ISCTE Business School
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EQUITY VALUATION OF AMORIM GROUP

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Project submitted as a partial requirement for the conferral of

Master in Finance

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Abstract

The present project intents to perform a valuation of Corticeira Amorim SGPS, S.A. – a Portuguese company that is a part of the Amorim Group, one of the most successful Portuguese origin groups in recent years and the worldwide market leader in the cork sector.

The journey of the Amorim Group represents one of the most successful stories in the Portuguese market through the 20th and 21st centuries, marked by a constant search for success, sustainability and innovation.

This project will be supported by several different approaches and theoretical models and, ultimately, will provide a target price of the company's shares as of 31st December 2018.

Hence, the primary goal of this project is to deliver potential investors with tools to understand if Corticeira Amorim's shares are being priced above or below its true intrinsic value.

After the valuation process was concluded, a target price of €10.41 was obtained, leading to a recommendation to acquire the shares of Corticeira Amorim.

Keywords: Valuation; Discounted Cah Flow; Multiples; Corticeira Amorim

JEL Classification: O22 / G32

Resumo

O projecto que aqui se apresenta tentará providenciar uma avaliação da Corticeira Amorim SGPS, S.A. – uma empresa Portuguesa pertencente ao Grupo Amorim, um dos grupos de empresas de origem Portuguesa com maior êxito nos anos recentes e líder de mercado mundial no sector da cortiça.

O percurso do Grupo Amorim representa uma das histórias de maior sucesso do mercado Português, ao longo dos séculos 20 e 21, marcada por uma procura de sucesso, sustentabilidade e inovação.

Este projecto será suportado por várias abordagens e modelos teóricos e, em última instância, irá alcançar um preço de mercado da acções da empresa com referência ao dia 31 de Dezembro de 2018.

Deste modo, o objecto principal deste projecto é presentear potenciais investidores com ferramentas que lhes permitam compreender se as acções da Corticeira Amorim estão avaliadas acima ou abaixo do seu verdadeiro valor intrínseco.

Após a conclusão do processo de avaliação, um preço de mercado de €10,41 foi obtido, projectando-se a recomendação da aquisição das acções da Corticeira Amorim.

Palavras-chave: Avaliação; Cash Flow Descontado; Múltiplos; Corticeira Amorim

Classificação JEL: O22 / G32

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1. Introduction

The aim of this project, presented hereby as a partial requirement for the conferral of Master in Finance, is to provide a reliable equity value of Corticeira Amorim, giving an insight into the main practices used in valuation, while providing potential investors with tools to make a decision regarding an investment in the referred company. To this purpose, this project will gather historical information about the Amorim Group, in order to compute a target price for its listed shares by the end of 2018.

Corticeira Amorim is part of a family-owned Portuguese Group, the Amorim Group, one the largest group of companies of Portuguese origin. Presently, the company is listed in the Portuguese Stock Market, currently placed as the worldwide market leader in the cork sector.

Through its 5 major business units (Raw Materials, Cork Stoppers, Floor and Wall Coverings, Composite Cork and Insulation Cork), Corticeira Amorim has been constantly thriving in the market, offering sustainable and differentiated solutions and best practices all around.

In addition to the executive summary, this project will be structured in different chapters. Starting with chapter 2, in which an in-deep Literature Review will present the existing main valuation methodologies, with a natural emphasis on the chosen models to value the company, chapter 3 will describe the methods used for collecting the data to be analyzed.

Chapter 4 will follow, providing an overview of the Amorim Group as well as the markets in which the group operates, along with the most important current macroeconomic trends.

The outcome of this valuation project will be presented in chapter 5, while conclusions and a final recommendation will be provided in chapter 6.

2. Literature Review

2.1. Introduction

The following chapter will focus on presenting the valuation models that shall be addressed in this project. The crucial role of corporate valuation in the financial world, as the process that aims to accurately estimate the financial value of a company's assets and liabilities, has been the theme of several studies performed by some of the most notable financial authors.

According to studies made by Copeland et al. (2000), the major key to valuation's importance is that it allows the analyst to identify which investments are actually generating value, as well as, the drivers behind such value creation. A specific type of value is approached in this study, with the authors outlining the importance of valuation to a business manager of long-term successful company attempting to create value for shareholders.

Damodaran (2006) goes as far as considering that "valuation can be considered the heart of finance". The author claims that, considering the overall importance of valuation in corporate finance, whereas research on valuation models and metrics has been a heavy scrutinized topic, the estimation of cash flows and reconciliation between several versions of valuation models was not receiving enough attention, at that date.

The author also points out the importance of market efficiency. In a summarized manner, Damodaran (2006) defines an efficient market, as a market in which the market price is an unbiased estimate of the true value of the investment in question. However market efficiency does not imply for the market price to be an exact replication of its investment's true value. Detecting this "deviations", as defined by the author, may be the difference between making a good or a bad investment decision, and its early detection by investors, is relying on their accurate use of valuation models at their disposal.

Fernández (2007) outlined the significant role that a clear understanding of the available mechanisms of corporate valuation may offer to investors and/or shareholders, not only in assessing investment options but also in continuously valuing the creating value aspect of their target/company.

In fact, determining the true value of a company, through corporate valuation models, is not only important from a business planning perspective to shareholders but, similarly, assumes a

pivotal role for shareholders to have an accurate understanding of their shares when trying to enter in a selling agreement for example.

In this era, the fact that the trending role of technological advances is becoming more and more apparent in the Financial Markets, allowed for an increase in the constant flow of up-to-date financial information, meaning that investors have a greater amount of reliable and updated information at their disposal.

Bearing this in mind, choosing the right valuation approach will, ultimately, allow for investors and shareholders to use the potential of the data gathered to its full extent, but such analysis is only possible with a complete understanding of the characteristics of each model and its eventual applicability to the company under analysis, as it shall be addressed in chapter 2.3.

2.2. Valuation Models

As previously stated, there exist several Valuation Models that may be used when valuing a company, depending on its specific nature and respective share capital structure, each containing different assumptions, as well as advantages and disadvantages.

Please bear in mind that an accurate understanding of the company to be valued and the choice of the most indicated method to use is, generally, regarded as the first step in valuation.

Studies by notable authors in the field of Finance such as Fernández (2007) and Damodaran (2002) provides us with most used Valuation Models. As both authors utilize identical similar classification schemes, this project will focus on the four main approaches to Valuation, as provided by Damodaran (2002) in its systematization, as follows:

Table 1 – Valuation Approaches and Models

Main Valuation Models			
Discounted Cash Flow Valuation	**Liquidation and Accounting Valuation**	**Relative Valuation (Multiples)**	**Contingent Claim Valuations (Options)**
Free Cash Flow to the Firm (FCFF)	Liquidation Valuation	Enterprise Value to EBITDA Ratio (EV/EBITDA)	Black-Scholes Model
Free Cash Flow to Equity (FCFE)	Accounting Valuation	EV/EBIT	Binomial Model
Adjusted Present Value (APV)	Book Value Based Valuation	EV/Sales	
Economic Value Added (EVA)		Price-to Earnings Ratio (PER)	
Discounted Dividends (DDM)		Etc.	

Source: Adapted from Damodaran (2002)

The following pages of the present chapter have a special emphasis on the two Valuation Models chosen for this valuation: the Discounted Cash Flow Valuation (Free Cash Flow to the Firm approach) and the Relative Valuation (Multiples)

2.2.1. Discounted Cash Flow Valuation

In the Finance field, Discounted Cash Flow (DCF) Valuation is widely regarded as one of the most consistent and accurate Valuation Models.

For example, Fernández (2007) proclaims that "the methods that are increasingly popular and are conceptually "correct" are those based on cash flow discounting", since they allow investors to understand a company's ability to generate cash flow.

In short, the most important assumption used in discounted cash flow valuation is that an investment is made to generate future wealth.

This notion is outlined by Koller *et al*. (2010) that suggest that companies may create value by investing capital to generate future cash flows at rates of return that exceed their cost of capital.

Damodaran (2006) also supports the concept that investors will acquire assets relying on an expectation that such assets will generate future cash flows.

Therefore, when valuing a company using the referred model, one must account the present value of the expected cash-flows, discounted at a rate that accurately reflects the cost of capital required to generate said cash flows. This notion, presented in DCF Valuation, may be also considered as the risk of the investment.

In essence, Damodaran (2006) defines that, in DCF Valuation, "the value of an asset is the present value of the expected cash flows on the asset, discounted back at a rate that reflects the riskiness of these cash flows."

In this model, the Net Present Value (NPV) of a given investment may be determined by the following formula:

$$NPV = \sum_{t=0}^{t=n} \frac{FCF_t}{(1+r)^t} \quad (1)$$

Where,

n = The number of periods in the life of the asset
FCF_t = Free Cash Flow of the project considering t period
r = Discounted rate reflecting the riskiness of the estimated cash flows

In practical terms, although DCF Valuation is increasingly popular, the computation of the formula presented above is associated with a substantial level of uncertainty, relying comprehensively on the accurateness of the predictions and assumptions chosen.

This model of valuation has a strong emphasis on the Time Value of Money. As above-stated, the accuracy of this model is strongly dependent on the assumptions used, especially on two components: the expected cash flows and the discount rate. In logical terms, the precision of the valuation increases the closer these assumptions are when compared to reality.

For Brealey & Myers, Future Cash Flows (FCF) are defined as the amount of cash not required for operations or reinvestment, meaning, the amount of cash that a firm may distribute to shareholders after paying the investments necessary for its growth, while for Clayman *et al.* (2012) the FCF is the most accurate indicator to consider when valuing a company, since it measures the actual cash that would be available for a company's investors after covering all the operational expenses and associated liabilities.

Considering that a company may incur in financing operation either by equity or debt, there exist two main approaches to DCF Valuation: Firm and Equity Approaches. These two will be addressed in the following paragraphs of this chapter.

2.2.1.1. Firm Approach

The most common measure accepted in the Firm Approach of DCF Valuation is the Free Cash Flow to the Firm (FCFF), which Damodaran (2002) considers as the value of a company that is obtained after discounting expected cash flows to the firm at the weighted average cost of capital (WACC).

In essence, the FCFF measures the net amount of cash flow that is generated for the firm, including expenses, taxes, net working capital and investments in fixed assets and may be obtained using the following formula:

$$FCFF = EBIT \times (1 - t) + Depreciation\ and\ Amortization - \Delta Net\ Working\ Capital\ Needs - Capex \quad (2)$$

Furthermore, this leads us to the concept of Enterprise Value, which may be computed, as Damodaran (2002) suggested, by the discounted expected cash flows at the WACC, while bearing in mind the Terminal Value at perpetuity, according to the following formula:

$$Enterprise\ Value = \sum_{t=1}^{t=n} \frac{FCFF_t}{(1 + WACC)^t} + \frac{Terminal\ Value_n}{(1 + WACC)^n} \quad (3)$$

Where,

$FCFF_t$ = Free Cash Flow of the project considering t period
$Terminal\ Value_n$ = Free Cash Flow of the company in period n
WACC = Weighted Average Cost of Capital

The Terminal Value introduces the impact of the long-term cash flows in the Firm approach of DCF Valuation, considering the assumption that a given company will generate future cash flows until perpetuity and may be calculated by the formula below:

$$Terminal\ Value = \frac{FCFF_t}{Discount\ rate - g} \quad (4)$$

One should notice that, while the Terminal Value serves to measure the impact of future Cash Flows, both the Discount rate and the expected growth rate of cash flows (g) must be calculated using the present day available data.

The growth rate of a company depends heavily on one determining factor, *i.e.*, the growth rate of the economy in which said company is comprised. This notion is supported by Damodaran (2002) "since no firm can grow forever at a rate higher than the growth rate of the economy in which it operates, the constant growth rate cannot be greater than the overall growth rate of the economy."

Giving its notorious importance in DCF Valuation Models, this chapter will now focus on the specific computation of the WACC.

2.2.1.1.1. WACC (Weighted Average Cost of Capital)

The WACC may be defined as the discount rate used in Valuation Models as a firm's weighted average rate of the cost of capital that may be raided from two sources, Equity and Debt. Fernández (2009) defines this concept as "the rate at which the Free Cash Flows must be discounted (…)".

WACC may be calculating in the following equation:

$$WACC = \frac{E}{D+E} \times K_E + \frac{D}{D+E} \times K_D \times (1-t) \quad (5)$$

Where,

E = Market Value of the Equity

$\frac{E}{D+E}$ = Equity-to-Value ratio

K_E = Cost of Equity

D = Market Value of the Debt

$\frac{D}{D+E}$ = Debt-to-Value ratio

K_D = Cost of Debt

t = Corporate income tax rate

As one can see by the formula presented above, the computation of the WACC allows the incorporation of both the capital structure, via the Equity and Debt-to-Value ratios and the interest tax shields in the valuation model.

On the other hand, oversimplifying calculations utilizing only one discount rate, as is the case of the WACC, may lead to insufficiencies in accurateness of the valuation process. For example, in case the company has a considerable amount of convertible debt or tax-exempt

debt, such specificities are, in a general way, not integrated in the formula used to compute the discount rate. Also studies by Luehrman (1997) pointed to the limitation of using a stationary share capital structure in the valuation.

Furthermore, a correct estimation of the WACC also relies on an accurate estimation of the cost of equity and capital to a said firm.

Damodaran (2002) states that the cost of capital is influenced by three factors: the risk-free rate (in practical terms, using the yield-to-maturity, recent debt issuing or synthetic rating), the default risk of the company and the tax disadvantage associated with debt.

The computation of the cost of equity is usually not as straightforward as the cost of debt. This is the case since, whereas in debt instruments there are pre-arranged agreements that are deemed as obligations to the company, the company's cost of equity represents an underling rate of return which a shareholder demands in exchange for buying a share and, essentially, assuming its several forms of risk exposure.

In the Finance field, the most common alternative to calculate the cost of equity is the Capital Asset Pricing Model (CAPM) which shall be addressed next.

2.2.1.1.2. Capital Asset Pricing Model

As indicated by Damodaran (2002), CAPM is "the most commonly accepted risk and return model to calculate the cost of equity".

The CAPM model, which was developed by Sharpe (1964) and Lintner (1965), based on the initial work of Markowitz (1959), presents a relation between the risk of holding shares of said company and its respective contribution, in terms of return, to an investor's portfolio.

Notable authors in the financial field, such as, Fama. and French (2004) entitle this model as the "birth of asset pricing theory".

In theory, the main concept behind CAPM is that investors should be rewarded in two ways for their respective investments, firstly, by the time value of money and also by the risk they undertake.

The following formulas should be used in the CAPM in order to calculate the cost of equity:

$$Cost\ of\ Equity = Risk\ Free\ Rate + Beta \times Market\ Risk\ Premium \quad (6)$$

Which translates, in mathematical terms, to:

$$K_E = R_f + \beta_L \times \left(R_M - R_f\right) \quad (7)$$

Where,

K_E = Cost of Equity

R_f = Risk-free rate

β_L = Beta Levered

$R_M - R_f$ = Market risk premium

Hence, the cost of equity or the given return on an asset, is computed by adding the risk-free rate to the product of the Beta Levered and the Market risk premium.

While some of these concepts have been discussed in the previous chapter, its comprehension is essential to understand their respective importance in valuation models.

2.2.1.1.2.1. Risk-free rate

Conceptually, Damodaran defines a risk-free rate investment as an investment deprived of default risk and reinvestment risk. Regarding the first condition, the risk-free rate is commonly associated with government securities. Additionally, in what concerns the timing of the investment, the author defends that since "the present value effect of using year-specific risk-free rates tends to be small", the most suitable method is to use a risk-free proxy with the maturity of the cash flows that will be analyzed.

Another important factor to consider when selecting the risk-free rate to use in the Valuation Model is the consistency between the currency in which the Cash Flows are being valued and the referred risk-free proxy of the government bond.

Lastly, in logical terms, if the valuation is focused on a European Country, as is the case of Corticeira Amorim, the chosen government bond should be of a European government bond, ideally the yield of the German bond as it offers the slighter risk on investment in its respective continent.

2.2.1.1.2.2. Beta

According to Koller et al. (2005) Beta represents "a stock's incremental risk to a diversified investor, where risk is defined by how much the stock covaries with the aggregate stock market."

In the financial field, it is widely considered that a portfolio is generally exposed to two types of risk: unsystematic risk (also referred to as specific risk) and systematic risk (also referred to as market risk or non-diversifiable risk).

Unsystematic risk is particularly related to a company's current situation and how such company-related circumstances may impact its respective stock's performance in the markets. As such, portfolio diversification is viewed as the most effective method of minimizing an investor's exposure to unsystematic risk.

Considering the above, in the CAPM, the Beta denotes the sensitivity of a determined share's return in accordance with fluctuations in a market portfolio:

$$\beta = \frac{cov(R_E, R_M)}{\sigma^2\,(R_M)} \quad (8)$$

Where,

R_E = Cost of equity
R_M = Return of the market portfolio
$\sigma^2\,(R_M)$ = Variance of the market portfolio
Considering the formula in which it is computed, the closer the value of the beta is to 1, the bigger the correlation between the share and the market return.

Consequently, a beta of 0 indicates that a given share is uncorrelated with the market return, while a beta of 1 denotes that a given share's return will vary exactly with its benchmark fluctuations. Additionally, a negative beta of -1 means that a stock is inversely correlated to the market return.

Furthermore, studies by Damodaran (2002) serve to outline the importance of different financing structures that companies have at their disposal, when computing the Beta.

Said author introduces the notion of Levered and Unlevered Betas (β_L and β_U, respectively). Whereas the Unlevered Beta, or the Equity Beta, represents the Beta of a company that does

not have any Debt, the Levered Beta represents Beta of a company that also possesses a level of Debt when compared to its Equity.

In logical terms, a company that is levered, meaning that it has a level of Debt, shall own riskier shares to invest than an unlevered company.

Bearing in mind these two additional concepts, the Levered Beta formula is as follows:

$$\beta_L = \beta_{U+}\beta_U \times (1-t) \times \frac{D}{E} \quad (9)$$

Where,

β_L = Levered Beta

β_U = Unlevered Beta

t = Corporate income tax rate

$\frac{D}{E}$ = Debt to Equity ratio

2.2.1.2. Equity Approach

Besides the FCFF model approach, studies by Damodaran (2002), simultaneously, present the concept of the Free Cash Flow to Equity (FCFE) model as the value of the residual cash flows that may be disposed to the firm's equity shareholders, after all its expenses, reinvestments needs, net debt payments (including interest) and tax obligations are paid.

In short, this value represents the leftover cash after the company meets all its operational and financial obligations and may be obtained from the previously described FCFF value, as presented in the following formula:

$$FCFE = FCFF - Interest\ expenses\ \times (1-t) + \Delta\, Debt \quad (10)$$

Having summarized the main aspects that should be considered when performing DCF valuation, in both the Firm and Equity approaches, the following chapter will focus on another type of Valuation Model – the Economic Value Added model.

2.2.1.3 Economic Value Added

The Economic Value Added model, also commonly referred to as the EVA model, is one type of valuation model categorized as excess return model. According to this type of valuation models, an investment only increases the value of a business if it has a positive net present value and if its Return on Equity (ROE) surpasses the cost of equity (R_E). Hence, the

conception of these models aims to assess the performance of companies, not relying exclusively on the volatility of its corresponding shares' performance in the market.

EVA, as defined by Damodaran (2002), "measures the dollar surplus value created by an investment or a portfolio of investments", and may be calculated using the Return on Capital (ROI) or the NOPAT (Net Operating Profit after Tax) and the previously mentioned WACC.

Thus, the formula for computing the EVA is as follows:

$$EVA = NOPAT - (WACC \times Invested\ Capital) \quad (11)$$

As suggested by Damodaran, integrating this formula in the concept of the NPV of an investment, as presented in chapter 2.2.1 – Discounted Cash Flow Valuation, the following formula allows users to calculate the NPV of an investment:

$$NPV = \sum_{t=0}^{t=n} \frac{EVA_t}{(1+WACC)^t} \quad (12)$$

Where,

n = The number of periods in the life of the asset
EVA_t = The Economic Value Added by the investment in year t
WACC = Weighted Average Cost of Capital
While bearing in mind the formula presented above, it may be outlined that one of the main advantages of the application of the EVA valuation is that it takes into account, practically, all the costs that are related with an investment project. Furthermore, it serves the purpose of a useful management related tool in order to accurately measure value creation or, in other words, economic profit.

However, even though the main disadvantage associated with this valuation model is the lack of practicability of the calculations, authors such as Fernández (2001) also question the usefulness of EVA valuation as measurement of value creation.

The author defends that, as the EVA valuation formula uses the book value of the company's equity/debt and return on assets (ROA) instead of the equity's market value and shareholder's return, respectively, the true value creation of an investment to the company's shareholders is not being accurately measured.

2.2.2. Relative Valuation (Multiples)

The process of Relative Valuation, commonly referred to as the method of Multiples Valuation, if one of the types of valuation models that has been raising its popularity in the past 30 years.

The approach inherent to this valuation model is to use a company's valuation, in comparison to others companies in the market, *i.e.*, quantifying the disparity, if it exists, between a company's assets and its comparable assets current valuation in the market.

Damodaran (2006) supports this notion stating that, in short, with this model of valuation, assets are valued based upon how similar assets are priced in the market. With this in mind, the author concludes that, if the market is currently valuing certain assets in an amount, this same amount should be obtained by the valuation obtained when using a discounted cash flow model (when applied to the same set of assets).

This idea is supported by some authors such as Fernández (2001), that suggest that the Relative Valuation might be used in a second phase of valuation, for instance, after a valuation based on a discounted cash flow model has been computed, in order to critically compare the obtained results.

Koller *et al*. (2005) framework the Relative Valuation as a complement to DCF valuation, while raising an important topic regarding Relative Valuation. The authors question the practicably of this valuation model if the companies that are deemed as comparable are, in fact, distant from the company to value.

Bearing this potential limitation, authors such as Koller *et al*. (2005) propose several factors that may be considered in order to deem a company as comparable, such as having similar expected growth rates and similar Return on Invest Capital (ROIC). Additionally, they advise using forward-looking multiples based on future projections instead of past data, such was Enterprise Value/EBITDA and, lastly, adjusting the enterprise-value multiples for non-operating assets.

Logically, a critical step of this type of valuation is to choose which Multiples to use when computing the valuation.

Notable authors in the financial field, such as Fernández (2001) and Damodaran (2006) consider the following two main groups of Multiples:

Table 2 – Main Groups of Relative Valuation Multiples

	Multiple	Determinants
Enterprise Value Multiples	Enterprise value/EBITDA	Growth, Capital, Investment, Risk, Taxes
	Enterprise Value/EBIT	Growth, Capital, Risk, Taxes
	Enterprise Value/Sales	Growth, Capital, Risk, Margins, Taxes
Equity Value Multiples	Price-to-Earnings (PER)	Growth, Risk, Payout, Financial Structure
	Price-to-Cash Flow	Growth, Capital, Investment, Risk, Taxes, Financial Structure
	Price-to-Book Value	Growth, Risk, Payout, Equity

Source: Adapted from Damodaran (2006)

As per the work of Fernández (2001) the most suitable Relative Valuation Multiples for companies include (i) the PER, (ii) the Enterprise Value (EV)/EBITDA and (iii) the Enterprise Value (EV)/Sales.

Since this concept has not been previously refereed, it should be noted that the formula of the PER multiple is as follows:

$$PER = \frac{Market\ Price\ per\ Share}{Earnings\ per\ Share} \quad (13)$$

This multiple may be considered useful to attest the associated risk and growth of a stock, for companies with similar market exposure and projected growth rates. Nevertheless, since this calculation may consider several non-operating incomes, it may easily skewed.

In the financial field, Enterprise Value Multiples are more popular among authors such as Koller *et al*. (2005). The rationale associated with this view, is that Equity Value Multiples' values may be significantly influenced by a company's specific capital structure and management decisions.

As previously referred, two of the most popular Enterprise Value Multiples are the EV/EBITDA and the EV/Sales.

Koller *et al*. (2010) claim that EV/EBITDA is the most accurate multiple since the EBITDA (i) does not include one-time costs (unlike the case of net income) and (ii) is less likely to be influenced by a company's capital structure.

2.3. Choosing a valuation model

Furthermore, even considering the above stated usefulness of valuation models, studies by the same author, Fernández (2009), suggested that all of the most popular valuation models are envisaged to have the same outcome value, since "all the methods analyze the same reality under the same hypotheses". From the author's point of view, the only difference between valuation models may be found in the cash flows considered as the respective starting point of each valuation model, a topic to be addressed in the next chapters.

However, when choosing a valuation model, one must account several key factors that may impact, critically, the valuation outcome.

As such, Damodaran (1994) outlines three types of uncertainty that may be deemed as considerably impactful, as listed below.

- Estimation Uncertainty – the conversion of the raw data collected into inputs in order for that information be used in the respective valuation models;
- Firm-Specific Uncertainty – the performance of a company may deviate greatly from our expectations in the estimation process; and
- Macroeconomic Uncertainty – the alteration in several macroeconomic factors can affect the accuracy of the valuation model, for example, a change in interest rates.

Taking into account the several valuation models approached in this chapter, and its applicability in this study, in accordance with the capital structure of Corticeira Amorim (that will be presented in the following chapter), the Discount Cash Flow Model utilizing the Firm Approach seems to be the most suitable to value the share price range of Corticeira Amorim. However, a Relative Valuation, using EV/EBITDA and PER as Multiples, will also be carried out to further complete this project.

3. Data

The overall trustworthiness of this valuation project is, critically, reliant on the quality of the information collected and, subsequently, used when computing both valuation models that shall be used in chapter 5. –Discounted Cash Flow Model (Firm Approach) and the Relative Valuation using Multiples.

As described throughout chapter 2, these models may be used to value companies based on their respective historical financial data and economic environment.

Nonetheless, logically, a precise selection and treatment of this information is particularly important in a valuation project.

Hence, the data that will be considered in the following chapters will be obtained in completely reliable sources only, such as the official Annual Reports of Corticeira Amorim and Reuters portal. In case any additional website or paper is consulted, it will be promptly identified in References.

4. Industry and Company Overview

The following chapter will be divided in two main themes.

Initially, an overall company overview of Corticeira Amorim will be given, followed by a cork sector analysis as of 2018.

4.1. Corticeira Amorim SGPS, S.A – Company Overview

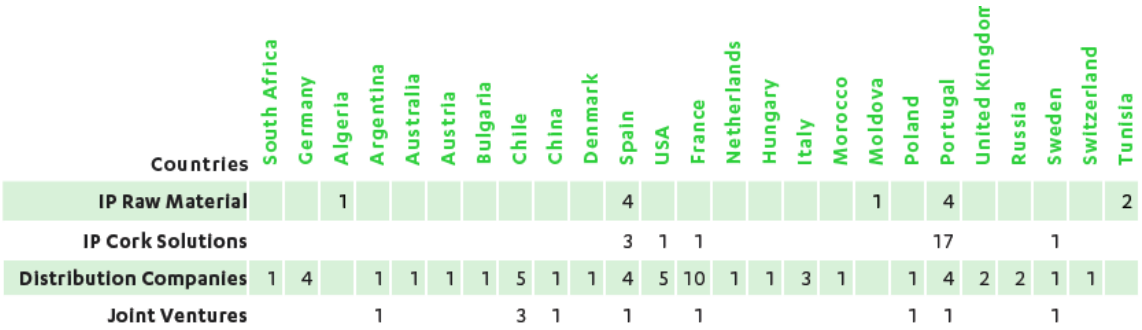
As of the major Portuguese holding companies, Corticeira Amorim is part of the well regarded Portuguese Amorim Group that, since its immense growth in the 20th century, is considered one of the most important multinational corporation groups of Portuguese origin.

The Group operates in several market sectors. However, it is most known for its activities developed in the cork sector, in which Corticeira Amorim is the worldwide market leader, operating as the sector's largest producer and assuming a role unlike any other company in this sector.

Amorim Group adopted a maxim that accurately translates the Group's positioning in the worldwide market throughout the years: "not just one market, not just one client, not just one currency, not just one product", exploring several different sectors such as tourism and real estate, in addition to the previously mentioned cork sector.

The Group's current portfolio consists of over 250 "main agents", whose worldwide presence is displayed in the figure below (and further complemented in Appendixes 1 and 2):

Figure 1 – Amorim Group Geographical Distribution



Countries	South Africa	Germany	Algeria	Argentina	Australia	Austria	Bulgaria	Chile	China	Denmark	Spain	USA	France	Netherlands	Hungary	Italy	Morocco	Moldova	Poland	Portugal	United Kingdom	Russia	Sweden	Switzerland	Tunisia
IP Raw Material			1								4							1		4					2
IP Cork Solutions											3	1	1							17			1		
Distribution Companies	1	4		1	1	1	1	5	1	1	4	5	10	1	1	3	1		1	4	2	2	1	1	
Joint Ventures				1				3	1		1		1						1	1			1		

Source: Company Information

The Group's positioning and overall importance within the Portuguese market, transversal to all the companies that are part of its highly valued portfolio, is considered unparalleled in areas such as innovation and design.

4.1.1. Company History

Corticeira Amorim was founded in 1870 by António Alves Amorim and has been a family owned group throughout all its history. In fact, the first company of the Group was established as Amorim & Irmãos, Lda., in 1922, by the sons of António Alves Amorim.

The Group began to gain national recognition in the 1930s when it became the country's largest cork manufacturing. In addition, that decade was marked by growth of the cork sector, a factor that promoted Amorim Group's early internationalization.

In 1935, with the acquisition of a warehouse in Abrantes, strategically located close to the Portuguese main cork forest, the Group tried to prevent foreign players to stranglehold its position in the market since, at that time, Portugal only processed around 5% of raw materials, while the rest was monopolized by foreign companies.

During the post-war period, the Group continued its steady growth, expanding its portfolio of clients to emerging markets after the wars, such as Eastern Europe. It was also during this decade that the third generation of the Amorim Family assumed the control of the Group, committing to implement several innovations to transform the Portuguese cork industry.

The decade of 1960's was marked by the adoption of the company's before mentioned maxim that still stands to this day: "not just one market, not just one client, not just one currency, not just one product". This maxim was aligned with a new verticalization orientated strategy that the Group adopted in this decade, with the aim of achieving leadership of production and

exportation of cork products. The country's cork sector economic indicators were very favorable during this decade, with Portugal consolidating its position as the world's largest cork producer (raw materials only). In this regard, approximately 80% of the exported cork was exported in a raw state and, subsequently, processed in other counties. During this decade, the Group also proceeded to acquire and create several companies, enhancing its portfolio and position in the market.

The seventies introduced an important change in the Portuguese cork sector, since it was in that decade that 50% of the raw material exported, which represented 75% of the Portuguese exportation in this sector, became industrially manufactured in the country.

The decade of the 1980's was marked by an important milestone in the Group's history, as the Group created Labcork, Laboratório Central do Grupo Amorim, S.A., the outcome of a new market strategy, *i.e.*, differentiation by quality and investment in Research and Development.

In 2001, following a decade in which the company consolidated its market position and introduced a new corporate image, António Rios de Amorim assumed the position of CEO of the Group, which he still holds today.

By 2007, Amorim Group had become one of the most sustainability concerned Portuguese corporations, publishing the first Sustainability Report in the cork industry and becoming a member of the Business Council for Sustainable Development.

Amorim Cork Ventures, a business incubator was set up by the Group in 2014, with the objective of promoting the design of new cork products and cork-related businesses, ensuring that the investment and search for constant innovation remained one of the priorities of the Group.

4.1.2. Company Shareholders Structure

As of 31 December 2018, Corticeira Amorim share capital totals €133 million, which represents 133 million of ordinary shares, registered at a respective nominal value of €1 each, to which the right to dividends is granted.

The distribution of the referred share capital, listed on Euronext Lisbon, is as follows:

Figure 2 – Share Capital distribution

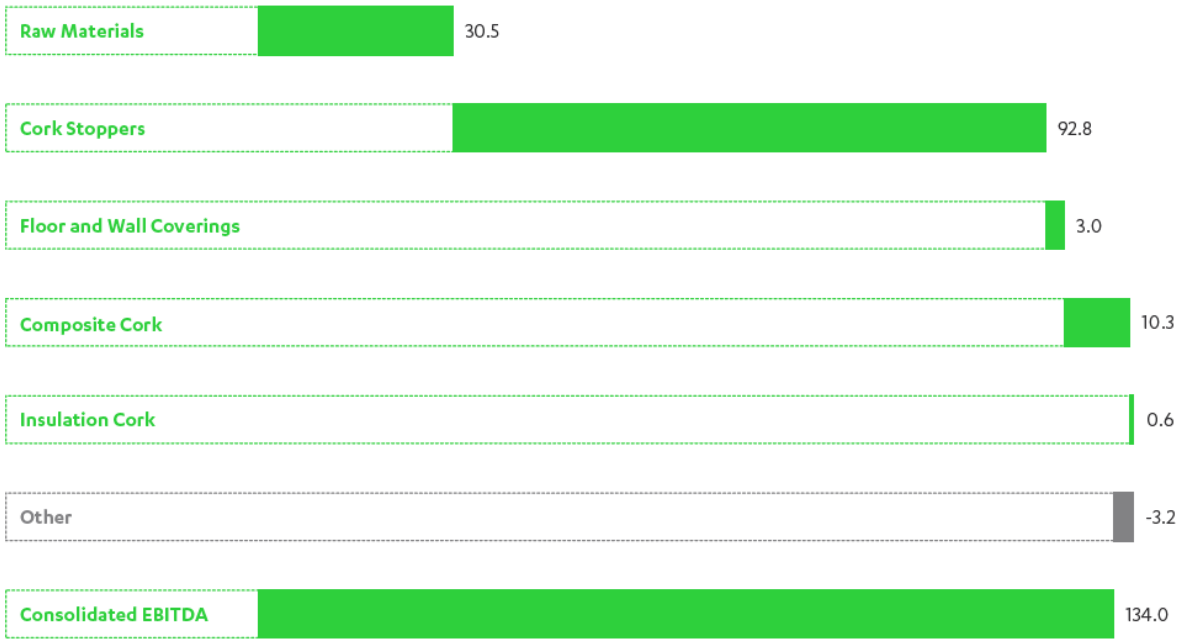
Shareholder	No. of shares owned (quantity)	Stake	Voting rights
Qualifying interests			
Amorim Investimentos e Participações, SGPS, S.A.	67,830,000	51.000%	51.000%
Investmark Holdings, B.V.	18,325,157	13.778%	13.778%
Amorim International Participations, B.V.	13,414,387	10.086%	10.086%
Free float	33,430,456	25.136%	25.136%
Total	133,000,000	100.000%	100.000%

Source: Company Information

4.1.3. Business Units

The Group is structured in five business units, specifically, Raw Materials, Cork Stoppers, Floor and Wall Coverings, Composite Cork and Insulation Cork, with each business unit contribution to the consolidated EBITDA, in 2018, displayed in the following figure:

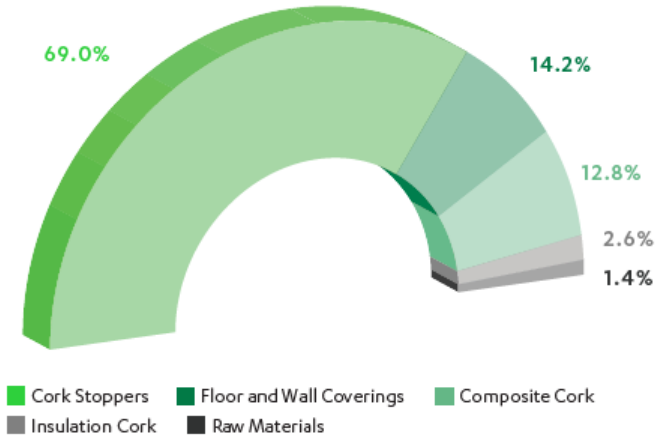
Figure 3 – Business units' contribution to the consolidated EBITDA (million euros)



Source: Company Information

Furthermore, in line with the figure presented above, the consolidated sales by business units, in 2018, were as follows:

Figure 4 – Consolidated Sales by business unit



Source: Company Information

Nevertheless, this chapter will breakdown the Group's business units in order to fully understand each's current market performance and respective specificities within Amorim Group's business model.

4.1.3.1. Raw Materials

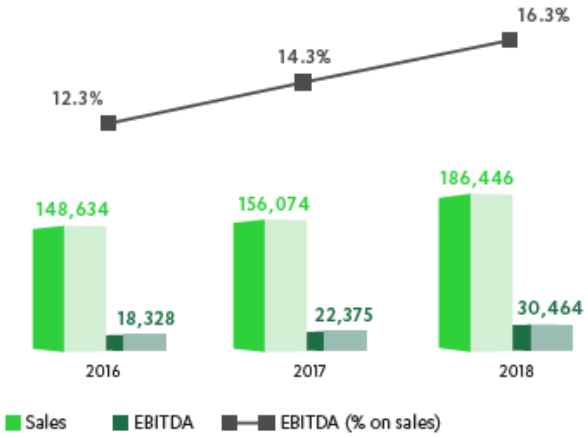
The initial business unit to consider in the Group's value chain is the Raw Material business unit.

The Group stablished this business unit at the beginning of its value chain as it plays a key role in ensuring the optimization of the flow of raw materials and, secondly, enhancing the synergies among other business units.

Taking into account its responsibilities as a major part in guaranteeing the future sustainability of its raw materials supply region, through this business unit, Amorim Group has adopted a policy of diversification of its sources of supply, expanding its supply area to several cork-producing regions in addition to Portugal (such as Spain and North Africa). Such strategy not only considers the current levels of demand for cork, but also, future likely increases in the demand of this raw material.

In 2018, this business unit continued its steady growth, as represented by the figure presented below:

Figure 5 – Raw Materials BU Sales and EBITDA (thousand euros)



Source: Company Information

Furthermore, several factors contributed to the increase in EBITDA (the yearly EBITDA was €30.4 million) of 5% in the Raw Materials business unit, such as:

- the preparation units were consumed at more competitive prices;
- the implementation of efficiency improvement measures in the disc production units;
- improved returns on the grinding units; and
- corrections of transfer pricing policies in the North African units.

4.1.3.2. Cork Stoppers

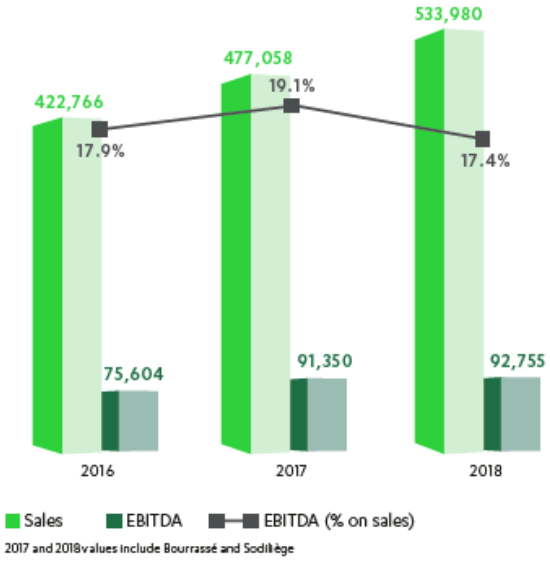
Under the trustworthy business relationship that it developed, throughout over 150 years, with the leading wine producers, Corticeira Amorim is the number one worldwide supplier and producer of cork stoppers.

The position of market leader was accomplished mainly due to the Group's commitment to provide the world's best cork stoppers by, for example, investing in research and development in this field.

The annual production of cork stoppers by the Group reaches billions, providing this product not only for wines, but also for champagne and spirits.

The production of wine increased greatly in 2018, as well as wine consumption, resulting in a good performance of this business unit as the figure below illustrates:

Figure 6 – Cork Stoppers BU Sales and EBITDA (thousand euros)



Source: Company Information

Within this year, Cork Stoppers' sales growth reached a level beyond the market average and was registered a significant increase in raw materials costs, which prompted the ongoing investment in research and development by the Amorim Group in order to sustain its current market leader position.

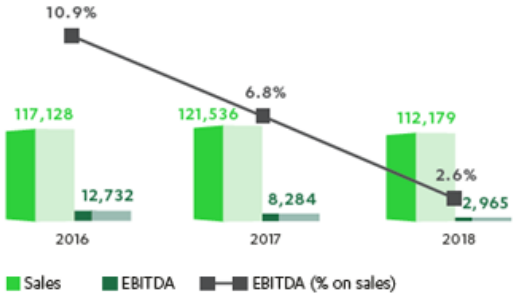
Compared with 2017, this business unit gross margin rose by 9.2%, however the impact of the rise in raw materials costs was felt at the Group's level, resulting in a 1.6% decrease of gross margin at this level. Had not the Group adopted the previously mentioned measures to produce cork more efficiently, this decrease could have had an even greater impact.

4.1.3.3. Floor and Wall Coverings

The Floor and Wall Coverings business unit is the worldwide market leader in terms of production and distribution of cork flooring and wall covers, operating in over 70 countries and known for its excel in both innovation and quality.

The market performance of this business unit in the past 3 years is displayed in the figure below:

Figure 7 – Floor and Wall Coverings BU Sales and EBITDA (thousand euros)



Source: Company Information

As per the data presented in the figure above, this business unit reached a total sales amount of €112,2 million. Also, in opposition to the previous business units presented throughout this chapter, this business unit registered a decrease in sales (of 7,7%) when compared to 2017.

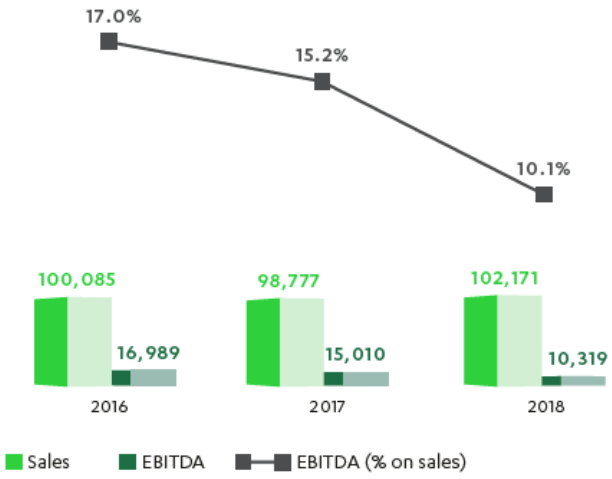
The amount in sales decrease was particularly felt in the United States and Russian markets. While in North America, the Group is making efforts to successfully implement its global approach, the biggest drawback in Russia resulted from the financial difficulties of this business unit's major client in that territory.

4.1.3.4. Composite Cork

Within the Amorim Group, Composite Cork is regarded as the most technologically advanced business unit, with a motto of redesigning the world in a sustainable manner by providing several applications to cork related materials, such as the surplus cork from the other business units. Its range of possible applications includes several industries for example automobile, electricity, construction, consumer goods and aerospace industries.

As may be seen in the figure below, in spite of an increase in the total sales amount in 2018 in comparison to 2017, the EBITDA of this business unit fell by €4,7 million.

Figure 8 – Composite Cork Sales BU and EBITDA (thousand euros)



Source: Company Information

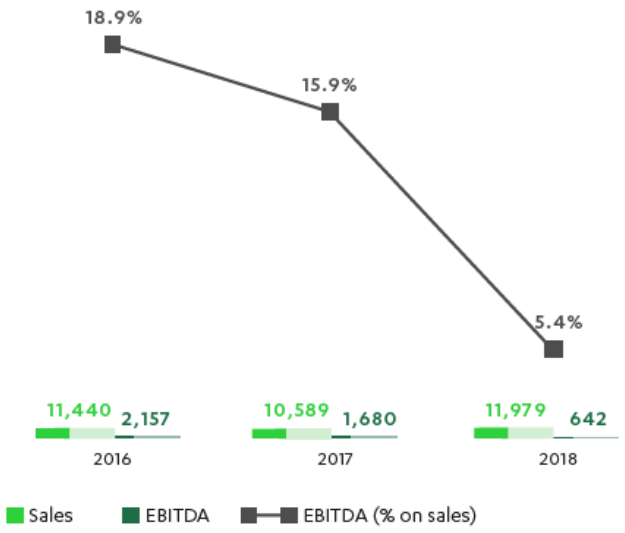
These numbers also translated into a reduction in the gross margin, which resulted, in large part, from the increased prices of raw cork materials in 2018. However, when considering such disadvantage, the performance of this business unit may be considered as positive, with regards to several growth indicators, introduction of new products and geographic expansion.

4.1.3.5. Insulation Cork

The fifth and final business unit that shall be considered in the Group's value chain is the Insulation Cork business unit.

This business unit develops its activities through Amorim Isolamentos S.A., resulting from the production of 100% natural thermal and acoustic insulation agglomerates. It has been consolidating its position in the European market, mainly due to the rise of the sustainable construction sector.

Figure 9 – Insulation Cork BU Sales and EBITDA (thousand euros)



Source: Company Information

Even though sales actually increased from the year 2017, EBITDA fell on a considerable percentage (61,8%) when compared to the EBITDA registered in 2017, which may be mainly attributed to the decrease of 12,2% at the level of the gross margin due to the significant increase in raw material prices.

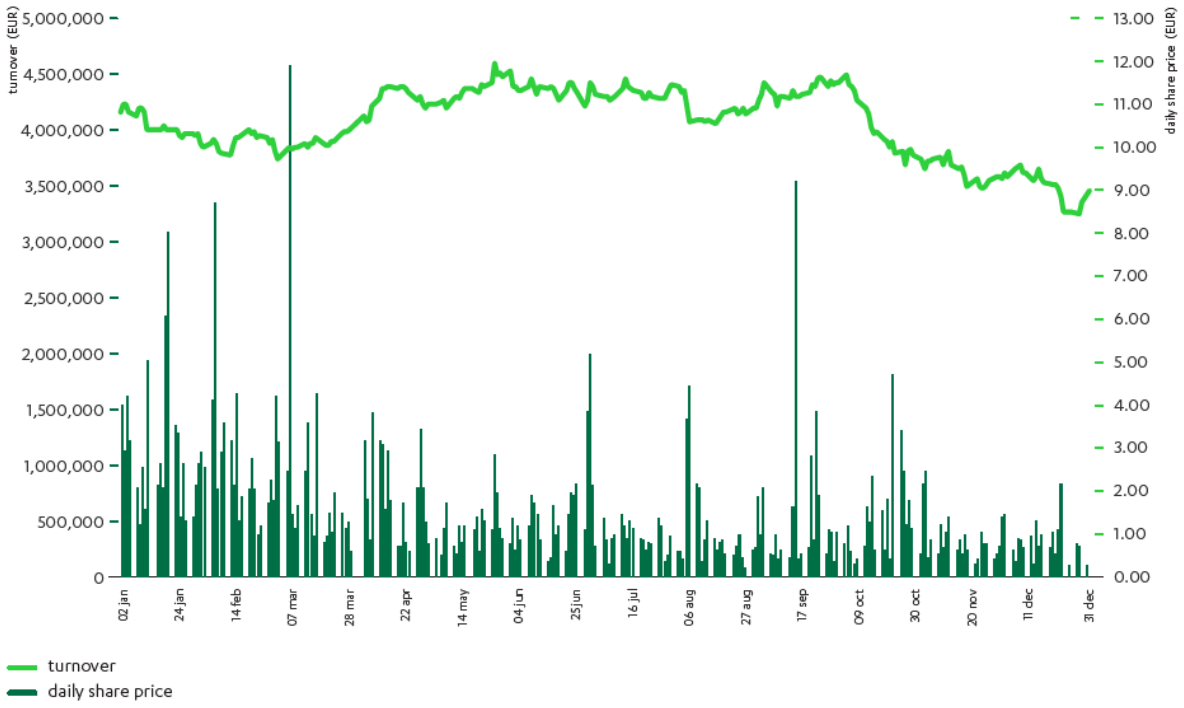
4.1.4. Stock Performance

The year 2018 marked the 30th year in which Corticeira Amorim has been listed on the Lisbon stock market.

In recent years Corticeira Amorim's shares have been performing considerably well in the stock market, *i.e.*, the last 5 years saw an appreciation of approximately 300% in the share price evolution, which is placed at around €10,00.

However, during 2018, the company's stock market performance was not entirely positive, as may be seen in in the following figure:

Figure 10 – Share Capital Trading Volumes in 2018

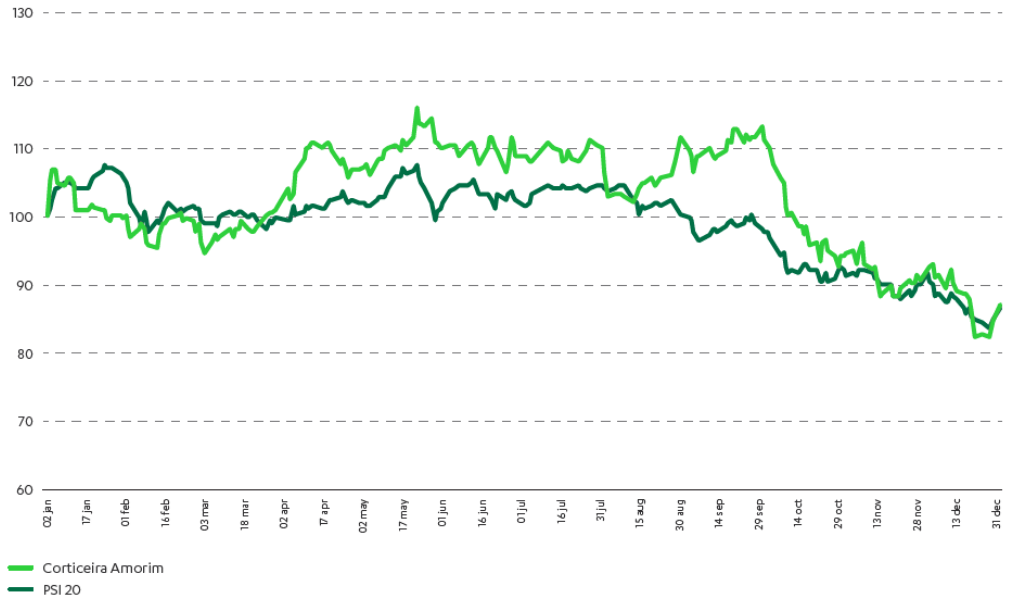


Source: Company Information

As displayed, by the end of 2018 the company's share was valuated at around €9.00, which denotes a yearly decrease of approximately €1.80 since by the beginning of the year this share as listed at around €10.80.

Such performance was aligned with the fall registered in the second half of 2018 of the PSI-20 Index, suggesting that there is a high correlation between the returns of Corticeira Amorim's share price and the performance of the Portuguese benchmark. The high correlation between the shares and the Portuguese index, suggests that these two components will tend to move in the same direction, as shown in the figure below:

Figure 11 – Share price performance versus PSI-20 index



Source: Company Information

Even so, since the end of the first quarter the company's shares usually outperformed the PSI-20 benchmark.

Moreover the following figure presents the most important indicators of Corticeira Amorim's share market performance in the last 5 years:

Figure 12 – Stock market performance since 2014

	2014	2015	2016	2017	2018
Quantity of shares traded	3,481,685	12,693,424*	10,801,324	19,290,907	14,884,614
Share prices(€):					
Maximum	3.65	6.29	9.899	13.300	12.000
Average	2.85	4.34	7.303	11.067	10.604
Minimum	2.20	2.99	5.200	8.180	8.370
Year-end	3.02	5.948	8.500	10.300	9.000
Trading Frequency	96.1%	98.8%	100%	100%	100%
Stock market capitalisation at year-end (million €)	401.66	791.08	1,130.50	1,369.90	1,197.00

*including 7,399,262 shares traded in a ABB.

Source: Company Information

During 2018, the average pricing of the company's shares was of €10.604, with the minimum trade value being registered around the year-end (€8.370 on 27 December) and the maximum value of €12.00, per share, registered on 23 May.

4.2. Market overview

4.2.1. Macroeconomic environment

Until 2018, the world economy was experiencing a period of growth and recovery from 2008's Subprime Mortgage Crisis and the subsequent European Sovereign Debt Crisis.

That being said, 2018 was marked by lowest growth rate registered since 2008, reaching a global rate of approximately 3.70%, and considering that the same situation is expected for 2019, the world economy may enter a new period of contraction in the next 5 to 10 years.

Such decrease in the worldwide growth rates may be attributed to several factors such as a less confident market environment, considering that the sentiment of 2008's crisis is still present within the mindset of global investors and the political uncertainty over big economies such as China.

This market behavior has reflected in the overall trade volume for 2018 and the figure below suggests that the projections for 2019 and 2020 indicate a similar downwards shortfall.

Figure 13 – World merchandise trade volume and real GDP growth from 2011 to 2020

Source: World Trading Organization

4.2.2. Cork Sector Overview

Even considering that, as previously referred, the Amorim Group operates in several markets, its main source of income is originated in the cork sector. Because of this aspect, the remaining of this chapter will focus on the performance of the cork sector in recent years. Furthermore, the majority of the information hereby quoted is presented in the annual reports published by APCOR, the Portuguese Cork Association.

As of the end of 2018, Portuguese cork had consolidated its position has the sector's worldwide market leader, with a market share of 62.4%, followed by Spain's 18.6%.

Table 3 – World Cork Exportations in 2017

Exporting countries	Revenues in million €	Market Share
Portugal	985.20	62.40%
Spain	292.90	18.60%
France	80.30	5.10%
Italy	41.80	2.60%
Germany	29.70	1.90%
USA	21.90	1.40%
China	18.80	1.20%
Morocco	14.20	0.90%
Chile	9.60	0.60%
Australia	7.30	0.50%
Top 10 Exporting countries	1,501.60	95.20%
Worlwide Exportation	1,578.20	100.00%

Source: APCOR' Annual Report of 2018

The value of the Portuguese exportations is mainly attributed to the exportations accredited to the Amorim Group, reaching a total revenue value of €985.2 million.

The major part of exportation is accounted to cork stoppers, which contributed for 72.1% of total exportations.

Accordingly, in terms of importations, the list of the major importing countries is highly correlated with the countries that possess a high tradition in the alcoholic production that may be labelled as cork consuming, such as wine and champagne for example, like France (16,5%) followed by USA (15,3%) and Portugal (10,8%).

5. Valuation

As mentioned in chapter 2.3. – Choosing a Valuation Model, the first model that was considered as the most suitable to establish a price target for Corticeira Amorim's shares is the Discounted Cash Flow model using the Firm Approach.

Moreover, given that Corticeira Amorim is composed by several companies, and multiple business units, the valuation shall be performed, through the usage of the Sum of the Parts (SoTP) approach.

Prior to the valuation model computation, the following chapter will focus on the general assumptions considered in the valuation.

5.1 General Assumptions

5.1.1. WACC

As stated in chapter 2.1.1., presenting the Firm Approach to Discounted Cash Flow Valuation, the computation of the WACC is mandatory in order to accurately determine the enterprise value of the company through this model.

The table below presents the output obtained for the estimated WACC of Corticeira Amorim: (the assumptions supporting each variable will be referred briefly)

Table 4 – WACC computation

Assumptions	Corticeira Amorim
Risk-free Rate (Rf)	2.82%
Market Risk Premium	3.06%
Unlevered Beta (BU)	0.60
Unlevered Cost of Equity (RU)	7.99%
Default Spread	0.75%
Cost of Debt (RD)	3.57%
Debt	467,840
Equity	1,197,000
Debt to Equity Ratio	0.39
Corporate Income Tax	21.00%
Growth Rate	2.00%
Cost of Equity (RE)	9.35%
WACC	7.52%

Source: Company Information, own projections, Damodaran Website and OECD Website

5.1.1.1. Cost of Equity

The considered cost of equity was computed based on the CAPM model, under which a company's exposure to the market is measured using three variables: the risk-free rate, the market risk premium and the Beta.

Firstly, as the basis found in the Literature Review, the risk-free rate that will be considered in this valuation will be the German long term Government Bond with a 10 year maturity. According to the information presented in Bloomberg, this rate is -0.24%. However, since this yield is not aligned with the cash flows generated by Corticeira Amorim, as most of these are generated in the Portuguese territory, a weighted average Country Risk Premium (as made available in the Damodaran website) of 3.06% was added to the risk-free rate.

Thus, the considered risk-free rate is obtained by -0.24% plus 3.06% which equals 2.82%.

Similarly, the market risk premium was obtained considering the data presented in Damodaran's website by computing the implied equity risk premium of the S&P Index. Given that, through the years, this value ranged between 5.00% and 6.00%, a rate of 5.50% was considered. Using a similar method as regarding the risk-free rate computation, a percentage of 3.06 % corresponding to the Portuguese Country Risk Premium was added to the referred market risk premium rate.

As such, the obtained market risk premium corresponds to 5.50% with the addition of 3.06%, resulting in a value of 8.56%.

Finally, the last variable to compute in order to obtain the cost of Equity is the Beta.

The value for the Levered Beta was found in Reuters database that displays the respective Beta for each of the companies available in that portal. Hence, a Levered Beta of 0.79 was considered.

Under the CAPM, the following formula permits the computation of the Unlevered Beta:

$$\beta_U = \frac{\beta_L}{(1 + (1 - t) \times \frac{D}{E}} \quad (14)$$

$$\beta_U = \frac{0{,}79}{(1 + (1 - 0{,}21) \times \frac{467{,}840}{1{,}197{,}000}}$$

$$\beta_U = 0.60$$

It is possible to compute the Unlevered Cost of Equity using the above mentioned parameters, as follows:

$$R_U = R_f + \beta_U \times Market\ Risk\ Premium \quad (15)$$

$$R_U = 2.82\% + 0.60 \times 6.42\%$$

$$R_U = 7.99\%$$

Furthermore, the Levered Cost of Equity may be obtained using the following formula:

$$R_E = R_U + (R_U - R_D) \times \frac{D}{E} \times (1 - t) \quad (16)$$

Bearing this formula, several parameters such as the cost of debt (R_D) or the corporate income tax rate have to be accurately determined in this phase.

5.1.1.2. Cost of Debt

The cost of a company's debt may be defined as the rate at which a company reimburses its respective financial debt obligations, in accordance with both the company's average default spread, inherent to such financial obligations and the current risk-free rate.

The most common procedure to determine the company's default spread is to estimate its interest coverage ratio. In doing so, it is possible to conclude regarding how straightforwardly a company may pay interest on its outstanding debt.

In order to estimate Corticeira Amorim's interest coverage ratio, the company's EBIT and interest expenses for the last financial exercise, as displayed in the figure below, will be confronted with the rating estimation model provided by Damodaran.

Table 5 – Interest Coverage Ratio (thousand euros)

Description	Amounts for 2018
EBIT	102,705
Interest Costs	3,548
Interest Coverage Ratio	28.95

Source: Company Information

As per the information available in the Damodaran website, as at 22/08/2019, the following credit risk premium applies to Non-Financial Service Companies with market caps under €5 billion:

Table 6 – Default credit risk premium

For all emerging market firms and developed market firms with market cap < $5 billion			
Interest Coverage ratio greater than	**Interest Coverage ratio smaller than**	**Rating**	**Spread**
-100000	0.499999	D2/D	19.38%
0.5	0.799999	C2/C	14-54%
0.8	1.249999	Ca2/CC	11.08%
1.25	1.499999	Caa/CCC	9.00%
1.5	1.999999	B3/B-	6.60%
2	2.499999	B2/B	5.40%
2.5	2.999999	B1/B+	4.50%
3	3.499999	Ba2/BB	3.60%
3.5	3.9999999	Ba1/BB+	3.00%
4	4.499999	Baa2/BBB	2.00%
4.5	5.999999	A3/A-	1.56%
6	7.499999	A2/A	1.38%
7.5	9.499999	A1/A+	1.25%
9.5	12.499999	Aa2/AA	1.00%
12.5	100000	Aaa/AAA	0.75%

Source: Damodaran Website

As such, in accordance with Corticeira Amorim's interest coverage ratio, the default credit spread to consider in the calculation of the cost of debt is equal to 0,75%.

Accordingly, the company's cost of debt equals to:

$$R_D = default\ spread + R_f \quad (17)$$

$$R_D = 0{,}75\% + 2{,}82\%$$

$$R_D = 0{,}75\% + 2{,}82\%$$

$$R_D = 3{,}57\%$$

5.1.1.3. Debt to Equity ratio

The Debt to Equity Ratio of Corticeira Amorim may be obtained by the result of the coefficient of the division of the company's total liabilities by its shareholder equity.

The debt was obtained taking into consideration the figures, presented in the company's balance sheet, as at 31 December 2018, presented in the annual report of 2018, while the market value of equity was computed by multiplying the number of shares outstanding by the marked price as of 31/12/2018 (133,000,000 times €9.00 per share).

$$\frac{D}{E} = \frac{467{,}840}{1{,}197{,}000} = 0.39 \quad (18)$$

5.1.1.4. Corporate Income Tax Rate

The statuary corporate income tax rate applicable according to the Portuguese tax law is of 21% over a company's taxable basis.

In addition, a State Surcharge applies to the part of the taxable profit exceeding €1.50 million, as follows:

- from €1.50 million to €7,5 million: 3%
- from €7.5 million to €35 million: 5% (applicable to the part exceeding €7.5 million);
- above €35M: 9% (applicable to the part exceeding €35M).

A municipal surcharge is also due over the taxable profit at a rate of up to 1.5% (depending on the company's municipality).

Based on the general corporate income tax rate and additional surcharges, the total rate can rise up to a maximum of 31.5%.

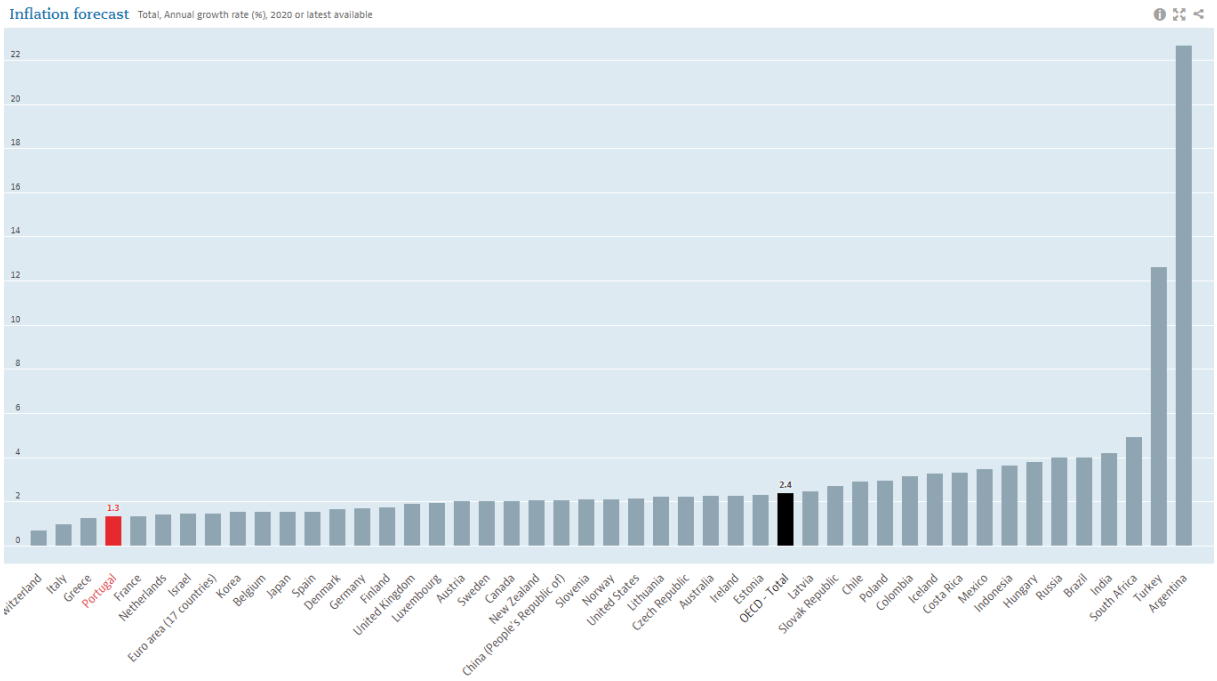
Even so, considering that the Group has been able to offset the application of the additional taxes foreseen in the Portuguese Law by the deduction of several tax benefits (for example the effective tax rate in 2018 was 19.0%) the utilization of a 21.0% corporate income tax rate seems to be reasonable.

5.1.1.5. Growth Rate

In order to determine Corticeira Amorim's projected Cash Flows after 2018, a suitable Terminal Value must be introduced in the Discounted Cash Flow Model. This is only possible by selecting an expected rate at which cash flows will grow perpetually, year by year, in the future.

Even considering that the 2020 Portuguese inflation rate forecasted by the Organisation for Economic Co-operation and Development (OECD) is around 1,30%, taking into account the short-term timespan of this projection and the Group's plans of continuous growth, as well as its recent history of outperforming the market, 70 basis points were added to the OECD's projection. Therefore, the terminal growth rate considered in the model was 2.00%.

Figure 14 – 2020's forecasted inflation rates



Source: OECD Website

Given the above, it is now possible to input all the necessary assumptions and variables to obtain the Cost of Equity by equation 16, as presented in chapter 5.1.1.1.

Thus, the Cost of Equity is equal to:

$$R_E = R_U + (R_U - R_D) \times \frac{D}{E} \times (1 - t) \quad (19)$$

$$R_E = 7.99\% + (7.99\% - 3.57\%) \times \frac{467{,}840}{1{,}197{,}000} \times (1 - 21\%)$$

$$R_E = 9.53\%$$

Therefore, the value of 9.53% is assumed in Table 4 as the Cost of Equity.

5.1.2 Business Units Sales and Projections

The next step of the valuation is to predict future revenues to be obtained by the company. This is made possible by forecasting the sales figures for the following 5 financial years, for each of the Group's business units. This forecast will be based on the historical weight in trade sales by each business unit, as presented in the following table, and its expected revenue growth.

Table 7 – Historical Weight in Trade Sales by each BU

Business Units	2014	2015	2016	2017	2018	Average
Raw Materials	0.94%	1.21%	1.47%	1.60%	2.68%	1.58%
Cork Stoppers	63.15%	64.24%	65.11%	67.29%	68.96%	65.75%
Floor and Wall Coverings	20.26%	17.77%	17.74%	16.85%	14.24%	17.37%
Composite Cork	14.20%	15.37%	14.26%	12.89%	12.76%	13.90%
Insulation Cork	1.45%	1.41%	1.42%	1.38%	1.35%	1.40%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Company Information

Considering that it is possible to obtain the information regarding each business unit's performance, for the last 5 years through the data disclosed by the Group, the forecast in revenues should be performed by business unit at first instance. Furthermore, the forecasts and valuations made should be based on trade sales.

5.1.2.1. Raw Materials

In the last 5 years, this business unit has been able to maintain its steady growth.

Table 8 – Historical Evolution in Sales Growth of the Raw Material BU since 2014

Raw Materials	2014	2015	2016	2017	2018	Average
Trade Sales	12.05%	39.81%	28.08%	19.18%	82.69%	36.36%
Total Sales	18.23%	3.09%	9.74%	5.01%	19.46%	11.11%

Source: Company Information

Nonetheless, the average growth has been marked by fluctuations, the most notable being the fluctuation in the year 2015, originated by the difficult worldwide economic situation in that year. The decline in growth in 2017 also derived from 2015's extraordinary economic scenario.

The company's projections for 2019 predict a good upcoming year for this business unit, since, despite the expectation of higher cork prices, the Group expects to increase its commercial activity.

Furthermore, several initiatives are already being implemented that should improve this business unit's results, such as increasing the yield of the cork at the preparation units level, projects to promote automatization of preparation processes, and improving the use of cork within the disc sector.

Bearing in mind this information, the sales are projected to grow 5.00% in 2019. 2020 and 2021 in conjunction with a growth of 3.00% until 2023, as the table below suggests:

Table 9 – Sales Growth Forecast of the Raw Material BU from 2019 to 2023

Raw Materials	2019	2020	2021	2022	2023
Trade Sales	5.00%	5.00%	5.00%	3.00%	3.00%
Total Sales	5.00%	5.00%	5.00%	3.00%	3.00%

Source: Own Projections

5.1.2.2. Cork Stoppers

As alluded in chapter 4.1.3. – Cork Stoppers and Table 7, the Cork Stoppers business unit represents a major part of the Group's total sales figures.

Per se, the Group's positive total sales figures' growth in last 5 years are intrinsically aligned with the sales obtained by this business unit as the following table suggests:

Table 10 – Sales Growth of the Cork Stoppers BU since 2014

Cork Stoppers	2014	2015	2016	2017	2018	Average
Trade Sales	7.23%	9.96%	7.49%	13.05%	11.46%	9.84%
Total Sales	7.09%	9.94%	7.62%	12.84%	11.93%	9.88%

Source: Company Information

As observed, the historical evolution in sales growth of this business unit has been steady and positive throughout the recent years, since the company's measures to improve efficiency and the positive outcome of the wine market have been able to offset the negative impact originated by the increase in raw material costs.

For 2019, the Group intends to implement additional measures for a even more efficient use of raw material cork and of the execution capacity for projects and strategic initiatives with the aim of impacting the organization.

For this reasons, the forecast of sales for the next 5 financial years predicts a steady increase of 4%, in sales numbers until 2022, the year in which the estimation of growth drops to 2%, as one can observe in Table 11.

Table 11 – Sales Growth Forecast of the Cork Stoppers BU from 2019 to 2023

Cork Stoppers	2019	2020	2021	2022	2023
Trade Sales	4.00%	4.00%	4.00%	2.00%	2.00%
Total Sales	4.00%	4.00%	4.00%	2.00%	2.00%

Source: Own Projections

5.1.2.3. Floor and Wall Coverings

Similarly to the sale of Cork Stoppers, the Floor and Wall Coverings business unit also provides a considerable contribute to the Group's overall sales number.

However, over the last few years, it is not possible to consider that this business unit has had a positive commercial performance, as its sales were deeply affected by the worldwide economic environment until 2015 and, in 2018, by the decrease in sales in the North American and Russian markets as disclosed in chapter 4.1.3.3. – Floor and Wall Coverings.

The following table evidences the above stated data:

Table 12 – Sales Growth of the Floor and Wall Coverings BU since 2014

Floor and Wall Coverings	2014	2015	2016	2017	2018	Average
Trade Sales	-4.60%	-5.21%	5.89%	3.87%	-8.06%	-1.62%
Total Sales	-4.63%	-5.60%	6.63%	3.76%	-7.70%	-1.51%

Source: Own Projections

In spite of this, Amorim Group is performing a vast effort to turnaround the current situation, with impactful measures to reposition its current market placement being implemented, like the redesign of the supply chain, the shift of focus on the business unit's innovation, deeper utilization of the contracting channel, as well as a strong investment in the alteration of the products' visuals.

With the introductions of these measures in mind, the sales forecast predicts a growth of 1% until 2020 and of 2% from 2020 onwards.

Table 13 – Sales Growth Forecast of the Floor and Wall Coverings BU from 2019 to 2023

Floor and Wall Coverings	2019	2020	2021	2022	2023
Trade Sales	1.00%	1.00%	2.00%	2.00%	2.00%
Total Sales	1.00%	1.00%	2.00%	2.00%	2.00%

Source: Own Projections

5.1.2.4 Composite Cork

Since 2015, the weight of this business unit in the total amount of sales registered has been gradually decreasing in the Group.

Coincidently, sales of Composite Cork have suffered a big decrease since that year, but signs of a significant recovery of this sector, even if it remains in an unfavorable scenario, are evidenced by the growth registered in 2018.

Table 14 – Sales Growth of the Composite Cork BU since 2014

Composite Cork	2014	2015	2016	2017	2018	Average
Trade Sales	-3.46%	17.01%	-1.59%	-1.12%	7.68%	3.70%
Total Sales	-14.38%	18.63%	0.11%	-1.31%	3.44%	1.29%

Source: Company Information

The outlook for the following years is challenging, largely due to the price of cork, but the Group is determined to maintain the growth registered in 2018, and maybe expand it, by implementing measures to allow a more efficient utilization of raw materials, ultimately optimizing cork yield ratios and diminishing the business unit's unnecessary expenses, as well as, the launch of new products with new technologies and raw materials.

For this effect, the growth in sales is expected to be forecasted at a 2% rate for the next 5 years, starting in 2018.

Table 15 – Sales Growth Forecast of the Composite Cork BU from 2019 to 2023

Composite Cork	2019	2020	2021	2022	2023
Trade Sales	2.00%	2.00%	2.00%	2.00%	2.00%
Total Sales	2.00%	2.00%	2.00%	2.00%	2.00%

Source: Own Projections

5.1.2.5. Insulation Cork

The Insulation Cork business unit has been able to turnaround its bad performance of 2017. That year's substandard performance was mainly due to a severe rise in the price of virgin cork originated from pruning, the main raw material used by this business unit.

Table 16 – Sales Growth of the Insulation Cork BU since 2014

Insulation Cork	2014	2015	2016	2017	2018	Average
Trade Sales	13.07%	4.89%	6.44%	6.19%	6.94%	7.51%
Total Sales	23.33%	0.26%	13.94%	-7.44%	13.13%	8.64%

Source: Company Information

Nonetheless, the Group is expecting an increase in terms of the sales to be obtained by this business unit, compelling its market strategy to strengthen its current position and take advantage of a market increasingly focused in sustainability.

With this is mind, the forecast in sales of this business unit is predicting a steady growth of 5% from 2019 until 2022 and from that year onwards, possibility due to a market stagnation, a 2% growth is considered to be appropriate.

Table 17 – Sales Growth Forecast of the Insulation Cork BU from 2019 to 2023

Insulation Cork	2019	2020	2021	2022	2023
Trade Sales	2.00%	2.00%	2.00%	2.00%	2.00%
Total Sales	5.00%	5.00%	5.00%	2.00%	2.00%

Source: Own Projections

Considering all of the projected trade sales growth rates and the historic trade sales' revenues as listed in Table 7, the table below presents the forecasted amount of each business units trade sales' revenues until 2023.

Table 18 – Trade Sales Forecast by each BU from 2019 to 2023 (thousand euros)

Business Units	2019	2020	2021	2022	2023
Raw Materials	21,503	22,578	23,707	24,418	25,151
Cork Stoppers	547,226	569,115	591,880	603,717	615,792
Floor and Wall Coverings	109,741	110,838	113,055	115,316	117,622
Composite Cork	99,331	101,317	103,344	105,410	107,519
Insulation Cork	10,834	11,376	11,944	12,183	12,427
Total	788,634	815,224	843,930	861,045	878,510
Yearly Growth	6.84%	3.37%	3.52%	2.03%	2.03%

Source: Own Projections

5.1.3. Cost of Sales and EBITDA Margins

After performing a sales forecast, by each business unit, in last chapter, the next step in the DCF Valuation is to analyze the Group's operating expenses, within the previous 5 years, and use this data to estimate such costs for the 5 years that will follow.

It is possible to obtain the historical data for such costs in the Group's Consolidated Income Statement by Nature per each year.

Table 19 – Operating Costs and Other Operating Expenses (thousand euros)

Description	2014	2015	2016	2017	2018
Costs of goods sold and materials consumed	69,006	71,976	67,392	83,892	101,639
Change in manufactured inventories	8,809	3,339	-4,633	2,833	11,069
Third party supplies and services	24,698	24,112	25,814	30,846	33,558
Staff Costs	27,146	30,754	29,163	33,352	32,243
Impairments of assets	-1,166	600	-1,293	-1,349	-986
Other income and gains	3,051	2,411	2,575	4,580	2,690
Other costs and losses	2,192	-345	518	2,568	1,097
Total	133,736	132,847	119,536	156,722	181,310

Source: Company Information

However, since such costs are not discriminated by each of Amorim Group's business units, it was considered appropriate to perform a cost allocation, by each business unit, taking into account a proxy consisting in the impact of each business unit's annual EBITDA in the overall trade sales amount.

Table 20 – Trade Sales by each BU from 2014 until 2018 (thousand euros)

Business Units	2014	2015	2016	2017	2018
Raw Materials	5,253	7,344	9,406	11,210	20,479
Cork Stoppers	353,306	388,493	417,592	472,080	526,179
Floor and Wall Coverings	113,345	107,440	113,772	118,180	108,654
Composite Cork	79,431	92,944	91,463	90,441	97,383
Insulation Cork	8,138	8,536	9,086	9,648	10,318
Total	559,473	604,757	641,319	701,559	763,013

Source: Company Information

With this information, it is possible to find the previously referred EBITDA/Total Trade Sales proxy, as presented in the following table:

Table 21 – EBITDA/Total Trade Sales coefficient for each BU

Business Units	2014	2015	2016	2017	2018	Average
Raw Materials	332.99%	231.32%	194.85%	199.82%	148.93%	221.58%
Cork Stoppers	13.25%	16.15%	18.10%	19.34%	17.64%	16.90%
Floor and Wall Coverings	13.69%	7.61%	11.19%	7.02%	2.76%	8.45%
Composite Cork	9.75%	15.69%	18.57%	16.59%	10.58%	14.24%
Insulation Cork	20.31%	14.54%	23.74%	17.62%	5.82%	16.41%
Other	-0.45%	-0.50%	-0.54%	-0.73%	-0.42%	-0.53%

Source: Company Information

In terms of EBITDA forecast, the weighted business units' EBITDA/Trade Sales coefficient average applied to the trade sales forecasted figures, as presented in Table 18, was considered for the forecasted EBITDA from 2019 until 2023.

In theoretical terms, EBITDA margin serves as an indicator for assessing a company's operating profitability. It is the result of the division of the EBITDA by total revenue.

In the forecast of EBITDA margins, a steady margin was considered, i.e., the average EBITDA margin rate registered by each business unit in 2018.

Lastly, the operating expenses, per business unit, were obtained as the remaining amount between the subtractions of the each year's EBITDA to the respective trade sales' revenues.

This information is organized, by business unit, in the tables presented below:

Table 22 – Raw Materials BU's EBITDA Margins from 2014 until 2023

Raw Materials	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trade Sales	5,253	7,344	9,406	11,210	20,479	21,503	22,578	23,707	24,418	25,151
Operating expenses	-12,239	-9,644	-8,922	-11,190	-10,021	-26,144	-27,451	-28,824	-29,689	-30,579
EBITDA	17,492	16,988	18,328	22,400	30,500	47,647	50,029	52,531	54,107	55,730
EBITDA Margins	332.99%	231.32%	194.85%	199.82%	148.93%	221.58%	221.58%	221.58%	221.58%	221.58%

Source: Own Projections

Table 23 – Cork Stoppers BU's EBITDA Margins from 2014 until 2023

Cork Stoppers	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trade Sales	353,306	388,493	417,592	472,080	526,179	547,226	569,115	591,880	603,717	615,792
Operating expenses	306,476	325,740	341,988	380,780	433,379	454,757	472,947	491,865	501,702	511,736
EBITDA	46,830	62,753	75,604	91,300	92,800	92,469	96,168	100,015	102,015	104,055
EBITDA Margins	13.25%	16.15%	18.10%	19.34%	17.64%	16.90%	16.90%	16.90%	16.90%	16.90%

Source: Own Projections

Table 24 – Floor and Wall Coverings BU's EBITDA Margins from 2014 until 2023

Floor and Wall Coverings	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trade Sales	113,345	107,440	113,772	118,180	108,654	109,741	110,838	113,055	115,316	117,622
Operating expenses	97,825	99,267	101,040	109,880	105,654	100,462	101,467	103,496	105,566	107,677
EBITDA	15,520	8,173	12,732	8,300	3,000	9,279	9,371	9,559	9,750	9,945
EBITDA Margins	13.69%	7.61%	11.19%	7.02%	2.76%	8.45%	8.45%	8.45%	8.45%	8.45%

Source: Own Projections

Table 25 – Composite Cork BU's EBITDA Margins from 2014 until 2023

Composite Cork	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trade Sales	79,431	92,944	91,463	90,441	97,383	99,331	101,317	103,344	105,410	107,519
Operating expenses	71,683	78,359	74,474	75,441	87,083	85,189	86,893	88,631	90,404	92,212
EBITDA	7,748	14,585	16,989	15,000	10,300	14,141	14,424	14,713	15,007	15,307
EBITDA Margins	9.75%	15.69%	18.57%	16.59%	10.58%	14.24%	14.24%	14.24%	14.24%	14.24%

Source: Own Projections

Table 26 – Insulation Cork BU's EBITDA Margins from 2014 until 2023

Insulation Cork	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trade Sales	8,138	8,536	9,086	9,648	10,318	10,524	10,735	10,950	11,169	11,392
Operating expenses	6,485	7,295	6,929	7,948	9,718	8,798	8,974	9,153	9,336	9,523
EBITDA	1,653	1,241	2,157	1,700	600	1,727	1,761	1,796	1,832	1,869
EBITDA Margins	20.31%	14.54%	23.74%	17.62%	5.82%	16.41%	16.41%	16.41%	16.41%	16.41%

Source: Own Projections

In what concerns the negative operating expenses of the Raw Materials business unit, as presented in Table 22, it should be noted that this business unit, in addition to its trade sales made outside of the Amorim Group, performs internal operations that, valuated at market price, allow to reduce the Group's overall operating expenses in the amounts presented in the referred table.

5.1.4. CAPEX

A company's capital expenses, commonly referred to as CAPEX, comprise the sum of its investments related to the acquisition, upgrade or maintenance of fixed assets such as buildings, industrial equipment or technology.

It is essential to determine the value of the CAPEX in order to access if a given company's investment in fixed assets is correlated with its capability of maintaining or expanding its current business activities.

This metric may be obtained using the following equation:

$$CAPEX = \Delta PP\&E + Current\ Depreciation \quad (18)$$

Where,

CAPEX = Capital Expenditures

$\Delta PP\&E$ = Change in property, plant and equipment

It is now necessary to calculate both the change in property, plant and equipment and the current depreciation components to include in equation 18.

5.1.5. Change in Property, Plant and Equipment

The historical figures presented in the Group's Annual Reports since 2014 are comprised in the following table, as a percentage of the Group's Gross Assets.

Table 27 – Value of Fixed Assets' Gross Value as a percentage of total Fixed Assets' Gross Value (thousand euros)

Description	2014	2015	2016	2017	2018	Average	Average Growth
PP&E	182,893	190,352	197,454	227,906	259,433		9.27%
Gross Value	615,687	643,399	649,992	720,965	781,162		
% Gross Value	29.71%	29.59%	30.38%	31.61%	33.21%	30.90%	31.14%
Land and Buildings	86,684	89,717	89,720	98,029	109,019		5.99%
Gross Value	229,817	239,478	232,385	256,656	273,001		
% Gross Value	37.72%	37.46%	38.61%	38.19%	39.93%	38.38%	38.52%
Machinery	88,015	88,205	96,589	97,711	105,344		4.67%
Gross Value	348,850	362,075	375,088	402,649	432,314		
% Gross Value	25.23%	24.36%	25.75%	24.27%	24.37%	24.80%	24.71%
Others	8,194	2,521	1,972	4,126	4,705		8.06%
Gross Value	37,020	31,937	33,346	33,620	35,482		
% Gross Value	22.13%	7.89%	5.91%	12.27%	13.26%	12.29%	10.33%
Advances and in Progress	0	9,909	9,173	28,040	40,365		60.55%
Gross Value	0	9,909	9,173	28,040	40,365		
% Gross Value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Investment Property	5,190	5,008	7,100	0	0		0
Gross Value	15,432	15,486	30,897	0	0		
% Gross Value	33.63%	32.34%	22.98%	0.00%	0.00%	17.79%	14.62%
Intangible Assets	1,091	2,489	3,776	4,077	7,585		68.47%
Gross Value	4,670	6,332	8,053	10,217	14,424		
% Gross Value	23.36%	39.31%	46.89%	39.90%	52.59%	40.41%	43.82%

Source: Company Information

As the Group does not disclose the above presented Assets by business unit, a similar situation is encountered as in chapter 5.1.3. In that chapter, the weighted contribution to the EBITDA was deemed as an accurate proxy to distribute operation costs by each business unit.

In this case, the result of the division of the annual trade sales of 2018 by the total value of gross assets in 2018, as presented in Table 27, which corresponds to €267.018, was considered as the foreseeable proxy for the next 5 years.

The following table presents the application of this proxy to each business units' forecasted trade sales from 2019 until 2023:

Table 28 – Forecast of Fixed Assets values by BU (thousand euros)

Business Units	2018	2019	2020	2021	2022	2023
Raw Materials	7,167	7,525	7,901	8,296	8,711	9,147
Cork Stoppers	184,137	191,503	199,163	207,130	215,415	224,031
Floor and Wall Coverings	38,024	38,404	38,788	39,564	40,355	41,162
Composite Cork	34,079	34,761	35,456	36,165	36,889	37,626
Insulation Cork	3,611	3,683	3,757	3,832	3,908	3,987
Total	267,018	275,876	285,065	294,987	305,278	315,953

Source: Own Projections

Using this information, the following table presents the forecasted amount of Net Assets by business unit, commonly referred to as the Net Capex:

Table 29 – Forecast of Net Capex by Business Unit (thousand euros)

Business Units	2019	2020	2021	2022	2023
Raw Materials	358	376	395	415	436
Cork Stoppers	7,365	7,660	7,967	8,285	8,617
Floor and Wall Coverings	380	384	776	791	807
Composite Cork	682	695	709	723	738
Insulation Cork	72	74	75	77	78
Total	8,858	9,189	9,922	10,291	10,675

Source: Own Projections

5.1.6. Depreciations

The values of depreciations forecasted for 2019 were calculated taking into account the average historical rate of depreciation, in the last 5 years, for each business unit.

From 2019 onwards, it was considered that the ratio of Depreciation/Trade Sales would be maintained throughout the next 5 years.

The outcome of this analysis, and subsequent forecast, may be found in the tables presented below:

Table 30 – Depreciation Amounts registered per BU from 2014 until 2018 (thousand euros)

Business Units	2014	2015	2016	2017	2018
Raw Materials	2,878	2,552	3,482	4,741	3,208
Cork Stoppers	11,105	12,252	13,319	17,250	18,548
Floor and Wall Coverings	4,659	4,800	5,598	4,309	5,671
Composite Cork	2,976	4,802	3,266	2,669	2,978
Insulation Cork	613	604	568	524	532
Total	22,231	25,010	26,233	29,493	30,937

Source: Company Information

Table 31 – Yearly Growth of Depreciation Amounts per BU

Business Units	2015	2016	2017	2018	Average
Raw Materials	-11.33%	36.44%	36.16%	-32.33%	7.23%
Cork Stoppers	10.33%	8.71%	29.51%	7.52%	14.02%
Floor and Wall Coverings	3.03%	16.63%	-23.03%	31.61%	7.06%
Composite Cork	61.36%	-31.99%	-18.28%	11.58%	5.67%
Insulation Cork	-1.47%	-5.96%	-7.75%	1.53%	-3.41%

Source: Company Information

Table 32 – Forecast Proxy used for depreciations growth rate from 2019 until 2023

Business Units	2019
Raw Materials	16.00%
Cork Stoppers	3.86%
Floor and Wall Coverings	5.53%
Composite Cork	3.17%
Insulation Cork	4.88%
Total Weighted Average	4.35%

Source: Own Projections

Table 33 – Forecasted Depreciation amounts per BU (thousand euros)

Business Units	2019	2020	2021	2022	2023
Raw Materials	3,440	3,612	3,793	3,906	4,024
Cork Stoppers	21,148	21,994	22,874	23,331	23,798
Floor and Wall Coverings	6,071	6,132	6,255	6,380	6,507
Composite Cork	3,147	3,210	3,274	3,339	3,406
Insulation Cork	514	524	535	545	556
Total	34,320	35,472	36,730	37,502	38,291

Source: Own Projections

5.1.7. Working Capital Needs/Requirements

A company's working capital needs or requirements is commonly referred to as net working capital, since it may be obtained by the result of the subtraction of its operating current liabilities (accounts payable) to its operating current assets (inventories and accounts receivable). Therefore, this variable serves as an indicator of a company's operational efficiency.

Whereas a company with a positive net working capital is currently exceeding its current liabilities and has, in a general way, a potential for growth and future development, a company with a negative net working capital is portraying signs of difficulty to pay back to its respective creditors.

The following table shows the amounts of the Amorim Group's Net Working capital throughout the last 5 years, its changes per year, and the percentage of working capital divided by the yearly trade sales.

Table 34 – Working Capital registered per BU from 2014 until 2018 (thousand euros)

Description	2014	2015	2016	2017	2018	Average
Current Assets	398,245	436,067	444,030	578,222	592,591	
Inventories	247,633	271,705	268,691	359,141	406,090	
Trade receivables	122,606	132,545	141,876	167,604	174,483	
Income tax assets	2,333	3,139	4,214	13,297	8,915	
Other current assets	25,673	28,678	29,249	38,180	3,103	
Current Liabilities	161,830	172,744	165,333	214,346	224,435	
Trade payables	115,303	121,184	109,985	157,096	165,008	
Other borrowings and creditors	44,007	49,518	49,631	55,019	57,503	
Income tax liabilities	2,520	2,042	5,717	2,231	1,924	
Net Working Capital	236,415	263,323	278,697	363,876	368,156	
Changes in Working Capital		26,908	15,374	85,179	4,280	
Working Capital % Sales	42.26%	43.54%	43.46%	51.87%	48.25%	45.87%

Source: Company Information

In order to forecast the networking capital until 2023, for the purpose of this valuation project, the 45.87% Working Capital divided by Sales worked as the forecast driver and the average weighted percentage in trade sales was considered for allocating such forecasted working capital values by each business unit.

The outcome of this forecast is showed is the following table:

Table 35 – Forecast of Working Capital amounts per BU from 2019 until 2023 (thousand euros)

Description	2019	2020	2021	2022	2023	
Trade Sales Forecast	788,634	815,224	843,930	861,045	878,510	
Networking capital/ revenues	45.87%	45.87%	45.87%	45.87%	45.87%	
Working Capital	361,782	373,980	387,149	395,000	403,012	
Changes in Working Capital	-6,373.86	12,197.99	13,168.46	7,851.73	8,012.02	
Business Units						**Average % Sales**
Raw Materials	-101	193	208	124	127	1.58%
Cork Stoppers	-4,191	8,020	8,658	5,163	5,268	65.75%
Floor and Wall Coverings	-1,107	2,119	2,287	1,364	1,392	17.37%
Composite Cork	-886	1,695	1,830	1,091	1,113	13.90%
Insulation Cork	-89	171	185	110	112	1.40%
Total	-6,374	12,198	13,168	7,852	8,012	100.00%

Source: Own Projections

5.1.8. Net Debt

For the purpose of the DCF Valuation, the Net Debt amount presented in the Group's Annual Report from 2018 was used. The following table displays the nature of the amounts considered:

Table 36 – Total Net Debt as of 31 December 2018 (thousand euros)

Description	Amounts
Non-current liabilities	122,205
Interest-bearing loans	121,200
Other financial liabilities	41,039
Total Net Debt	284,444

Source: Company Information

5.2 Target Price

After performing a SoTP approach to the each business unit's individual valuation, which may be found in the Appendixes, the outcome of the DCF Valuation, using the Firm Approach, has led to a Target Price of €10.41 per share, with reference to 31 December 2018 (15.6% above its market price of €9.00).

The table below summarizes all the assumptions considered to perform the DCF Valuation:

Table 37 – DCF Valuation Results

Assumptions	Corticeira Amorim
Raw Materials EV Value	668,135
Cork Stoppers EV Value	828,442
Floor and Wall Coverings	10,090
Composite Cork	126,757
Insulation Cork	14,204
Total Enterprise Value	1,647,628
Non Operating Assets	21,695
Debt	284,444
Equity Value	1,384,879
Number of Shares Outstanding	133,000
Target Price	10.41

Source: Own Projections

5.3 Relative Valuation (Multiples)

As explained in chapter 2.3, a valuation using multiples is also performed to complement and validate the results obtained using the Free Cash Flow to the Firm Approach applied the DCF valuation.

Under this type of valuation, multiples indicators of Corticeira Amorim will be compared with the respective multiples of five of their counterparts in the Forest, Paper and Packaging companies.

Through the consideration of the multiples EV/EBITDA and PER, the use of the relative valuation will serve to determine a price range in which the Group's shares would be, presumably, priced.

One must bear in mind, however, that Amorim Group is operating in such a wide range of markets that it is not possible to classify the selected counterparts as entirely comparable.

However the chosen companies share characteristics with Corticeira Amorim. Firstly, these companies are also listed as part of PwC's Top 100 Source Global Forest, Paper & Packaging Companies. Furthermore, a Portuguese listed company was also chosen, as well as one that operates in the Iberian Peninsula. Lastly, American Groups with a robust worldwide market position, similarly to Corticeira Amorim, were also deemed as comparable.

The results of this valuation are displayed below:

Table 38 – Multiples Valuation

Comparable Companies	EV/EBITDA	PER
ENCE S.A.	6.06	10.21
Altri S.G.P.S., S.A.	6.47	6.72
Kimberly-Clark Corporation	14.11	25.54
Graphic Packaging Holding Company	8.22	16.34
Sonoco Products Company	10.51	19.70
Comparable average	9.07	15.70
Corticeira Amorim		
Earnings Per Share		0.57
Corticeira Amorim 2019 EBITDA	165,263	
Number of Shares Outstanding	133,000	
Target Price	11.28	8.95

Source: Bloomberg and own projections

Comparing the price range displayed above and the target price of €10.41, as displayed in Table 38, the target price seems aligned with the Multiples Valuation since it is positioned within the obtained price range.

6. Conclusions

The goal of this project was to compute a trustworthy valuation of Corticeira Amorim, ultimately, leading to the attainment of a reliable target price of the company's shares.

This was accomplished with the use of two valuation models; DCF Valuation, using the Firm Approach, and Relative Valuation.

Using DCF Valuation, a number of important conclusions may be drawn, considering both the company's historic performance and the indicators that served as the forecast drivers.

Firstly, given that the Sum of the Parts approach was used, this Valuation allowed to project each business unit's Enterprise Value.

In this regard, as expected, the Cork Stoppers followed by the Raw Materials business units are the most significant parts of the Group's overall Enterprise Value. On the other hand, the low EBITDA margins of the Floor and Wall Coverings are having a significant impact in this business unit's value to the Group. Since the Group is already taking measures to shift this paradigm, future equity researches should already reflect the impact of said measures in this business unit´s valuation.

At this date, the most recent equity research found on the Group was published by Portuguese analysts of CaixaBank BPI, in the beginning of September 2019, which projects Corticeira Amorim's share value to be around €12,50. In addition, revised EBITDA projections of this equity research reflect the bad performance of the Floor and Wall Coverings business unit. In sum, the overall recommendation of this equity research is to buy the company's share. (for reference, as of the beginning of September 2019, the company's shares were listed at around €10,00).

Coincidently, both the equity research and the company's current share value are aligned with the DCF Valuation performed in chapter 5, which project a target price of €10.41, with reference to 31 December 2018.

To conclude, given the results obtained throughout this project, the final recommendation to investors is to buy the shares of Corticeira Amorim, considering its upside potential and strong indicators of the extension of the company's growth through recent years.

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Reuters website – https://www.reuters.com

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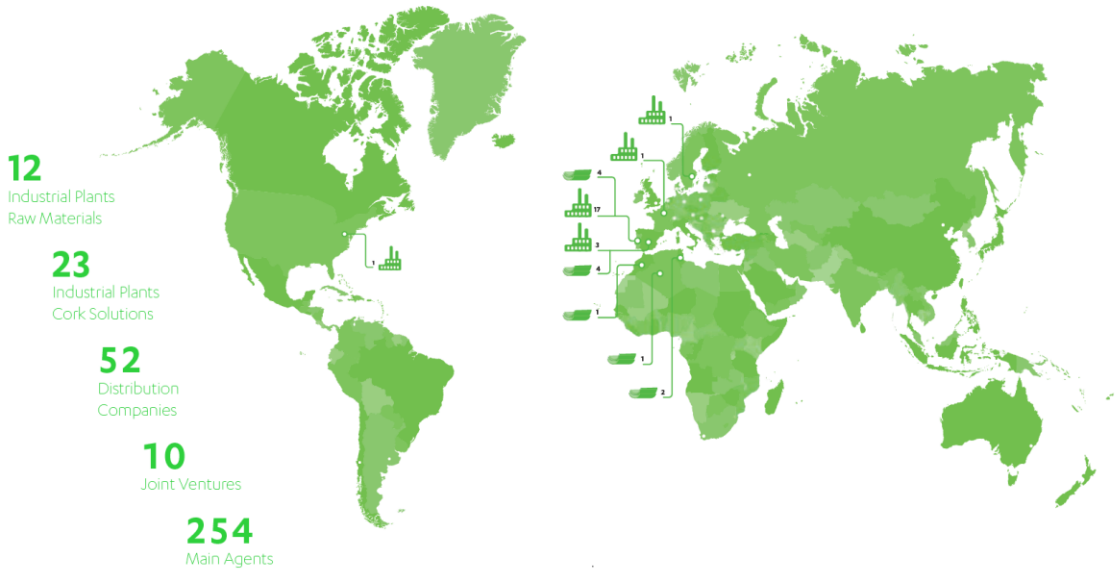
8. Appendixes

Appendix 1 – Amorim Group Organizational Chart

RAW MATERIALS	CORK STOPPERS		R&D, INNOVATION
Amorim Florestal, S.A.	Amorim & Irmãos, S.G.P.S., S.A.		
Provision	**Production**	**Distribuição**	
Amorim Florestal, S.A. Ponte de Sôr – Portugal	Amorim & Irmãos, S.A. Santa Maria de Lamas – Portugal	Amorim & Irmãos, S.A. Distribution Unit Santa Maria de Lamas – Portugal	Amorim Cork Research, Lda. Mozelos – Portugal
Amorim Florestal, S.A. Coruche – Portugal	Amorim Top Series, S.A Argoncilhe – Portugal	Portocork Internacional, S.A. Santa Maria de Lamas – Portugal	Amorim Cork Services, Lda. Mozelos – Portugal
Amorim Florestal, S.A. Abrantes – Portugal	Amorim & Irmãos, S.A Ind. Unit Valada Valada – Portugal	Amorim Cork SouthAfrica (PTY) Ltd. Cidade do Cabo – SouthAfrica	Amorim Cork Ventures, Lda. Mozelos – Portugal
Amorim Florestal, S.A. Ind. Unit Saltairos Ponte de Sôr – Portugal	Amorim & Irmãos, S.A Ind. Unit Coruche Coruche – Portugal	Amorim Cork Deutschland, GmbH Bingen am Rhein – Germany	
Cosabe – Companhia Silvo-Agricola da Beira, S.A Lisboa – Portugal	Amorim & Irmãos, S.A. Ind. Unit Portocork SantaMaria de Lamas – Portugal	Corchos de Argentina, S.A. Mendoza – Argentina	
S.I.B.L. – S.A.R.L. Jijel – Algeria	Amorim & Irmãos, S.A. Ind. Unit Saltairos Ponte de Sôr – Portugal	Trefinos Australia, Pty Ltd Adelaide – Australia	
Amorim Florestal España, S.L Algeciras – Spain	Amorim Champcork, S.A. Santa Maria de Lamas – Portugal	Amorim Australasia PTY Ltd. Adelaide – Australia	
Amorim Florestal España, S.L. San Vicente de Alcántara – Spain	Biocapo – Importação e Exportação de Cápsulas, Lda. Mozelos – Portugal	Korken Schlesser, GmbH Viena – Austria	
Amorim Florestal Mediterrâneo, S.L. San Vicente de Alcántara – Spain	Socori, S.A. Rio Maior – Portugal	Amorim Cork Bulgaria, EOOD Sofia – Bulgaria	
Comatral – Compagnie Marocaine de Transformation du Liège, S.A. Skhirat – Morocco	Francisco Oller, S.A. Girona – Spain	Corchera Gomez Barris, S.A. Santiago – Chile	
S.N.L. – Société Nouvelle du Liège, S.A. Tabarka – Tunisia	Trefinos, S.L. Girona – Spain	Corpack – Bourasse, S.A. Santiago – Chile	
Société Tunisienne d'Industrie Bouchonnière Tabarka – Tunisia	Amorim Top Series France S.A.S. Cognac – France	Wine Packaging & Logistic, S.A. Santiago – Chile	
	Elfverson & Co. AB Partil – Sweden	Industria Corchera, S.A. Santiago – Chile	
		ACI Chile Corchos, S.A. Santiago – Chile	
		Amorim Cork Beijing, Ltd. Pequim – China	
		Agglotap S.A. Girona – Spain	
		Victor y Amorim, S.L. Navarrete (La Rioja) – Spain	
		Amorim Cork España S.L. San Vicente de Alcántara – Spain	
		ACIC – USA LLC Napa Valley, CA – USA	
		Portocork America, Inc. NapaValley, CA – USA	
		Trefinos USA LLC Fairfield, CA – USA	
		Amorim Cork America, Inc. NapaValley, CA – USA	
		Amorim France, S.A.S. Eysines, Bordéus – France	
		Amorim France S.A.S. Unid. Sobefi Cognac – France	
		Amorim France S.A.S. Unid. Champfleury Champfleury – France	
		Bouchons Prioux S.A.R.L. Epernay – France	
		Amorim Top Series France S.A.S. Cognac – France	
		S.A.S. Ets Christian Bourasse Tosse – France	
		Sagrera et Cie Reims – France	
		S.A. Oller et Cie Reims – France	
		Société Nouvelle des Bouchons Trescasses, S.A. Le Boulou – France	
		Portocork France, S.A.S. Bordéus – France	
		Hungarokork Amorim, Rt. Veresegyház – Hungary	
		Portocork Italia, SRL Milão – Italy	
		Trefinos Italia SRL Treviso – Italy	
		Amorim Cork Italia, S.p.A. Conegliano – Italy	

Source: Company Information

Appendix 2 – Amorim Group Geographical Distribution



Source: Company Information

Appendix 3 – Segment Report of 2014 and 2013

2014	Raw Materials	Cork Stoppers	Floor & Wall Coverings	Composite Cork	Insulation Cork	Holding	Adjust.	Consolidated
Trade Sales	5,253	353,306	113,345	79,431	8,138	866	0	560,340
Other BU Sales	126,120	3,996	3,018	4,850	1,876	5,992	-145,853	–
Total Sales	131,373	357,302	116,363	84,282	10,014	6,859	-145,853	560,340
EBITDA (current)	17,492	46,830	15,520	7,748	1,653	-1,806	-714	86,722
Assets	136,146	300,237	87,860	79,754	12,866	475	106	617,446
Liabilities	38,095	102,214	28,630	25,898	2,353	14,703	89,983	301,877
Capex	2,816	12,917	1,409	3,334	562	182	–	21,220
Year Depreciation	-2,878	-11,105	-4,659	-2,976	-613	-105	–	-22,336
Non-cash cost	35	62	-1,867	-1,244	18	504	0	-2,493
Gains/Losses in associated companies	0	810	490	-19	0	0	–	1,280
2013	**Raw Materials**	**Cork Stoppers**	**Floor & Wall Coverings**	**Composite Cork**	**Insulation Cork**	**Holding**	**Adjust.**	**Consolidated**
Trade Sales	4,688	329,473	118,813	82,276	7,197	53	0	542,500
Other BU Sales	106,432	4,184	3,195	16,167	923	2,201	-133,102	–
Total Sales	111,120	333,657	122,009	98,443	8,120	2,254	-133,102	542,500
EBITDA (current)	15,829	41,414	15,177	6,726	1,349	-1,966	-402	78,127
Assets	153,014	295,413	103,086	88,320	13,346	4,833	-30,706	627,307
Liabilities	42,035	114,121	40,575	27,166	2,076	12,454	87,144	325,570
Capex	3,792	11,920	3,507	7,205	401	11	–	26,834
Year Depreciation	-1,672	-11,332	-4,639	-3,205	-621	-47	–	-21,516
Non-cash cost	-376	-393	-775	-1,467	55	-4	0	-2,960
Gains/Losses in associated companies	0	743	-160	109	0	0	–	692

(thousand euros)

NOTES:
Adjustments = eliminations inter-BU and amounts not allocated to BU.
EBITDA = Profit before interests, depreciation, equity method, non-controlling interests and income tax.
Provisions and asset impairments were considered the only relevant non-cash material cost.
Segments assets do not include DTA (deferred tax asset) and non-trade group balances.
Segments liabilities do not include DTL (deferred tax liabilities), bank loans and non-trade group balances.

Source: Company Information

Appendix 4 – Segment Report of 2016 and 2015

2016	Raw Materials	Cork Stoppers	Floor & Wall Coverings	Composite Cork	Insulation Cork	Holding	Adjust.	Consolidated
Trade Sales	9,406	417,592	113,772	91,463	9,086	93	0	641,411
Other BU Sales	139,228	5,174	3,355	8,622	2,355	2,693	-161,426	-
Total Sales	148,634	422,766	117,128	100,085	11,440	2,785	-161,426	641,411
EBITDA (current)	18,328	75,604	12,732	16,989	2,157	-3,266	-196	122,347
Assets	173,327	332,272	128,967	70,287	10,714	2,627	8,679	726,873
Liabilities	42,432	110,112	29,968	27,625	2,155	9,946	77,692	299,930
Capex	3,529	22,423	3,797	2,557	350	920	-	33,575
Year Depreciation	-3,482	-13,319	-5,598	-3,266	-568	-78	-	-26,310
Non-cash cost	-158	105	466	-599	187	10	0	10
Gains/Losses in associated companies	-3	271	49,706	0	0	-13	0	49,961
2015	**Raw Materials**	**Cork Stoppers**	**Floor & Wall Coverings**	**Composite Cork**	**Insulation Cork**	**Holding**	**Adjust.**	**Consolidated**
Trade Sales	7,344	388,493	107,440	92,944	8,536	43	0	604,800
Other BU Sales	128,093	4,332	2,403	7,036	1,504	2,172	-145,540	-
Total Sales	135,437	392,825	109,843	99,980	10,040	2,215	-145,540	604,800
EBITDA (current)	16,988	62,753	8,173	14,585	1,241	-2,771	-249	100,720
Assets	151,055	328,086	92,934	75,122	11,850	2,246	5,927	667,219
Liabilities	42,909	109,411	31,317	28,542	2,367	14,650	83,890	313,086
Capex	6,914	16,958	3,003	3,593	289	638	-	31,394
Year Depreciation	-2,552	-12,252	-4,800	-4,802	-604	-42	-	-25,051
Non-cash cost	38	-5,257	-715	-181	-476	135	-	-6,456
Gains/Losses in associated companies	-8	1,331	1,782	-12	0	-3	-	3,091

(thousand euros)

NOTES:
Adjustments = eliminations Inter-BU and amounts not allocated to BU.
EBITDA = Profit before interests, depreciation, equity method, non-controlling interests and income tax.
Provisions and asset impairments were considered the only relevant non-cash material cost.
Segments assets do not include DTA (deferred tax asset) and non-trade group balances.
Segments liabilities do not include DTL (deferred tax liabilities), bank loans and non-trade group balances.

Source: Company Information

Appendix 5– Segment Report of 2018 and 2017

2018	Raw Materials	Cork Stoppers	Floor & Wall Coverings	Composite Cork	Insulation Cork	Holding	Adjustm.	Consolidated
Trade Sales	20,479	526,179	108,654	97,383	10,318	103	-	763,117
Other BU Sales	165,966	7,801	3,525	4,788	1,661	4,318	-188,060	-
Total Sales	186,446	533,980	112,179	102,171	11,979	4,422	-188,060	763,117
EBITDA (current)	30,464	92,755	2,965	10,319	642	-3,397	236	133,984
Assets (non-current)	31,936	170,547	38,496	36,854	4,242	711	33,298	316,084
Assets (current)	207,445	333,080	62,986	51,736	10,225	966	-16,449	649,990
Liabilities	50,539	190,439	43,795	38,970	2,526	8,547	133,024	467,841
Capex	5,802	40,898	3,805	6,543	735	67	0	57,851
Year Depreciation	-3,208	-18,548	-5,671	-2,978	-532	-342	0	-31,279
Gains/Losses in associated companies	0	1,897	817	0	0	-22	0	2,691
2017	**Raw Materials**	**Cork Stoppers**	**Floor & Wall Coverings**	**Composite Cork**	**Insulation Cork**	**Holding**	**Adjustm.**	**Consolidated**
Trade Sales	11,210	472,080	118,180	90,441	9,648	49	-	701,609
Other BU Sales	144,864	4,978	3,356	8,336	941	2,516	-164,991	-
Total Sales	156,074	477,058	121,536	98,777	10,589	2,566	-164,991	701,609
EBITDA (current)	22,375	91,350	8,284	15,010	1,680	-5,189	85	133,594
Assets (non-current)	23,304	149,493	40,313	33,153	4,037	1,406	22,474	274,180
Assets (current)	183,573	291,801	65,469	42,016	7,514	1,675	3,180	595,228
Liabilities	60,772	170,560	39,798	31,163	2,263	10,282	94,578	409,417
Capex	6,131	22,475	9,729	4,661	460	284	0	43,739
Year Depreciation	-4,741	-17,250	-4,309	-2,669	-524	-106	0	-29,599
Gains/Losses in associated companies	0	1,668	-30	-181	0	-418	0	1,039

NOTES: (thousand euros)
Adjustments = eliminations inter-BU and amounts not allocated to BU.
EBITDA = Profit before net financing costs, depreciation, equity method, non-controlling interests, income tax and non-recurrent results.
Provisions and asset impairments were considered the only relevant non-cash material cost.
Segments assets do not include DTA (deferred tax asset) and non-trade group balances.
Segments liabilities do not include DTL (deferred tax liabilities), bank loans and non-trade group balances.

Source: Company Information

Appendix 6 – Amorim Group's Consolidated Statement of Financial Position of 2014 and 2013

Consolidated Statement of Financial Position (thousand euros)

	Notes	December 2014	December 2013
ASSETS			
Property, plant and equipment	VIII	182,893	184,661
Investment property	VIII	5,190	5,249
Goodwill	IX	2,911	5,255
Investments in associates	V e X	10,841	8,129
Intangible assets	VIII	1,091	693
Other financial assets	X	3,631	2,373
Deferred tax assets	XI	6,708	6,384
Non-current assets		**213,265**	**212,744**
Inventories	XII	247,633	244,063
Trade receivables	XIII	122,606	121,069
Income tax assets	XIV	2,233	8,026
Other current assets	XV	25,673	33,616
Cash and cash equivalents	XVI	6,036	7,788
Current assets		**404,181**	**414,562**
TOTAL ASSETS		**617,446**	**627,307**
EQUITY			
Share capital	XVII	133,000	133,000
Treasury stock	XVII	-7,197	-7,197
Other reserves	XVII	140,617	132,587
Net Income		35,756	30,339
Non-Controlling Interest	XVIII	13,393	13,009
TOTAL EQUITY		**315,569**	**301,737**
LIABILITIES			
Interest-bearing loans	XIX	26,225	33,623
Other borrowings and creditors	XXI	11,533	10,448
Provisions	XXIX	27,951	25,085
Deferred tax liabilities	XI	6,970	7,282
Non-current liabilities		**72,678**	**76,438**
Interest-bearing loans	XIX	67,369	78,612
Trade payables	XX	115,303	125,203
Other borrowings and creditors	XXI	44,007	42,822
Income tax liabilities	XXII	2,520	2,495
Current liabilities		**229,199**	**249,132**
TOTAL LIABILITIES AND EQUITY		**617,446**	**627,307**

(this statement should be read with the attached notes to the consolidated financial statements)

Source: Company Information

Appendix 7 – Amorim Group's Consolidated Statement of Financial Position of 2016 and 2015

Consolidated Statement of Financial Position (thousand euros)

	Notes	December 2016	December 2015
ASSETS			
Property, plant and equipment	IX	197,454	190,352
Investment property	IX	7,100	5,008
Investments in associates	VI and XI	9,450	13,304
Intangible assets	IX	3,776	2,489
Other financial assets	XII	3,940	4,177
Deferred tax assets	XIII	10,004	8,359
Non-current assets		**231,723**	**223,690**
Inventories	XIV	268,691	271,705
Trade receivables	XV	141,876	132,545
Income tax assets	XVI	4,214	3,139
Other current assets	XVII	29,249	28,678
Cash and cash equivalents	XVIII	51,119	7,461
Current assets		**495,150**	**443,530**
TOTAL ASSETS		**726,873**	**667,219**
EQUITY			
Share capital	XIX	133,000	133,000
Other reserves	XIX	175,347	152,754
Net Income		102,703	55,012
Non-Controlling Interest	XX	15,892	13,368
TOTAL EQUITY		**426,943**	**354,133**
LIABILITIES			
Interest-bearing loans	XXI	38,609	41,211
Other borrowings and creditors	XXIII	10,072	10,015
Provisions	XXX	30,661	32,227
Deferred tax liabilities	XIII	6,856	6,743
Non-current liabilities		**86,198**	**90,196**
Interest-bearing loans	XXI	48,399	50,146
Trade payables	XXII	109,985	121,184
Other borrowings and creditors	XXIII	49,631	49,518
Income tax liabilities	XVI	5,717	2,042
Current liabilities		**213,732**	**222,890**
TOTAL LIABILITIES AND EQUITY		**726,873**	**667,219**

(this statement should be read with the attached notes to the consolidated financial statements)

Source: Company Information

Appendix 8 – Amorim Group's Consolidated Statement of Financial Position of 2018 and 2017

Consolidated Statement of Financial Position (thousand euros)

	Notes	December 31 2018	December 31 2017
ASSETS			
Tangible assets	IX	259,433	227,905
Intangible assets	X	7,585	4,077
Goodwill	X	13,987	9,848
Biological assets		240	-
Investment property	XI	5,481	5,678
Investments in associates and joint ventures	VI e XII	9,537	11,006
Other financial assets	XIII	1,632	2,520
Deferred tax assets	XIV	13,346	13,146
Other debtors	XVIII	4,844	-
Non-current assets		**316,084**	**274,180**
Inventories	XV	406,090	359,141
Trade receivables	XVI	174,483	167,604
Income tax assets	XVII	8,915	13,297
Other debtors	XVIII	35,704	35,398
Other current assets	XVIII	3,103	2,782
Cash and cash equivalents	XIX	21,695	17,005
Current assets		**649,989**	**595,228**
TOTAL ASSETS		**966,074**	**869,407**
EQUITY			
Share capital	XX	133,000	133,000
Other reserves	XX	255,974	224,439
Net income		77,389	73,027
Non-Controlling interest	XXI	31,871	29,524
TOTAL EQUITY		**498,234**	**459,991**
LIABILITIES			
Interest-bearing loans	XXII	39,503	48,094
Other financial liabilities	XXIV	30,263	36,179
Provisions	XXXI	43,081	40,940
Post-employment benefits	XXXI	1,621	975
Deferred tax liabilities	XIV	7,737	7,187
Non-current liabilities		**122,205**	**133,375**
Interest-bearing loans	XXII	121,200	61,695
Trade payables	XXIII	165,008	157,096
Other financial liabilities	XXIV	41,039	33,498
Other liabilities	XXIV	16,464	21,521
Income tax liabilities	XVII	1,924	2,231
Current liabilities		**345,635**	**276,042**
TOTAL LIABILITIES AND EQUITY		**966,074**	**869,407**

(this statement should be read with the attached notes to the consolidated financial statements)

Source: Company Information

Appendix 9 – Amorim Group's Consolidated Income Statement by Nature of 2014 and 2013

Consolidated Income Statement by Nature – Of the Year and Fourth Quarter (thousand euros)

4Q14 (non audited)	4Q13 (non audited)		Notes	12M14	12M13
130,655	123,359	Sales	VII	560,340	542,500
69,006	68,070	Costs of goods sold and materials consumed		286,205	264,356
8,809	12,475	Change in manufactured inventories		9,448	-662
24,698	24,176	Third party supplies and services	XXIII	96,429	97,266
27,146	24,280	Staff costs	XXIV	103,315	100,154
-1,166	-337	Impairments of assets	XXV	149	1,930
3,051	2,155	Other gains	XXVI	9,613	7,765
2,192	2,773	Other costs	XXVI	6,581	7,770
20,639	**19,028**	**Current EBITDA**		**86,722**	**78,127**
5,650	5,595	Depreciation	VIII	22,336	21,516
14,989	**13,433**	**Current EBIT**		**64,386**	**56,611**
2,840	0	Non-current costs	XXV	6,354	0
2,759	3,968	Financial costs	XXVII	6,036	8,888
769	1,311	*Interest and other fiancial costs*		4,046	6,231
1,990	2,657	*Provisions*		1,990	2,657
56	140	Financial income	XXVII	180	1,095
354	363	Share of (loss)/profit of associates	X	1,280	692
9,801	**9,967**	**Profit before tax**		**53,456**	**49,509**
2,850	4,529	Income tax	XI	16,776	18,551
6,951	**5,438**	**Profit after tax**		**36,680**	**30,958**
229	234	Non-controlling Interest	XVIII	924	620
6,722	**5,204**	**Net Income attributable to the equity holders of Corticeira Amorim**		**35,756**	**30,339**
0,054	**0,041**	**Earnings per share – Basic and Diluted (euros per share)**	XXXIII	**0.285**	**0.242**

(this statement should be read with the attached notes to the consolidated financial statements)

Source: Company Information

Appendix 10 – Amorim Group's Consolidated Income Statement by Nature of 2016 and 2015

Consolidated Income Statement by Nature – Of the Year and Fourth Quarter (thousand euros)

4Q16 (non audited)	4Q15 (non audited)		Notes	2016	2015
150,554	141,911	Sales	VIII	641,411	604,800
67,392	71,976	Costs of goods sold and materials consumed		294,350	307,375
-4,633	3,339	Change in manufactured inventories		-12,358	18,188
25,814	24,112	Third party supplies and services	XXIV	103,001	100,537
29,163	30,754	Staff costs	XXV	113,291	111,881
-1,293	600	Impairments of assets	XXVI	729	3,291
2,575	2,411	Other gains	XXVII	9,596	8,934
518	-345	Other costs	XXVII	4,932	8,117
26,901	**20,565**	**Current EBITDA**		**122,347**	**100,720**
8,249	6,337	Depreciation	IX	26,310	25,051
18,651	**14,228**	**Current EBIT**		**96,037**	**75,669**
-623	3	Non-current costs	XXVI	-4,353	-2,904
-467	1,126	Financial costs	XXVIII	-860	2,847
266	*418*	*Interest Costs and other financial costs*		*1,646*	*2,139*
-733	*709*	*Provisions*		*-2,506*	*709*
28	32	Financial income	XXVIII	88	58
78	1,050	Share of (loss)/profit of associates	XI	2,384	3,091
47,577	0	Gain on the disposal of associates	XI	47,577	0
66,178	**14,188**	**Profit before tax**		**142,592**	**73,066**
17,700	408	Income tax	XIII	37,880	17,496
48,478	**13,779**	**Profit after tax**		**104,713**	**55,570**
999	378	Non-controlling Interest	XX	2,010	558
47,479	**13,402**	**Net Income attributable to the equity holders of Corticeira Amorim**		**102,703**	**55,012**
0.357	**0.101**	**Earnings per share – Basic and Diluted (euros per share)**	XXXIV	**0.772**	**0.431**

(this statement should be read with the attached notes to the consolidated financial statements)

Source: Company Information

Appendix 11 – Amorim Group's Consolidated Income Statement by Nature of 2018 and 2017

Consolidated Income Statement by Nature (thousand euros)

4Q18 (non audited)	4Q17 (non audited)		Notes	2018	2017
179,360	170,139	Sales	VIII	763,117	701,609
101,639	83,892	Costs of goods sold and materials consumed		408,780	333,030
11,069	2,833	Change in manufactured inventories		32,119	4,932
33,558	30,846	Third party supplies and services	XXV	124,140	116,524
32,243	33,352	Staff costs	XXVI	134,239	125,630
-986	-1,349	Impairments of assets	XXVII	-73	2,290
2,690	4,580	Other income and gains	XXVIII	11,599	12,348
1,097	2,568	Other costs and losses	XXVIII	5,765	7,822
25,566	**28,242**	**Operating Cash Flow (current EBITDA)**		**133,984**	**133,594**
7,670	7,852	Depreciation	IX, X e XI	31,279	29,599
17,896	**20,390**	**Operating Profit (current EBIT)**		**102,705**	**103,995**
-624	-1,341	Non-recurrent results	XXVII	57	-2,913
1,332	555	Financial costs	XXIX	3,547	1,471
34	74	Financial income	XXIX	95	191
562	81	Share of (loss)/profit of associates and joint-ventures	XII	2,691	1,039
16,536	**18,650**	**Profit before tax**		**102,002**	**100,842**
-2,502	1,344	Income tax	XIV	19,393	24,263
19,038	**17,306**	**Profit after tax**		**82,608**	**76,579**
239	642	Non-controlling interest	XXI	5,220	3,551
18,798	**16,664**	**Net income attributable to the equity holders of Corticeira Amorim**		**77,389**	**73,027**
0.141	**0.125**	**Earnings per share - Basic e Diluted (euros per share)**	XXXV	**0.582**	**0.549**

(this statement should be read with the attached notes to the consolidated financial statements)

Source: Company Information

Appendix 12 – Raw Materials BU DCF Valuation

Raw Materials	2019	2020	2021	2022	2023
Sales	21,503	22,578	23,707	24,418	25,151
Cost of Sales	-26,144	-27,451	-28,824	-29,689	-30,579
EBITDA	47,647	50,029	52,531	54,107	55,730
Depreciations and Amortizations	3,440	3,612	3,793	3,906	4,024
EBIT	44,207	46,417	48,738	50,200	51,706
Taxes	9,283	9,748	10,235	10,542	10,858
EBIT (1-t)	34,923	36,670	38,503	39,658	40,848
Net CAPEX	358	376	395	415	436
Changes in Net Working Capital	-101	193	208	124	127
FCFF	34,666	36,101	37,900	39,119	40,286
WACC	7.52%				
Discount Factor	0.92	0.86	0.79	0.73	0.68
Discounted FCFF	32,060	30,878	29,981	28,620	27,258
Terminal Value	546,596				
NPV	121,539				
Enterprise Value	668,135				

Source: Own Projections

Appendix 13 – Cork Stoppers BU DCF Valuation

Cork Stoppers	2019	2020	2021	2022	2023
Sales	547,226	569,115	591,880	603,717	615,792
Cost of Sales	454,757	472,947	491,865	501,702	511,736
EBITDA	92,469	96,168	100,015	102,015	104,055
Depreciations and Amortizations	21,148	21,994	22,874	23,331	23,798
EBIT	71,321	74,174	77,141	78,684	80,257
Taxes	14,977	15,576	16,200	16,524	16,854
EBIT (1-t)	56,344	58,597	60,941	62,160	63,403
CAPEX	7,365	7,660	7,967	8,285	8,617
Changes in Net Working Capital	-4,191	8,020	8,658	5,163	5,268
FCFF	53,169	42,917	44,316	48,712	49,519
WACC	7.52%				
Discount Factor	0.92	0.86	0.79	0.73	0.68
Discounted FCFF	49,173	36,708	35,056	35,638	33,505
Terminal Value	671,867				
NPV	156,575				
Enterprise Value	828,442				

Source: Own Projections

Appendix 14 – Floor and Wall Coverings BU DCF Valuation

Floor and Wall Coverings	2019	2020	2021	2022	2023
Sales	109,741	110,838	113,055	115,316	117,622
Cost of Sales	100,462	101,467	103,496	105,566	107,677
EBITDA	9,279	9,371	9,559	9,750	9,945
Depreciations and Amortizations	6,071	6,132	6,255	6,380	6,507
EBIT	3,207	3,239	3,304	3,370	3,438
Taxes	674	680	694	708	722
EBIT (1-t)	2,534	2,559	2,610	2,662	2,716
CAPEX	380	384	776	791	807
Changes in Net Working Capital	-1,107	2,119	2,287	1,364	1,392
FCFF	3,261	56	-453	507	517
WACC	7.52%				
Discount Factor	0.92	0.86	0.79	0.73	0.68
Discounted FCFF	3,016	48	-358	371	350
Terminal Value	7,013				
NPV	3,077				
Enterprise Value	10,090				

Source: Own Projections

Appendix 15 – Composite Cork BU DCF Valuation

Composite Cork	2019	2020	2021	2022	2023
Sales	99,331	101,317	103,344	105,410	107,519
Cost of Sales	85,189	86,893	88,631	90,404	92,212
EBITDA	14,141	14,424	14,713	15,007	15,307
Depreciations and Amortizations	3,147	3,210	3,274	3,339	3,406
EBIT	10,995	11,215	11,439	11,668	11,901
Taxes	2,309	2,355	2,402	2,450	2,499
EBIT (1-t)	8,686	8,859	9,037	9,217	9,402
CAPEX	682	695	709	723	738
Changes in Net Working Capital	-886	1,695	1,830	1,091	1,113
FCFF	8,890	6,469	6,498	7,403	7,551
WACC	7.52%				
Discount Factor	0.92	0.86	0.79	0.73	0.68
Discounted FCFF	8,222	5,533	5,140	5,416	5,109
Terminal Value	102,446				
NPV	24,311				
Enterprise Value	126,757				

Source: Own Projections

Appendix 16 – Insulation Cork BU DCF Valuation

Insulation Cork	2019	2020	2021	2022	2023
Sales	10,524	10,735	10,950	11,169	11,392
Cost of Sales	8,798	8,974	9,153	9,336	9,523
EBITDA	1,727	1,761	1,796	1,832	1,869
Depreciations and Amortizations	514	524	535	545	556
EBIT	1,213	1,237	1,262	1,287	1,313
Taxes	255	260	265	270	276
EBIT (1-t)	958	977	997	1,017	1,037
CAPEX	72	74	75	77	78
Changes in Net Working Capital	-89	171	185	110	112
FCFF	975	732	737	830	846
WACC	7.52%				
Discount Factor	0.92	0.86	0.79	0.73	0.68
Discounted FCFF	902	627	583	607	573
Terminal Value	11,485				
NPV	2,719				
Enterprise Value	14,204				

Source: Own Projections