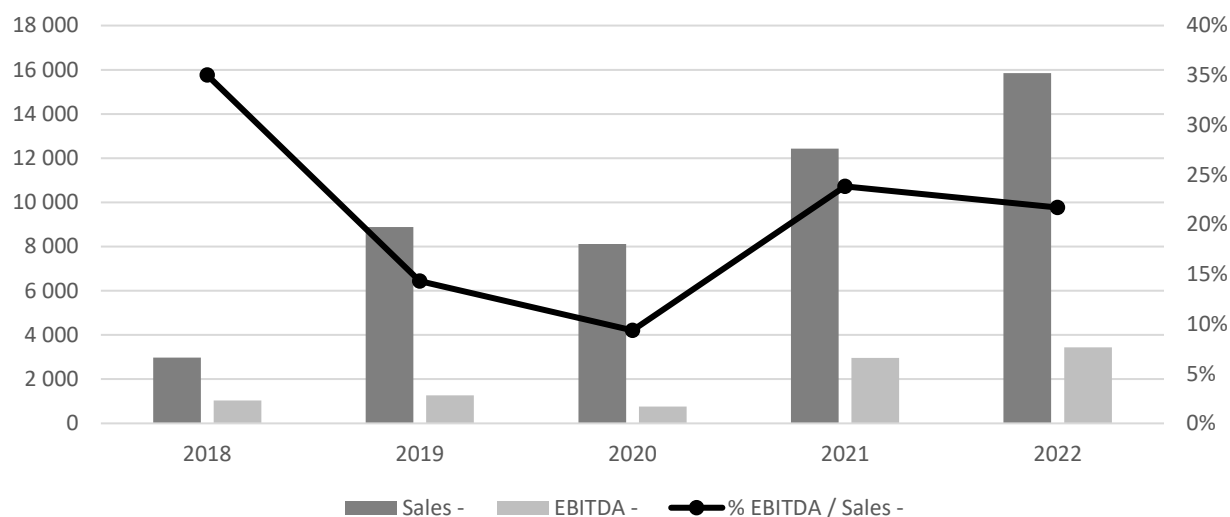
As mentioned, in 2017 the group acquired Cerutil (stoneware segment), and in addition Bordallo Pinheiro (earthenware), the owner of the brand "Bordallo Pinheiro". The subsidiary plays an essential role in the national revitalization of Portuguese's cultural items through ceramics and the artistic heritage of its founder.

In 2019, it was finished the renovation of Bordallo Pinheiro's factory. Upgraded with advanced equipment and bigger space that experienced a complete renovation and expansion, its production

capacity increased by 50%, which contributed to higher durability and a wider range of products possible to the new capacities. In addition, the company started producing more earthenware pieces in response to the growing demand from the HORECA sector.

**Figure 6**

Earthenware - Sales, EBITDA, and percentage of EBITDA/Sales from 2017 to 2022



Source: Vista Alegre Annual Reports

After Portugal being the main consumer with 46% share, it also outstands the importance the USA with a 10% consumption share. The remaining destination of earthenware was more homogenous throughout Europe and the rest of the world.

### 5.3.4. Crystal and handmade glass

VA is involved in the production and commercialization of handcrafted and semi-automatic crystal articles and hand-blown glass. Crystal is made from sand and lead oxide, which are melted together in a fiery mass and shaped through the blowing and hand movements of artisans.

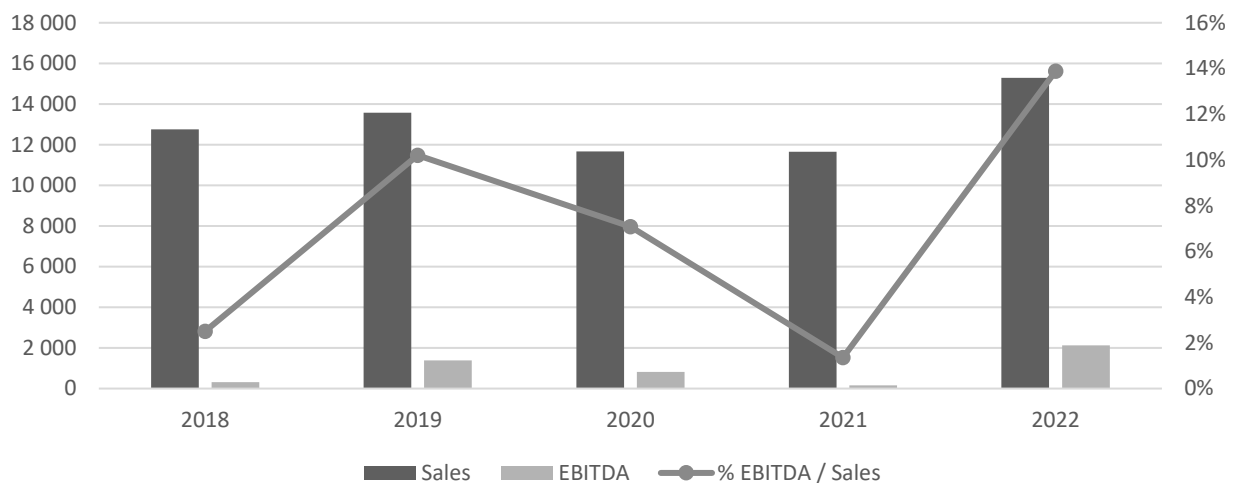
In this industry, labor and energy costs (i.e., electricity and natural gas) are of great importance. The efficient utilization of these resources is a key factor for greater profitability.

Just like in the other sectors, the market has seen the introduction of alternative products at considerably lower prices, such as automatic colored crystal and high-quality automatic glass. This led in the past to a continuous and rapid decline in sales and services related to handcrafted crystal,

forcing VA to reevaluate its industrial approach in this business domain. It started focusing more on forging partnerships with internationally acclaimed brands. By collaborating with luxury brands VA can develop pieces that offer greater value and with better technical elements, as it increases its visibility as well.

**Figure 7**

Crystal and handmade glass - Sales, EBITDA, and percentage of EBITDA/Sales from 2017 to 2022



Source: Vista Alegre Annual Reports

There was an enhancement in the industry because of the investments made in 2017, primarily focused on stoneware and crystal products. The “CristalLux” project aimed to develop more efficient and luxurious packaging for crystal, featuring unique and high-quality designs. Additionally, throughout the year, a new contract was secured with Hennessy to supply luxury crystal bottles of brandy and cognac.

The national and French market are the main consumers of the segment, counting with one third each, which echoes the long seeking Atlantis’ integration into France and its strategical investment in partnerships with external brands, as Remy Martin and Martell.

#### 5.4. Future

According to annual reports, Vista Alegre expects to continue strengthening its presence worldwide. The foreign market has been growing and already represents approximately 75% of

sales in recent years. The company expects to increase its growth in both sales and brand awareness in the American continent (mostly in the United States, Mexico, and Brazil), and anticipates 2023 to be the best year in sales in the Middle East (as Saudi Arabia and Qatar) and Asia (as South Korea and Japan). Also, the company intends to continue to gain European market share, specially hoping to increase its sales growth in the Horeca channel in Spain.

On the Portuguese market, it is unlikely that the company will lose anytime soon its leadership on the retail market, being the national major player on the sector. The company wishes to continue to innovate on its processes, partnerships, and collections. Furthermore, Vista Alegre looks for cultural initiatives and projects that promote art, craftsmanship, and heritage preservation. With this initiatives, new collections and new designs emerge, and often connected with cultural themes, diversifying its product catalogue, and reducing reliance on large private label contracts that can be vulnerable to fluctuations.

This way, and as the only way to keep facing cheapest imports that downpour through the European market, Vista Alegre mission “continues to focus on the global recognition of its brand as one of the world’s leading brands of prestige, quality and design”.

## **6. Assumptions**

### **6.1 Revenue Forecast**

The revenue forecast is a tactful topic of the valuation since many other items are directly related to the results here assumed. To the computation of this item is considered the historic revenues of the company and its future prospects, and also general macroeconomic forecasts as inflation and GDP growth rates.

During the last years the turnover has been far from linear. Amid restructuration and innovation processes, COVID-19 and war impacts, the growth of revenues is not easy to predict based on its irregular historic figures. Yet, only considering the organic growth (without the acquisition effect of Cerutil) during a calmer period from 2017 to 2019, the company presented a stable average annual growth of 12.77%.

Due to the continuing expected growth on the Horeca channel and expansion on the Asian and Middle East markets, it is assumed that VA will be able to maintain good levels of turnover, ultimately getting its terminal growth rate closer to the expected Portuguese and European real GDP growth.

Regarding inflation, it is not possible to compute its exact impact on revenues during the last years due to the lack of product volume details on the company's reports. Then, it is assumed that the sales prices experienced minimal increases. As per Koller et al. (2015), most companies cannot pass its inflation costs directly to customers without losing volume, only being able to pass some through time, and therefore taking a toll on its performance indicators.

Taking the above into consideration, with the economic prospects being precarious and uncertain, a more conservative vision was considered when computing future revenues.

## **6.2 Operational Costs**

It would be a good practice to also examine closely the operational costs per operating segment, to construct a valuation by summing the segment parts. However, the company does not unfold sufficiently detailed items. Only revenues, depreciation (not constant) and EBIT per segment are mentioned. Also, it was not considered to build estimations per segment due to the historic volatility on EBIT, which is explained by the similarities between segments and synergies as previously discussed. Despite the crystal and handmade glass segment being the most different from the others, this represented only 8% of the revenues in 2022.

Therefore, the operational costs (as costs of goods and personnel costs) per segment were not computed. From this point, the valuation items were mainly achieved considering the totals, and not by segments. This is, the items of operating expenses were calculated in line with historical percentages of total revenues, and not considering the segments weights as initial was intended.

## **6.3 Investment & Capital Expenditure**

Capex was calculated in simple terms since the company did not provide any insight into its forthcoming investment strategies. The only one disclosed was an investment of 10.7M EUR in 2023 for an oven upgrade, for greater energy efficiency and flexibility to production lines.

To calculate capex it was assumed that the company will mainly have investments to sustain its operations and maintain its revenues growth. Therefore, net change in Property, Plant, and Equipment (PP&E) was calculated at the same growth rate as revenues from 2024 onwards, and depreciation as a percentage of total revenues. If PP&E had been calculated as a percentage of revenues it would be an unrealistic change, reason for following the growth rate and not as a relative percentage.

#### **6.4. Working Capital**

Working capital serves as a short-term indicator of a company's financial well-being. In order to calculate this element, it is observed the company's past performance in managing its working capital and considering its future objectives. To determine the net working capital the fundamental formula for deducting current assets associated with operational activities from current liabilities is used.

In 2022 the company had a working capital ratio of 1.40 and it is forecasted to maintain at 1.35, being an indicator that the company is unlikely to face liquidity issues in the foreseeable future and is employing its assets to generate future revenues.

#### **6.5. Debt**

Debt was an harden item to project due to the unknown debt target ratio intended by the company. As discussed in the chapter 4.2, the company showed strong intentions of entering in the main Portuguese stock market, and for such it is assumed that the company will be looking to reduce its debt ratio, just has been doing over the last years (book debt ratio reduced overtime from 56% in 2015 to 41% in 2022).

In 2019 the company issued guaranteed bonds in the total amount of 50M EUR: 45M EUR at a cost of 4.5% fixed rate and 5M EUR at 3.5%. With both maturing at the end of 2024, it is assumed that the company will issue new bond loans to renew its debt by then again, just as it occurred in the past. One other assumption in here was made regarding the cost of debt: considering that inflation has return to the expected 2% rate by end of 2023, and that the company has decreased its debt ratio, again a 4.5% tax rate was considered as cost of debt.

From 2025, looking to maintain a slowly decrease on its debt ratio, it is assumed that the company will increase its debt amount with revenue's growth.

#### **6.6. Dividends**

As mentioned earlier, VAA was restricted from any dividend distribution from 2010 to 2019 as a banking loan condition. However, although since then possible, this practice has persisted to the present day. It is understandable taking into consideration the macroeconomic conditions and uncommon events over the last years. It is assumed that the company will continue with the non-

dividend distribution to flow its available funds towards ongoing innovation and expansion initiatives.

## 6.7. Taxes

It was not a simple task to come with a decision on how to treat taxes, as income tax statement is not simple to have a full comprehensive view. Upon much consideration, the following was considered, as stated from VA annual reports:

- Nominal tax rate of 21% to Corporate Income Tax (IRC);
- Maximum municipal tax rate of 1.5%;
- 3% for taxable profits between 1,500,000 euros and 7,500,000 euros;
- 5% for taxable profits between 7,500,000 euros and 35,000,000 euros; and
- 7% for taxable profits over 35,000,000 euros.

Therefore, the effective tax rate used throughout the years during the valuation was not fixed.

**Table 2**

Effective tax rate

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
EBIT	2 697	5 449	7 703	11 325	14 108	2 496	9 345	11 333	7 815	10 013	13 690	15 846	17 961	18 389	18 736	19 011
Normal tax rate	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%	21,00%
Municipal tax rate	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%	1,50%
3% between 1.5 to 7.5	36	118	180	180	180	180	180	180	180	180	180	180	180	180	180	180
5% between 7.5 to 30	0	0	10	191	330	-250	92	192	16	126	309	417	523	544	562	576
<b>Total tax rate</b>	<b>23,83%</b>	<b>24,67%</b>	<b>24,97%</b>	<b>25,78%</b>	<b>26,12%</b>	<b>19,69%</b>	<b>25,41%</b>	<b>25,78%</b>	<b>25,00%</b>	<b>25,55%</b>	<b>26,08%</b>	<b>26,27%</b>	<b>26,41%</b>	<b>26,44%</b>	<b>26,46%</b>	<b>26,47%</b>

Note. Absolute values in thousands EUR.

Source: VA annual reports & own calculations.

## 7. Valuation

As previously discussed, the decision was made to employ the APV model. Although a good practice to corroborate the obtained results with a second alternative approach, this will not be applied. The FCFF valuation approach using WACC does not have the same flexibility as the APV to deal with the uncertainty of future cash flows and capital structure changes, and therefore more complex to adjust for any corrections on these important items. When it comes to relative valuation (using multiples), it appears that are very few companies listed within the same industry (only the

German company Villeroy & Boch looked as a possibility), but yet no sufficient similarities (as growth rate) to be a worthy comparison, and VA not being on a steady state level yet.

Over the past years, the company has undergone two capital increases and showed a clear interest in incorporating the PSI-20, the main Portuguese stock market index. However, to accomplish this objective it still needs a substantial increase in its free float portion. Therefore, to become more attractive to new investors, it is assumed that the company will look to decrease its debt ratio overtime. There is no disclosure about its capital structure target ratio and also no assumptions regarding new capital increases in the market are being made.

The upcoming subchapters will focus on the calculation of each APV component based on the previous assumptions. Finally, we will bring all the elements together into the valuation model and arrive at a final prediction.

## 7.1. Unlevered Firm Value

As the APV approach is based on the future cash flows of a project as if it was entirely financed with equity, we start by getting the FCFF at its appropriate equity cost: as there would be no debt involved.

**Table 3**

Free cash flow to the firm

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
EBIT	2 697	5 449	7 703	11 325	14 108	2 496	9 345	11 333	7 815	10 013	13 690	15 846	17 961	18 389	18 736	19 011
Tax (-)	643	1 344	1 923	2 919	3 685	491	2 375	2 922	1 954	2 559	3 570	4 163	4 744	4 862	4 957	5 033
NOPAT	2 054	4 105	5 780	8 406	10 423	2 005	6 970	8 411	5 861	7 454	10 120	11 684	13 217	13 527	13 779	13 978
Depreciation	5 380	5 370	5 783	6 044	10 611	12 832	12 115	12 254	12 769	13 709	14 393	14 912	15 309	15 645	15 921	16 144
Amortization	122	184	631	416	396	334	1 377	1 473	1 473	1 473	1 473	1 473	1 473	1 473	1 473	1 473
Capex (-)	-	-9 412	-6 433	-16 734	-46 326	-18 460	-11 286	-9 467	-16 787	-23 703	-21 699	-20 484	-19 597	-19 282	-18 935	-18 607
Δ Net WC (-)	-	172	-6 784	13 185	-6 566	1 167	-2 378	2 192	1 987	-1 120	-815	-619	-473	-400	-329	-266
<b>FCFF</b>	-	<b>418</b>	<b>-1 023</b>	<b>11 317</b>	<b>-31 461</b>	<b>-2 122</b>	<b>6 798</b>	<b>14 864</b>	<b>5 303</b>	<b>-2 186</b>	<b>3 472</b>	<b>6 966</b>	<b>9 929</b>	<b>10 963</b>	<b>11 908</b>	<b>12 722</b>

Note. Absolute values in thousands EUR.

Source: VA annual reports & own calculations.

Initially, it was intended to get the levered beta through the historical excess returns. However, analysing through Bloomberg, even the adjusted beta (theoretically more correct and considerable higher than the raw beta) presented low values, around 0.2 to 0.3, depending on the time frame. This does not seem appropriate to be used, as they align more closely with the energy industry. Given this observation, Villeroy & Boch adjusted beta over the same period was around 0.8.



Additionally, consulting Damodaran’s website, an average unlevered beta of 0.92 is recommended for household products during last years.

In terms of the equity risk premium, it was established at 5% as most of the literature suggests. And for the risk-free rate, it was retrieved from the 10-year yield rate of German government bonds. Here two different amounts were used during time: 2.33% for 2023 was later adjusted in the model to 2.00% in 2025, both consulted in Bloomberg.

Concerning the country risk premium, it was not used on the CAPM calculation as discussed previously. I consider CRP to be embedded in other economic projections and assumptions. Only for reference, according to Damodaran website, the rate to use would have been 2.8%.

**Table 4**

CAPM

CAPM	2023	From 2025
Bu	0,92	0,92
Rf	2,33%	2,00%
Rm - Rf	5,00%	5,00%
<b>Ku</b>	<b>6,93%</b>	<b>6,60%</b>

Source: Own calculations.

At this stage, the unique missing component to reach the unlevered value of the firm is the terminal value, which was computed considering the perpetuity growth rate of 1.40% and the 6.60% unlevered cost of equity.

**Table 5**

Unlevered value of the firm

Explicit Period	2023	2024	2025	2026	2027	2028	2029	2030	Terminal Value	PV Vu
FCFF	5 303	-2 186	3 472	6 966	9 929	10 963	11 908	12 722	<b>248 251</b>	
Ku	6,93%	6,93%	6,60%	6,60%	6,60%	6,60%	6,60%	6,60%	6,60%	
PV = FCFF/ (1+Ku) <sup>t</sup>	4 960	-1 912	2 866	5 394	7 213	7 471	7 613	7 630	139 661	<b>180 896</b>

Note. Absolute values in thousands EUR.

Source: Own calculations.

## 7.2. Present Value of Tax Shields

The following point on the APV equation is the present value of tax shields. The tax shield is a benefit that arises from the company's use of debt. Along the negative side of interest payments on debt financing, there is the positive side where the company is also reducing the amount of its tax obligations, through deductions. As in line with previous assumption made on taxes, the total tax rate is dynamic through the forecasted years.

The discount rate used to convert to present value was the cost of debt, since tax savings is deriving from interest expenses.

**Table 6**

Present Value of Tax Shield

	2023	2024	2025	2026	2027	2028	2029	2030	Terminal Value	<b>PV Tax Shield</b>
Cost of Debt	5,15%	5,15%	4,50%	4,50%	4,50%	4,50%	4,50%	4,50%	0	
Tax Rate	25,00%	25,55%	26,08%	26,27%	26,41%	26,44%	26,46%	26,47%	26,47%	
Debt	91 270	92 731	98 005	103 558	109 450	114 878	118 818	121 966	3 994 008	
PV Tax Shield	1 118	1 104	1 008	1 027	1 044	1 050	1 040	1 022	32 018	<b>40 429</b>

Note. Absolute values in thousands EUR.

Source: Own calculations.

## 7.3. Present Value of Bankruptcy Costs

The bankruptcy cost can be considered as the hardest value to achieve through the entire valuation exercise. However, if we simply ignore it, we would be inducing that substantial increases of debt would have no negative side effects. As discussed in the literature review there are two points to be estimated.

Firstly, it was calculated what would be the probability of going bankrupt. Following Damodaran approach, from the interest coverage ratio (2.09) we get a bond rating (Ba2/BB) which has an associated default rate (12.20%). In the interest of more accuracy, as the intervals range are still considerable, it was also checked the default probability at Bloomberg, which was 11.32%. The final probability of filing for bankruptcy was calculated as an average of both: 11.76%.

Next, as discussed in the literature review and from Appendix A, the average industry distress costs for the household's items industry accounts to 20% of the unlevered value of the company.

**Table 7**

Bankruptcy Costs

Unlevered Firm Value	180 896
Default Probability	11,76%
Industry Distress Cost	20%
<b>Bankruptcy Costs</b>	<b>4 255</b>

Note. Absolute values in thousands EUR.

Source: Own calculations.

#### 7.4. Value per share

As the last step, once all the elements necessary for assessing the company's worth using the APV method were in place, certain adjustments were made to determine the Equity Value of the company. Financial investments and excess cash are added, as they are not accounted for in the unlevered value, yet they represent value that could be distributed through shareholders. On the contrary, debt value is not available to distribute. Therefore, considering debt holders have priority in repayment, net debt is subtracted to get the value available to shareholders – equity value.

**Table 8**

Share price valuation using Adjusted Present Value

Unlevered Value	180 896
PV Tax Shields	40 429
PV Bankruptcy Costs	-4 255
<b>APV</b>	<b>217 070</b>
Financial Investments	2 121
Net Debt (-)	69 358
<b>Equity Value</b>	<b>149 833</b>
Nº Shares	167 650 060
<b>Share Price</b>	<b>EUR 0,89</b>

Note. Absolute values in thousands EUR.

Source: Own calculations.

The final share price is obtained at 0.89€. In theory, comparing to the 0.79€ share price on 31st July 2023, the suggested advice is to buy/ hold the stock, as it is expected that the stock has room to appreciate in value.

Additional comments on the final result will be provided and discussed later. Next is conducted a sensitivity analysis to evaluate how changes in specific input variables can influence the outcome.

### 7.5. Sensitivity Analysis

Despite the valuation result higher than what the market is currently pricing, it is important to not jump into immediate conclusions and actions. Understanding the robustness of our valuation estimates is just as important as the final result, since variations on key inputs will have impact on the model output. Some will be residual, while others can be drastic. Therefore, it is important to proceed to a sensitivity analysis.

An analysis to the explicit period of revenues would have considerable differences. Since the company has not reached a state of steady level growth, and at the current future uncertainty, there is a considerable scope for different opinions. Considering that I have been conservative (if we look at previous rates consistently at 12%) on the revenues forecast, an analysis was elaborated only for the terminal value period.

**Table 9**

Sensitivity analysis of terminal value - growth rate and discount rate

		Growth Rate								
		1,00%	1,10%	1,20%	1,30%	1,40%	1,50%	1,60%	1,70%	1,80%
Ku	5,80%	1,03	1,05	1,07	1,09	1,12	1,14	1,17	1,20	<b>1,23</b>
	6,00%	0,97	0,99	1,01	1,03	1,06	1,08	1,10	1,13	1,15
	6,20%	0,92	0,94	0,96	0,98	1,00	1,02	1,04	1,06	1,08
	6,40%	0,88	0,89	0,91	0,92	0,94	0,96	0,98	1,00	1,02
	<b>6,60%</b>	0,83	0,85	0,86	0,88	<b>0,89</b>	0,91	0,93	0,95	0,96
	6,80%	0,79	0,80	0,82	0,83	0,85	0,86	0,88	0,90	0,91
	7,00%	0,75	0,77	0,78	0,79	0,81	0,82	0,83	0,85	0,86
	7,20%	0,72	0,73	0,74	0,75	0,77	0,78	0,79	0,81	0,82
	7,40%	<b>0,69</b>	0,70	0,71	0,72	0,73	0,74	0,75	0,77	0,78

Note. Amounts in EUR.

Source: Own calculations.

As per above, other assumptions on the unlevered cost of equity and on the perpetual growth rate (considering remaining model *ceteris paribus*) would take to other results ranging from -22% to +38% compared to the modelled 0.89€ final result.

Although highly related to the unlevered cost of equity, it is also interesting to note the sensitivity of the risk-free rate (*ceteribus paribus* - beta at 0.92):

**Table 10**

Sensitivity analysis of the risk-free rate

					Rf						
1,00%	1,20%	1,40%	1,60%	1,80%	<b>2,00%</b>	2,20%	2,40%	2,60%	2,80%	3,00%	
1,19	1,12	1,06	1,00	0,94	<b>0,89</b>	0,85	0,81	0,77	0,73	0,70	

Note. Amounts in EUR.

Source: Own calculations.

By last, not only the revenues forecast has space for debate as the next two items derived from revenues are also highly sensible, since together they account for 70% of the company's expenses: the cost of personnel and the cost of materials. On the below table it is perceptible the impact, ranging from a depreciation in value of 75% to an appreciation of 63%.

**Table 11**

Sensitivity analysis of the cost of goods and cost of personnel

		Costs of goods					
		33%	34%	<b>35%</b>	<b>36%</b>	37%	38%
Personnel Costs	32%	<b>1,45</b>	1,33	1,21	1,08	0,96	0,84
	33%	1,33	1,21	1,08	0,96	0,84	0,72
	<b>34%</b>	1,21	1,08	<b>0,96</b>	<b>0,84</b>	0,72	0,59
	<b>35%</b>	1,08	<b>0,96</b>	<b>0,84</b>	0,72	0,59	0,47
	36%	0,96	0,84	0,72	0,59	0,47	0,35
	37%	0,84	0,72	0,59	0,47	0,35	<b>0,22</b>

Note. Amounts in EUR.

Source: Own calculations.

The sensitivity analysis has provided information on the potential gains/losses from slight changes. Of course, not all possibilities are here exhibited. Yet, it shows how much attention is required to every decision, offering also support on the risk assessment.

## **8. Conclusion**

As the primary goal of this project, a share price to Vista Alegre Atlantis SGPS, SA has been achieved. Based on my valuation analysis through the Adjusted Present Value, the calculated share price for Vista Alegre stands at 0.89€. However, just as any valuation, the obtained results are subjective to numerous inputs and perceptions.

Even though in theory differences should be residual, if any, the decision on which valuation model to follow was an arduous task. There is not a right or wrong approach for valuation methods, depending on how we want to approach the subject, and even for the same company some can be more appropriate at certain times than others. Initially, it was considered to use two of the following three: Free Cash Flow to the Firm with WACC as discount rate or the APV, and the relative valuation (multiples) as a comparable model. As the capital structure might change over time, APV allows the open incorporation of these financial events, making it a more suitable choice than FCFE (WACC) when dealing with non-defined conditions. Later during the study, also decided to abstain from utilizing multiples for two main reasons: the lack of sufficient competitors listed on stock markets and the non-steady state growth of the company. Only Villeroy & Boch was found as a possible comparable company, and even here some challenges would be faced, as this not only provides tableware and decorative items as also does construction materials. For these reasons, this method would pose a significant challenge in establishing reliable and meaningful multiples.

One limitation to develop this work was the lack of other reports to compare with our assumptions. Through Bloomberg it came to my attention that some other forecasts exist, but not meaningful without supportive assumptions. We tried to contact Caixa Bank BPI and JB Capital markets, who were the only producers of the existing reports to the best of our knowledge but got no feedback. Here is a suggestion to compare with in case of wish to elaborate further on this topic. Also, there was no private communication with VAA, so all inputs here presented were produced on public data and assumptions.

Concerning the result obtained, the valuation suggests a promising investment opportunity, as the stock is currently undervalued. Taking a look at the historical share price data for Vista Alegre

over the past seven years, and prior to COVID-19 pandemic and to the war, Vista Alegre experienced a more robust share price performance, with values hovering around 1.40€. This also indicates the company's potential for growth when economic conditions stabilize. On the other hand, while many companies worldwide have already recovered or shown signs of it, VAA's stock share price continues at low levels. The low liquidity on the market (reason for desire to increase free-float shares portion) and the uncertain future from macroeconomic conditions are most likely linked to the current stock performance.

In conclusion, based on historical performance and the undervaluation identified in this work, it is suggested a "buy and hold" strategy for VAA Vista Alegre stock. However, this decision should always be supplemented by a thorough risk assessment to make informed investment decisions.





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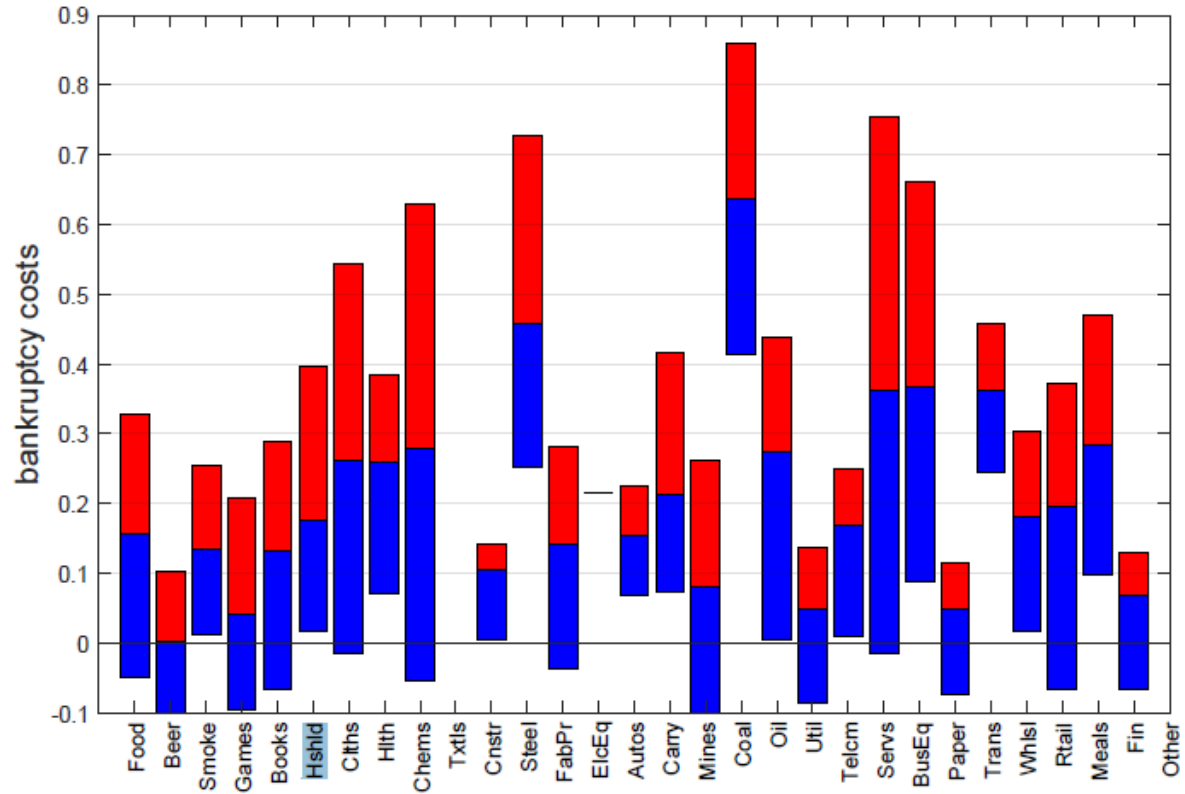
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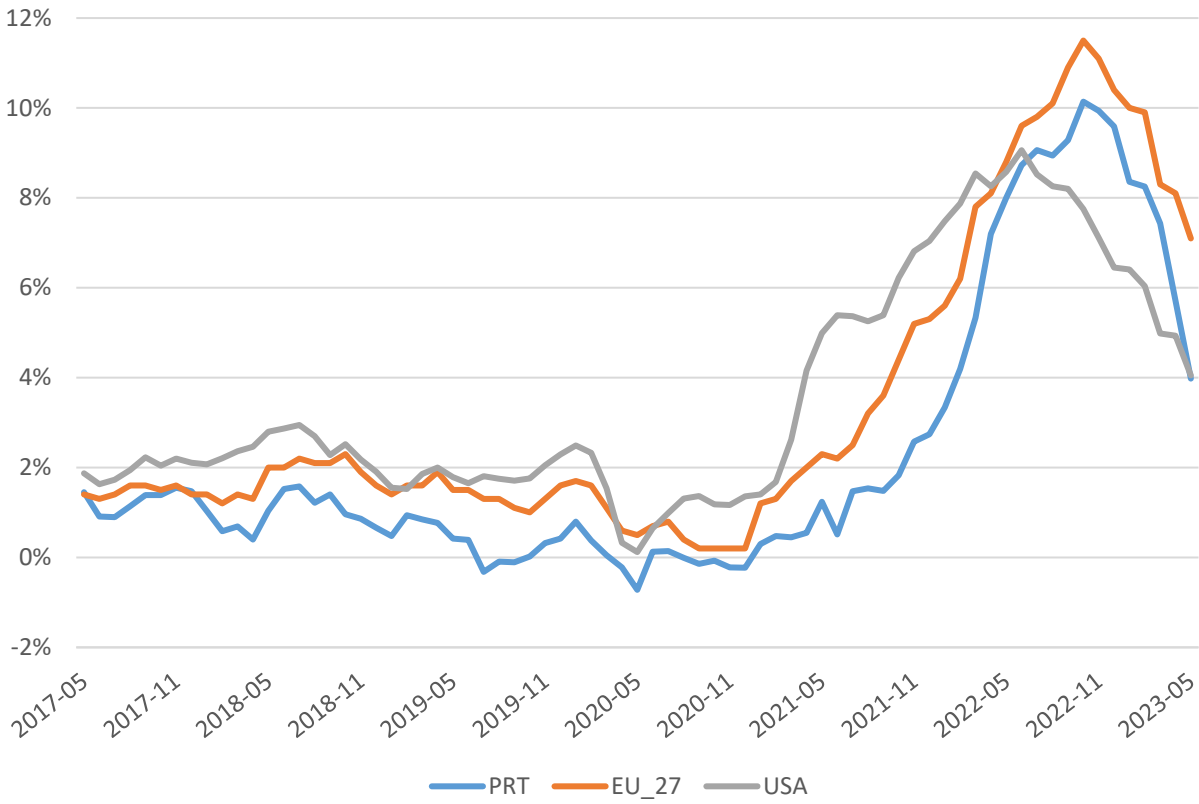
## 10. Appendixes

### Appendix A – Average industry distress costs per unlevered assets value ratio



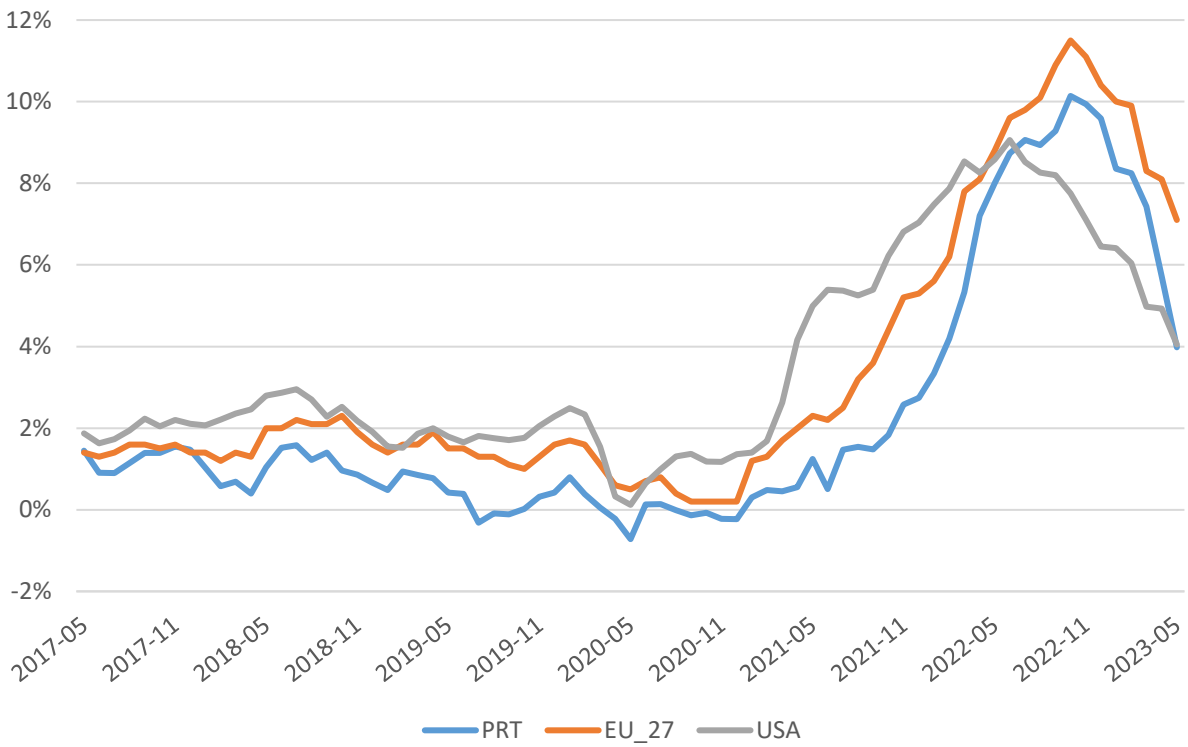
Source: Reindl et al. (2017)

**Appendix B – Inflation (CPI) Total, Annual growth rate (%), Jan 2017 – May 2023**



Source: OECD (2023a)

### Appendix C – Short-term interest rates Total, % per annum, Jan 2018 – Jun 2023



Source: OECD (2023b)

## Appendix D – EU exports of ceramic tableware, kitchenware and other ceramic household and toilet articles

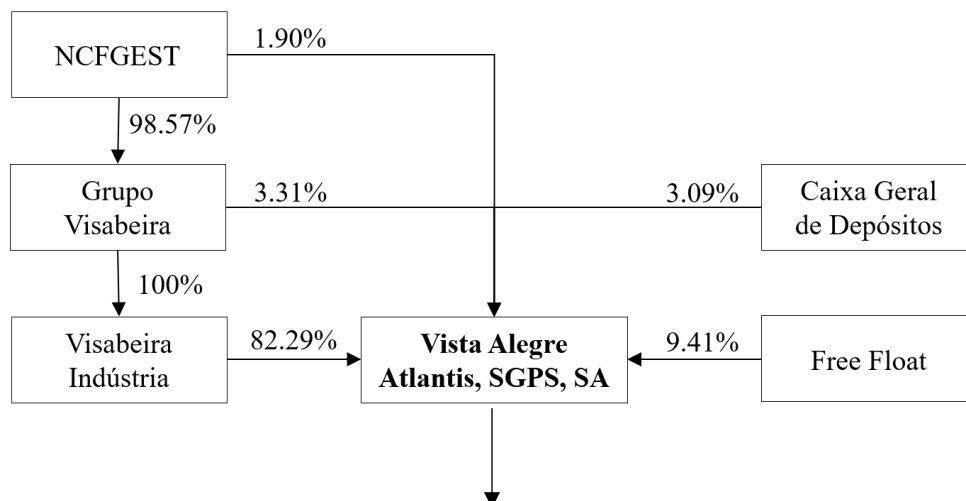
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Germany	379 697 465	384 524 555	393 533 009	398 352 474	389 482 263	382 179 565	382 072 879	398 222 306	343 437 902	416 693 793	471 305 415
Portugal	132 464 845	153 441 651	172 631 666	187 482 015	204 425 174	212 961 436	238 670 099	233 582 251	230 342 214	288 580 101	339 162 121
United Kingdom	191 993 120	187 332 795	220 101 469	246 590 392	225 192 861	225 164 907	231 788 304	227 834 116	:	:	:
France	156 321 012	145 311 579	162 651 750	145 302 767	151 976 619	149 718 663	152 089 840	158 665 353	142 091 309	192 480 460	236 773 990
Netherlands	81 566 974	90 958 988	112 549 658	112 236 807	140 521 018	144 274 901	152 113 432	151 190 628	180 536 436	263 759 550	322 351 906
Poland	68 072 783	81 802 153	80 088 638	96 736 659	110 494 464	133 413 624	134 288 557	146 603 304	159 893 094	178 361 921	200 385 073
Italy	99 091 583	105 774 012	108 983 409	117 123 011	116 941 731	119 045 017	122 004 545	128 466 724	115 916 825	158 757 987	171 253 742
Belgium	83 621 265	78 572 735	84 789 611	98 589 581	93 171 401	104 343 333	116 848 460	95 117 835	84 061 444	112 755 822	123 386 988
Czechia	72 799 933	78 349 363	80 596 880	73 539 906	79 506 682	85 111 741	83 135 917	80 382 352	68 120 158	87 372 978	94 576 267
Romania	52 724 735	60 695 536	63 110 944	67 428 618	68 779 353	72 081 680	75 381 675	74 432 034	62 062 738	71 857 383	75 668 598
Denmark	45 676 991	52 261 830	57 057 600	62 791 893	66 214 365	70 846 155	63 753 288	67 137 080	74 955 190	86 713 734	79 096 388
Spain	30 115 041	32 621 257	34 859 281	44 572 729	99 873 032	53 405 118	55 062 546	58 286 744	47 944 335	58 926 703	71 378 577
Austria	24 336 241	24 718 748	24 684 633	26 781 587	25 767 005	26 487 163	27 072 469	29 010 919	37 516 691	45 833 288	40 887 485
Hungary	24 497 140	19 264 258	26 513 540	27 829 157	25 761 280	25 125 846	25 899 152	25 237 110	23 015 418	29 105 780	33 698 814
Finland	24 188 485	28 451 400	29 458 811	26 249 907	24 053 503	28 376 962	24 770 644	25 214 376	30 552 978	39 183 412	32 327 188
Hungary	17 086 185	16 082 399	15 123 739	15 938 580	14 878 554	12 802 664	13 833 358	15 485 684	14 294 164	20 008 417	28 052 792
Slovakia	13 017 531	11 283 276	10 690 129	12 870 468	11 487 397	11 341 188	14 535 209	13 585 399	14 146 215	14 185 967	18 090 474
Lithuania	5 792 069	11 600 666	10 322 294	8 664 355	8 664 690	10 701 981	13 635 054	9 538 434	7 423 654	7 165 137	9 697 473
Slovenia	2 608 156	2 107 288	1 440 260	1 440 405	2 128 247	3 201 620	3 218 661	3 374 275	4 772 532	9 746 412	8 913 800
Croatia	3 897 889	5 056 866	4 840 244	4 706 220	3 390 639	2 826 345	2 970 578	3 360 608	2 362 368	3 078 567	3 848 016
Greece	3 196 936	2 483 025	2 936 838	2 752 159	2 825 653	2 749 968	3 276 973	3 212 986	3 584 551	4 687 722	4 812 096
Ireland	3 186 968	2 370 238	3 358 354	2 983 103	4 449 076	3 827 480	3 269 496	2 786 365	2 755 273	3 683 480	4 189 682
Latvia	2 279 633	2 337 361	3 781 258	3 603 239	4 134 471	4 406 604	2 499 729	2 316 680	2 725 390	3 029 354	3 758 630
Bulgaria	1 313 526	1 815 476	909 385	390 467	301 594	463 065	692 888	2 140 839	1 177 059	1 760 000	2 875 022
Estonia	1 896 002	1 709 668	1 989 112	1 966 432	1 692 570	1 361 496	1 621 094	1 234 794	2 107 212	1 443 569	2 350 258
Cyprus	25 077	15 857	135 268	11 575	135 251	70 645	86 744	471 144	134 373	238 701	391 544
Luxembourg	311 056	166 102	120 879	166 217	107 708	141 456	403 616	152 190	229 758	198 799	376 557
Malta	10 946	8 376	61 325	50 608	4 636	2 512	2 621	15 596	41 359	49 821	110 797

Note. Amounts in EUR

Source: Eurostat



## Appendix E – Group structure and shareholder participation



Companies	Head Office	Participation
Bordalgest, SA	Lisbon	100.00%
Cerexport - Cerâmica de exportação, SA	Ílhavo	100.00%
Cerutil - Cerâmicas Utilitárias, SA	Sátão	100.00%
Faianças Artísticas Bordallo Pinheiro, SA	Caldas da Rainha	86.14%
Faianças da Capôa - Indústria Cerâmica, SA	Ílhavo	100.00%
Mexicova, SA	Mexico City	100.00%
Ria Stone Fábrica de Louça de Mesa em Grés, SA	Ílhavo	100.00%
Ria Stone II, SA	Ílhavo	100.00%
Shree Sharda Vista Alegre Private Limited	Delhi	50.00%
VA - Vista Alegre España, SA	Madrid	100.00%
VAA Brasil – Comércio, Importação e Exportação, SA	S. Paulo	89.93%
VAA I.I. – Sociedade Imobiliária, SA	Ílhavo	100.00%
Vista Alegre Atlantis Moçambique, Lda	Maputo	99.00%
Vista Alegre Atlantis, SA	Ílhavo	100.00%
Vista Alegre France, SAS	Paris	100.00%
Vista Alegre USA Corporation	New York	100.00%

Source: Annual Report Vista Alegre 2022

## Appendix F – Segments Examples

### Porcelain and related products



Madeira 600 -  
Round box



Heterónimos - Coffee  
Cups & Saucers



Quartz - Tall Vase



Sagres - Dinner Set

### Stoneware



True Scale -  
Rectangular Roaster



Rustic Blend White -  
Soup Plate



Festival - Round  
Casserole



Amazonia - Mug

### Earthenware



Cabbage -  
Concave Leaf



Spring - Pot, Bowl  
and Plate



Sardine - Camões



Cloudy Butterflies -  
Mug

### Crystal and handmade glass



Comtesse -  
Table Lamp



Casino Royal -  
Whisky Decanter



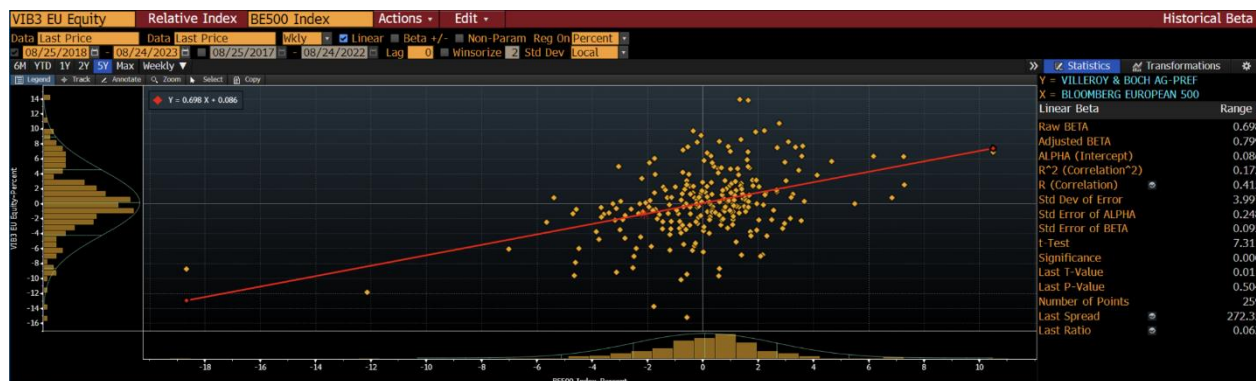
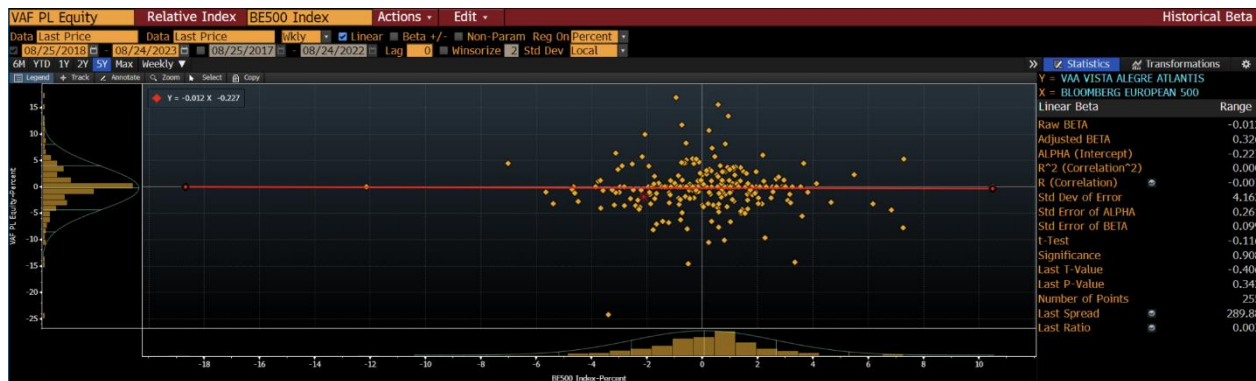
Chartres - Ballon



Pomum -  
Cake Stand (glass)

Source: Vista Alegre and Bordallo Pinheiro internet sites

## Appendix G – VAA and Villeroy & Boch - Bloomberg betas



Source: Bloomberg

## Appendix H – Historical and Forecasted Balance Sheet

Balance Sheet (T EUR)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>ASSETS</b>																
<b>Non-current assets</b>																
Tangible fixed assets	79 704	81 043	89 715	127 299	142 681	134 050	130 034	129 410	134 410	144 302	151 504	156 971	161 152	164 682	167 588	169 939
Goodwill	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711	4 711
Investment properties	30 209	29 993	19 013	1 439	970	930	938	938	938	938	938	938	938	938	938	938
Intangible assets	1 546	1 748	1 403	1 631	1 384	1 621	2 587	1 984	1 984	1 984	1 984	1 984	1 984	1 984	1 984	1 984
Financial investments	175	224	172	182	682	683	683	1 183	1 183	1 183	1 183	1 183	1 183	1 183	1 183	1 183
Use rights assets	0	0	0	0	7 546	7 506	8 239	7 257	7 359	7 462	7 567	7 673	7 781	7 890	8 001	8 113
Deferred taxes	6 685	6 037	4 941	5 535	5 897	4 896	4 312	4 984	4 984	4 984	4 984	4 984	4 984	4 984	4 984	4 984
<b>Total non-current assets</b>	<b>123 029</b>	<b>123 756</b>	<b>119 955</b>	<b>140 796</b>	<b>163 871</b>	<b>154 397</b>	<b>151 503</b>	<b>150 467</b>	<b>155 569</b>	<b>165 564</b>	<b>172 871</b>	<b>178 444</b>	<b>182 733</b>	<b>186 372</b>	<b>189 388</b>	<b>191 852</b>
<b>Current assets</b>																
Inventories	33 973	35 141	33 531	36 610	41 770	43 008	40 082	43 081	41 131	44 158	46 362	48 035	49 314	50 394	51 283	52 003
Accounts receivable	12 466	14 315	18 901	21 734	21 727	13 214	16 572	15 941	15 081	16 191	16 999	17 613	18 082	18 478	18 804	19 068
State and other Public Entities	1 149	1 014	629	2 573	2 152	1 353	5	1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144	1 144
Excess Cash and Bank Deposits	2 220	1 593	4 800	11 145	14 462	17 501	24 060	27 746	17 692	17 157	27 251	38 244	55 780	72 020	87 490	102 860
<b>Total current assets</b>	<b>49 798</b>	<b>52 063</b>	<b>57 861</b>	<b>72 061</b>	<b>80 111</b>	<b>75 077</b>	<b>80 719</b>	<b>87 913</b>	<b>75 048</b>	<b>78 650</b>	<b>91 756</b>	<b>105 035</b>	<b>124 320</b>	<b>142 036</b>	<b>158 721</b>	<b>175 075</b>
<b>TOTAL ASSETS</b>	<b>172 827</b>	<b>175 819</b>	<b>177 816</b>	<b>212 857</b>	<b>243 981</b>	<b>229 473</b>	<b>232 222</b>	<b>238 380</b>	<b>230 617</b>	<b>244 214</b>	<b>264 627</b>	<b>283 480</b>	<b>307 053</b>	<b>328 408</b>	<b>348 109</b>	<b>366 927</b>
<b>EQUITY CAPITAL</b>																
Equity	92 508	92 508	121 927	121 927	134 120	134 120	134 120	134 120	134 120	134 120	134 120	134 120	134 120	134 120	134 120	134 120
Treasury shares	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2
Premium shares	0	0	22 065	22 065	24 280	24 280	25 113	25 113	25 113	25 113	25 113	25 113	25 113	25 113	25 113	25 113
Other equity	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182	38 182
Reserves and retained earnings	-102 345	-101 440	-104 104	-139 938	-131 984	-128 785	-131 558	-128 560	-124 619	-118 181	-107 538	-94 975	-80 549	-65 959	-51 266	-36 476
Net profit for the period	-814	1 797	4 258	7 276	7 226	-2 507	1 592	5 334	3 941	6 439	10 643	12 562	14 427	14 590	14 693	14 790
<b>Equity excluding non-controlling interests</b>	<b>27 529</b>	<b>31 045</b>	<b>82 326</b>	<b>49 510</b>	<b>71 812</b>	<b>65 288</b>	<b>67 447</b>	<b>74 187</b>	<b>76 734</b>	<b>85 671</b>	<b>100 518</b>	<b>115 000</b>	<b>131 291</b>	<b>146 044</b>	<b>160 840</b>	<b>175 727</b>
Non-controlling interests	229	241	271	780	980	1 107	1 111	1 392	1 392	1 392	1 392	1 392	1 392	1 392	1 392	1 392
<b>Total equity capital</b>	<b>27 758</b>	<b>31 286</b>	<b>82 598</b>	<b>50 290</b>	<b>72 792</b>	<b>66 395</b>	<b>68 558</b>	<b>75 579</b>	<b>78 126</b>	<b>87 063</b>	<b>101 910</b>	<b>116 392</b>	<b>132 683</b>	<b>147 436</b>	<b>162 232</b>	<b>177 119</b>
<b>LIABILITIES</b>																
<b>Non-current liabilities</b>																
Long-term bank loans	26 170	24 215	21 799	28 837	68 370	77 366	78 979	73 767	67 738	68 686	73 494	78 639	84 144	89 192	92 760	95 543
Long-term shareholder loans	60 906	60 216	370	26 917	0	0	0	0	0	0	0	0	0	0	0	0
Subsidiaries	2 196	2 763	3 779	5 548	6 768	6 663	9 579	10 936	8 000	8 000	6 000	3 000	3 000	3 000	3 000	3 000
Lease liabilities	0	0	0	0	5 745	5 346	5 947	4 477	4 567	4 658	4 751	4 818	4 885	4 953	5 023	5 093
Provisions	555	538	369	238	238	208	208	208	199	214	224	232	239	244	248	252
Provisions for pensions	2 917	2 363	1 465	1 360	1 194	1 138	1 072	2 458	3 551	3 709	3 786	3 923	4 027	4 116	4 188	4 247
Deferred taxes	12 003	12 304	12 216	9 240	9 289	8 778	8 781	8 903	8 903	8 903	8 903	8 903	8 903	8 903	8 903	8 903
<b>Total non-current liabilities</b>	<b>104 746</b>	<b>102 398</b>	<b>39 997</b>	<b>72 139</b>	<b>91 604</b>	<b>99 532</b>	<b>104 566</b>	<b>100 748</b>	<b>92 957</b>	<b>94 170</b>	<b>97 159</b>	<b>99 515</b>	<b>105 198</b>	<b>110 408</b>	<b>114 122</b>	<b>117 037</b>
<b>Current liabilities</b>																
Short-term bank loans	8 803	7 469	24 209	38 961	29 971	20 562	17 933	16 134	16 360	16 590	16 823	17 059	17 298	17 541	17 787	18 037
Lease liabilities	750	750	0	0	1 787	2 475	2 235	2 726	2 605	2 797	2 936	3 042	3 123	3 192	3 248	3 294
Accounts payable and other debts	28 921	32 192	29 325	48 703	45 925	38 935	37 361	41 957	41 131	44 158	46 362	48 035	49 314	50 394	51 283	52 003
State and other public entities	1 849	1 723	1 688	2 764	1 902	1 574	1 569	1 236	-563	-563	-563	-563	-563	-563	-563	-563
<b>Total current liabilities</b>	<b>40 323</b>	<b>42 134</b>	<b>55 222</b>	<b>90 428</b>	<b>79 585</b>	<b>63 546</b>	<b>59 098</b>	<b>62 053</b>	<b>59 533</b>	<b>62 981</b>	<b>65 598</b>	<b>67 573</b>	<b>69 173</b>	<b>70 564</b>	<b>71 756</b>	<b>72 771</b>
<b>Total liabilities</b>	<b>145 069</b>	<b>144 532</b>	<b>95 219</b>	<b>162 567</b>	<b>171 189</b>	<b>163 078</b>	<b>163 664</b>	<b>162 801</b>	<b>152 491</b>	<b>157 152</b>	<b>162 717</b>	<b>167 088</b>	<b>174 370</b>	<b>180 972</b>	<b>185 878</b>	<b>189 808</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>172 827</b>	<b>175 818</b>	<b>177 817</b>	<b>212 857</b>	<b>243 981</b>	<b>229 473</b>	<b>232 222</b>	<b>238 380</b>	<b>230 617</b>	<b>244 214</b>	<b>264 627</b>	<b>283 480</b>	<b>307 053</b>	<b>328 408</b>	<b>348 109</b>	<b>366 927</b>

Note. Amounts in thousands EUR.

Source: VA annual reports and own calculations.

## Appendix I – Historical and Forecasted Income Statement

Income Statement (T EUR)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenue (sales of goods and services provided)	71 831	75 439	84 981	99 022	120 097	110 379	116 989	143 326	137 103	147 193	154 539	160 116	164 381	167 981	170 945	173 344
Production variation	3 540	690	-447	39	4 139	1 521	-5 073	2 528	0	0	0	0	0	0	0	0
Other operating income and revenues	1 360	2 014	3 316	6 848	5 569	7 406	9 498	7 848	6 855	7 360	7 727	8 006	8 219	8 399	8 547	8 667
Operating Income	76 731	78 143	87 850	105 909	129 805	119 306	121 414	153 702	143 958	154 552	162 266	168 122	172 600	176 380	179 492	182 011
Cost of goods sold and materials consumed	24 217	22 728	26 068	31 254	40 073	41 498	32 127	56 852	50 728	54 461	55 634	56 041	55 889	57 114	58 121	58 937
Supplies and external services	16 618	16 896	17 292	21 902	21 175	20 226	19 892	19 544	19 194	20 607	21 636	22 416	23 013	23 517	23 932	24 268
Personnel costs	27 398	27 203	28 995	33 505	42 190	40 552	44 798	48 357	50 728	52 989	54 089	56 041	57 533	58 793	59 831	60 670
Provisions and impairment losses	30	-122	-155	48	284	352	-138	9	0	0	0	0	0	0	0	0
Other operating expenses and losses	1 673	1 767	1 908	1 415	968	1 016	1 898	1 422	1 250	1 300	1 352	1 393	1 420	1 449	1 478	1 507
Operating Expenses	69 936	68 472	74 108	88 124	104 690	103 644	98 577	126 184	121 900	129 358	132 710	135 890	137 856	140 873	143 362	145 383
<b>EBITDA</b>	<b>6 795</b>	<b>9 671</b>	<b>13 742</b>	<b>17 785</b>	<b>25 115</b>	<b>15 662</b>	<b>22 837</b>	<b>27 518</b>	<b>22 057</b>	<b>25 195</b>	<b>29 556</b>	<b>32 232</b>	<b>34 743</b>	<b>35 507</b>	<b>36 130</b>	<b>36 628</b>
Increases of fair value	1 404	1 332	375	-	-	-	-	-	-	-	-	-	-	-	-	-
Provision Adjustment (Pension without fund)	-	-	-	-	-	-	-	-2 458	-	-	-	-	-	-	-	-
Depreciation	-5 380	-5 370	-5 783	-6 044	-10 611	-12 832	-12 115	-12 254	-12 769	-13 709	-14 393	-14 912	-15 309	-15 645	-15 921	-16 144
Amortization	-122	-184	-631	-416	-396	-334	-1 377	-1 473	-1 473	-1 473	-1 473	-1 473	-1 473	-1 473	-1 473	-1 473
<b>EBIT</b>	<b>2 697</b>	<b>5 449</b>	<b>7 703</b>	<b>11 325</b>	<b>14 108</b>	<b>2 496</b>	<b>9 345</b>	<b>11 333</b>	<b>7 815</b>	<b>10 013</b>	<b>13 690</b>	<b>15 846</b>	<b>17 961</b>	<b>18 389</b>	<b>18 736</b>	<b>19 011</b>
Financial Income	3	0	22	8	9	121	169	563	563	563	563	563	563	563	563	563
Financial Expenses	-3 357	-3 540	-3 078	-2 542	-5 528	-4 803	-5 940	-5 413	-5 001	-4 700	-4 173	-4 410	-4 660	-4 925	-5 170	-5 347
<b>Pre-Tax Profit</b>	<b>-657</b>	<b>1 909</b>	<b>4 647</b>	<b>8 791</b>	<b>8 589</b>	<b>-2 186</b>	<b>3 574</b>	<b>6 483</b>	<b>3 378</b>	<b>5 876</b>	<b>10 080</b>	<b>11 999</b>	<b>13 864</b>	<b>14 027</b>	<b>14 130</b>	<b>14 227</b>
Income tax	-205	-234	-428	-1 567	-1 277	-288	-1 974	-889	563	563	563	563	563	563	563	563
<b>Consolidated net result</b>	<b>-862</b>	<b>1 675</b>	<b>4 219</b>	<b>7 224</b>	<b>7 312</b>	<b>-2 454</b>	<b>1 600</b>	<b>5 594</b>	<b>3 941</b>	<b>6 439</b>	<b>10 643</b>	<b>12 562</b>	<b>14 427</b>	<b>14 590</b>	<b>14 693</b>	<b>14 790</b>

Note. Amounts in thousands EUR.

Source: VA annual reports and own calculations.

## Appendix J – Historical and Forecasted Financial Indicators

Financial Indicators (T EUR)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenue	71 831	75 439	84 981	99 022	120 097	110 379	116 989	143 326	137 103	147 193	154 539	160 116	164 381	167 981	170 945	173 344
Revenue growth	-	5,02%	12,65%	16,52%	21,28%	-8,09%	5,99%	22,51%	-4,34%	7,36%	4,99%	3,61%	2,66%	2,19%	1,76%	1,40%
EBITDA	6 795	9 671	13 742	17 785	25 115	15 662	22 837	27 518	22 057	25 195	29 556	32 232	34 743	35 507	36 130	36 628
EBITDA margin	9,46%	12,82%	16,17%	17,96%	20,91%	14,19%	19,52%	19,20%	16,09%	17,12%	19,13%	20,13%	21,14%	21,14%	21,14%	21,13%
EBIT	2 697	5 449	7 703	11 325	14 108	2 496	9 345	11 333	7 815	10 013	13 690	15 846	17 961	18 389	18 736	19 011
EBIT margin	3,75%	7,22%	9,06%	11,44%	11,75%	2,26%	7,99%	7,91%	5,70%	6,80%	8,86%	9,90%	10,93%	10,95%	10,96%	10,97%
Net Income	-862	1 675	4 219	7 224	7 312	-2 454	1 600	5 594	3 941	6 439	10 643	12 562	14 427	14 590	14 693	14 790
Net Debt	94 409	91 057	41 578	83 570	91 411	88 248	81 034	69 358	73 578	75 574	70 754	65 314	53 670	42 859	31 328	19 106
Net Debt/ EBITDA	13,89	9,42	3,03	4,70	3,64	5,63	3,55	2,52	3,34	3,00	2,39	2,03	1,54	1,21	0,87	0,52
Book Debt Ratio	56%	53%	26%	44%	43%	46%	45%	41%	40%	38%	37%	37%	36%	35%	34%	33%
Interest Coverage Ratio	0,80	1,54	2,50	4,46	2,55	0,52	1,57	2,09	1,56	2,13	3,28	3,59	3,85	3,73	3,62	3,56
Cost of Debt	-	3,66%	3,32%	5,48%	5,84%	4,54%	5,62%	5,15%	5,15%	5,15%	4,50%	4,50%	4,50%	4,50%	4,50%	4,50%
NOPLAT	2 185	4 366	6 460	9 102	11 244	2 197	8 314	11 835	7 205	8 909	11 759	13 431	15 071	15 403	15 673	15 887
Invested Capital	99 444	100 813	110 081	134 706	169 709	159 699	160 360	154 490	163 538	174 744	182 960	189 219	194 048	198 155	201 570	204 371
ROIC	2,20%	4,33%	5,87%	6,76%	6,63%	1,38%	5,18%	7,66%	4,41%	5,10%	6,43%	7,10%	7,77%	7,77%	7,78%	7,77%
ROE	-0,93%	1,81%	2,93%	5,02%	4,62%	-1,55%	1,00%	3,51%	2,47%	4,04%	6,68%	7,89%	9,06%	9,16%	9,23%	9,29%

Note. Amounts in thousands EUR.

Source: VA annual reports and own calculations.