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BUSINESS VALUATION: THE CASE STUDY OF A COMPANY FROM THE MINING SECTOR

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Internship Report
Master in Economics of Business and Strategy

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Biography Note

Éder Miguel Mota de Oliveira Lima, born on July 6th, 1995, in Praia, Cape Verde, came to Portugal in 2013, where he started his bachelor's in Mathematics Applied to Economics and Management at ISEG Lisbon School of Economics and Management. It was a long, hard and learning path for Éder in a new country where he had to do everything on his own besides studying.

After completing his Bachelor's in 2019, he started to look for new opportunities and, at the same time, apply for some additional courses to complement his background. During that period, he had the chance to visit Porto, a city he enjoyed a lot and later decided to move on looking for new challenges. In 2020 the brand-new master in FEP called his attention and he decided to enrol in it.

The master's in Economics of Business and Strategy allowed Éder to encompass his knowledge and go deep in economic theory for a better understanding of the market dynamics and corporate performance. It was also a value-added for his personal and professional growth.

In his last semester, he had the opportunity to gain some experience and consolidate all the things learned during the curricular internship with Triple A – Capital & Finance. It was the first time he got his hands on a financial area in a company.

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Abstract

The report is based on an internship at Triple A - Capital & Finance, a financial boutique that acts as a financial advisor capable of leveraging new business opportunities with a focus on small and medium-sized companies. The internship provided learning at the level of corporate finance regarding economic-financial studies and business valuation. The intern was able to get the essential knowledge and tools for a more detailed level of analysis which was determinant to develop this report.

This report focused on business valuation, a very important topic nowadays and necessary in the preparation for strategic decision-making by the company, whether in a situation of purchase, sale, merger or in strategic planning for value creation. The knowledge acquired during the master's degree, mainly in the business valuation course, was further explored and applied in practical situations addressed during the internship. It was conducted a brief literature review in this field to extend the knowledge and to illustrate the differences between the methods, the particularities, and their impact on the chosen company. The characteristic presented by the company allowed to valuate and explore several aspects through the methodology considered most appropriate for the case.

The result of this work concludes about the use of the methods, explaining the most appropriate valuation method in this case and why other methods are not applicable. The valuation result revealed that companies, even if they are not developing any activity, can take advantage of their assets and create value, using them even in completely different areas of the company's main activity. In general, companies need to identify and take advantage of all possible and available resources to create value and only ultimately choose to liquidate the business.

Resumo

O relatório de estágio é baseado em um estágio na Triple A - Capital & Finance, uma boutique financeira que atua como consultora financeira capaz de alavancar novas oportunidades de negócios com foco em pequenas e médias empresas. O estágio proporcionou aprendizado no nível de finanças corporativas em relação a estudos económico-financeiros e avaliação de empresas. Foi possível obter conhecimentos e ferramentas essenciais para um nível de análise mais detalhado sendo determinante para desenvolver este relatório.

Este relatório incidiu-se sobre a avaliação de empresas, um tema muito importante nos dias de hoje e necessário na preparação para tomada de decisões estratégicas por parte da empresa, quer numa situação de compra, venda, fusão ou no planeamento estratégico para criação de valor da empresa. Os conhecimentos adquiridos durante o mestrado, principalmente na disciplina de avaliação de empresas foram aprofundados e aplicados em situações práticas trabalhadas durante o estágio. Foi alargado o conhecimento com uma breve revisão de literatura feita nesse campo de modo a ilustrar as diferenças entre os métodos, as particularidades e o seu impacto na empresa escolhida. A característica apresentada pela empresa permitiu avaliar e explorar vários aspetos através da metodologia considerada mais apropriada para o caso.

O resultado deste trabalho permitiu concluir à cerca da utilização dos métodos, mostrando o método de avaliação mais apropriado nesses casos e o porquê dos outros métodos não serem aplicáveis. O resultado da avaliação mostrou que as empresas mesmo não estando a desenvolver qualquer atividade, podem aproveitar dos seus ativos e criar valor, utilizando-os até em áreas completamente diferentes da atividade principal da empresa. De uma forma geral, é importante as empresas identificarem e aproveitarem todos os recursos possíveis e disponíveis para criar valor e só em último caso optar pela liquidação do negócio.

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1. Introduction

This report brings one of the most current and important topics in the business world where any investment opportunity whether to buy a company, sell or merge becomes necessary for its execution. In this way, business valuation allows everyone involved to know the real value of the company or to have a better idea of the value of the company, being able to be better prepared for future decisions. Köseoğlu and Almeany (2020) already said that the value of the company is an essential tool in the real world not only in situations of mergers and acquisitions, but also in the proper preparation of medium and long-term plans.

The purpose of this work was to put into practice, explore and apply all the knowledge and techniques that focused on business valuation, learned during the master's degree, thus giving the possibility to address different and concrete situations of a company. Triple A – Capital & Finance uses the two most used valuation methods today which are the Discounted Cash Flow Valuation Method and the Relative Valuation Method and also uses the Adjusted Net Asset Valuation Method. After a literature review in this field, the work makes a bridge between what is taught in theory and what is done in practice. Therefore, from the acquired elements it was applied to a case study of a company.

The chosen company is from the mining sector nonetheless it has had a break in activity for several years, largely due to its position in the sector, showing that it lacks capacity and licenses to explore mines, and also because the sector itself presents very demanding challenges nowadays and with a future increasingly at risk. Considering this fact, the company adopted a strategic option of being transfigured in the development and implementation of a tourist establishment seen as an opportunity to create value from its assets and the element that will substantially increase the value of the company even considering the conjunctural situation that the sector is going through. The two most used methodologies prove to not be adequate for the case since the company has not registered any operational cash flow in recent years being difficult to predict in a time horizon and not be possible to find companies that are comparable given the characteristics of the company under study. Therefore, it was decided to use the Adjusted Net Asset valuation method, which is adequate to evaluate companies with similar situations, such as, experiencing high drops in activity, negative operating results, or companies holding a lot of tangible fixed assets.

In conclusion, the results obtained from the application of this method reveal an approximated fair value of the company at the respective period of December 31st, 2021.

This study is relevant and shows that the adjusted net asset valuation method is a reliable substitute for the two most used methods, especially nowadays after the Covid-19 pandemic where many companies drastically reduced activities or liquidated their business. This case proves to be a good example of how a company in a sector takes advantage of its assets, its capital and with some knowledge, manage to strategically adapt to a new situation in which the results lead to the creation of value for the company. In these situations, companies should have a value-based management and not be static. It must always have a strategic vision according to the company's own results, the available resources, the framework in the national market and the requirements of the international market.

The structure of the work includes 4 chapters in addition to the introduction, and conclusion. Chapter 2 presents the host institution is presented, and the tasks developed during the internship. Then, a review of literature on topics related to business valuation is carried out to compare the different methods that exist. The following chapter refers to the methodology used in the elaboration of this case study, as well as its specificities. Finally, the valuation, the adjustments made and their impact on the company's value are presented.

2. Internship Framework

2.1. The Host Institution

The present report is the outcome of a corporate finance internship with a special focus on business valuation. The internship was proposed by a company from Porto, Triple A – Capital & Finance, a specialist in financial advisory. Triple A – Capital & Finance is a limited liability company incorporated on February 25th, 2012, based on business services which focuses on two different areas: corporate finance and financing advisory. At the time this report was written, the management board consisted of a general director and three partners, all of whom were shareholders in the company. The company presented an average turnover of €44,560 in the last two years, highlighted by a substantial drop of around 75% in 2021 compared to 2020.

Corporate Finance

In corporate finance the company supports clients in terms of mergers and acquisitions, strategy and capital raising. It assembles the operations and works until the conclusion of the deal, being responsible for the search for investors, approach to investors, presentation of highly technical documentation to capture the interest of investors, valuation of companies, financial due diligence, negotiations, and even the construction of a business plan or financial restructuring when necessary.

Financing Advisory

In financing advisory, the company guides clients on finding the appropriate solution through Equity, Debt, or Community Funds in start-ups, M&A operations, growth and expansion. Once again Triple A – Capital & Finance assembles, studies the operation and supports negotiations in order to obtain the best form of financing, working with the financial instruments available on the market, either through debt or equity.

The company positions itself as an independent financial boutique differing from several largest players which allows to create a closer and stronger relationship with its customers and partners, therefore, representing companies that are for sale, investors who want to acquire companies in order to maximize value for them. Thus, the objective of Triple A – Capital & Finance is to encourage and support society in the construction and growth of solid, responsible, and productive sustainable businesses.

Over the last few years, there are many partners with whom Triple A - Capital & Finance has been building a solid, long-lasting relationship, thus being a strategic policy of the company. It has been beneficial for both parties as reflected in real results across a wide range of solutions for the customer. The company have been standing out in the business field thanks to high expertise and accumulated experience of its team, having received several awards such as Most Outstanding Financial Advisory Boutique Services, Best Financial Advisory Boutique in Northwest Portugal, and Portugal's M&A Boutique Firm of the Year. Triple A – Capital & Finance still totally dedicated to keep providing the best results to the clients and partners.

2.2. Role Description and Activities Carried Out

The internship aimed at learning topics related to investment projects, economic and financial studies, business plans, strategic consultancy, and business valuation, focusing, therefore, on the financial and strategy areas. The internship was in corporate finance where the intern was assigned tasks of business valuation, writing valuation reports and investment decks, and researching for private equity investors. It was in hybrid regime and the intern was part of a team of three elements where one was the company's general director, and the other two were also interns.

Relatively to business valuation, Triple A – Capital & Finance uses three different methods to valuate companies, which are Discounted Cash Flow Method, Relative Valuation Method and Adjusted Net Assets Method. The valuations carried out during the internship allowed to understand the methodology applied by the company in the use of these methods and to broaden the knowledge at this level, giving the possibility to better understand the specificities of each method and also to determine the adequate methods to use in each situation.

It was made a deep search in Damodaran database web page when valuating companies through multiples method and also for a training valuation made using the discounted cash flow method.

Another key point was working with private equity investors in order to target the right investors with strategies that fit within the opportunities that Triple A - Capital & Finance had available, either for capital growth or for buyouts. Furthermore, it was necessary to develop some brief presentations called 'investment decks' related to those opportunities to send them to the investors. This was important for the intern to improve the ability to identify the most relevant and determinant dimensions of a company in creating value, making it more informative and appealing to the operation in question since the objective of the investment decks was to present to the investors a small summary of the company, a summary of their business plan and also some key financial data. These operations are hard to complete, since it depends on aspects such as the turnover, EBITDA, on the side of who sells and average investment tickets, strategy type on the side of who invests. It is important to find private equities and opportunities that matches in all these aspects in order to have a possible successful operation.

It was a relevant experience for the student, since he was able to work with other elements of the team and participate in smaller projects in contact with the respective clients. He got to know the different realities and questions of the clients as well as how each specific situation is addressed. The position gave the opportunity to experience and improve topics covered during the master and to further be able to address it in other situations. In general, the company's boutique concept was an asset for the intern because it benefits a better learning, and the student could follow up and acquire extra knowledge related to other areas that are close to the one in which he developed the work.

3. Theoretical Framework

3.1. Business Valuation

Valuation is a process whereby the value of certain assets, tangible or intangible, securities, liabilities and a specific business as a going concern or any listed or unlisted company or other forms of organization, partnerships or ownerships are appraised or determined (Ray, 2010). Thus, business valuation is important for the business world, and anyone involved in corporate finance usually is familiar with its tools (Fernandéz, 2002). Damodaran (2012) stated that valuation serves as the starting point for increasing companies' value since most corporate finance theories are based on the premise of value maximization. This author also stated that the value of a company and the decisions it makes may be directly related, reflected in the projects it takes on, how it finances them and in its dividend policy. More specifically, regarding mergers and acquisitions, valuation is crucial in determining the fair value of the companies involved, so influencing the decision of acquire or merge. In addition, in portfolio management valuation is fundamental for active investors, and the nature and role of valuation differ according to the types of investments. Investors who invest in stocks for long term focus on company valuation while investors who pick stocks for short term are more focused on market valuation (Damodaran, 2012). Finally, a business valuation process help identify the sources of creation and destruction of economic value within a company (Fernandéz, 2002).

'Value' is an expression which denotes the material or monetary significance of something, and which can be estimated by means of exchange. It is an opinion that results from an assessment made on something rather than an exact arithmetic result. Because of that, value can mean different things at different times, for different people, and in different contexts (Ray, 2010). There is a difference between value and price. Price represents the amount agreed between the two parties involved when selling a company (Fernandéz, 2002). In other words, price is the money or equivalent that the seller receives from the buyer in exchange for any product or service (Köseoğlu & Almeany, 2020).

3.2. When to do a Business Valuation

Besides, corporate finance, mergers and acquisitions and portfolio management, there are several other reasons to proceed with a business valuation (Köseoğlu & Almeany, 2020).

1. Bankruptcy or Liquidation

   For any company going bankrupt or ending its operations due to different reasons, it is required to liquidate the entire company's assets and find its value. Valuation plays a mandatory role in these types of cases in order to find the liquidation value which is the minimum amount that the company receives for the quick sale of the assets.

2. Legal disputes

   Any dispute of rights, pressure from shareholders, dissenting and minority shareholders need valuation. It is still needed for compensation calculations, property disputes, and the value to be paid to the counterparty that does not agree with the sale.

3. Public offering

   The focus of the transaction is the value and price of the publicly traded shares, being important during the public offering the reflection of reality in the valuation of the company's shares.

4. Business sale

   The process of selling or buying a company is supported by the detailed analysis that a valuation provides about the company in question.

5. Credit rating

   Credit institutions take into account the value of the company, the ability to pay the debt and the ability to generate future cash. Valuation is used in this process and also in the determination of the value of the asset, the group of assets or the entire company if the mortgage for the loan is required.

6. Intellectual property rights

   Companies with intellectual property rights such as trademarks, patents, know-how and copyrights may value much more. The value these rights have created must be carefully and separately determined, especially when it becomes important and when a significant part of the company's value is linked to the brand value it has created.

3.3. Valuation Methods

There is a broad variety of models and methods used by analysts, and these models are based on very different assumptions (Damodaran, 2012; Köseoğlu & Almeany, 2020). The various approaches and methods that exist very often yield different results. This means that the true value of a company is not objectively fixed, but rather dependent on the different valuation models, which indicates that there is no single figure to the fair value of a company, but a range of values (Schmidlin, 2014). Therefore, there may not be a definitive valuation method that offers a definitive value whatever the circumstances. A correct valuation requires a logical and methodical approach, and a careful application of the basic principles, so there is no preferred methodology to be always adopted. In this way, the valuation process gains more credibility when it establishes a range of values estimated through various methods (Ray, 2010). However, these methods have some common features and can be classified together (Damodaran, 2012; Köseoğlu & Almeany, 2020). This classification facilitates the understanding of individual models position into the overall picture, of why they show different results, and of when they have fundamental errors in logic (Damodaran, 2012). The valuation methods can be broadly classified in terms of their approach: income based, market based, or asset based (Köseoğlu & Almeany, 2020; Trugman, 2016).

Income Based Approach

The income valuation approach is based on the expected future cash flow that can be generated by a company. It is also known as Discounted Cash Flow Valuation, where the future cash flows are discounted to the present using a chosen rate of return in order to determine the present value of a company. In this approach, value is created when generates a flow of cash in the future, being essential to consider the company's future expectations (Köseoğlu & Almeany, 2020). There are two valuation methods most frequently used in this approach, which is the capitalization of benefits (earnings or cash flow) method and the discounted future benefits (earnings or cash flow) method (Trugman, 2016).

Market Based Approach

The market valuation approach, also known as relative valuation, is based on the comparison between a company and other similar companies. This approach assumes that similar assets is traded at a similar price in efficient market conditions, meaning that the value of the company is assessed using the real market values of similar companies. The more similar companies exist in the market, the more this approach can work well (Köseoğlu & Almeany, 2020). The methods most frequently used in this approach are the public company method of multiples, M&A company transactions method and guideline sales of interests (Trugman, 2016).

Asset Based Approach

The asset valuation approach is based on the companies' total assets and liabilities presented in the balance sheet, and the equity value is given by the difference between assets and liabilities (Köseoğlu & Almeany, 2020). There is one valuation method most frequently used in this approach, which is the adjusted net asset method (Trugman, 2016).

Different approaches and methods can be summarized in the following table (Fernandéz, 2007; Köseoğlu & Almeany, 2020; Miciuła et al., 2020):

Table 1 - Main Business Valuation Methods

Main Business Valuation Approaches/Methods			
Income Approach	**Market Approach**	**Asset Approach**	**Other Methods**
• Discounted Cash Flow Method • Discounted Dividend Method • Capitalization of Benefits Method	• Public Company Multiples Method • M&A Comparable Transactions Method	• Adjusted Net Asset Method • Book Value Method • Replacement Value Method • Liquidation Value Method	• Contingent Claim Valuation Method (Option Pricing Models) • Cash Flow Return on Investment • Residual Income • Economic Value Added

The most used business valuation method in real world is relative valuation (market-based approach). However, all valuation approaches are built in the discounted cash flow valuation fundamentals (Damodaran, 2012). These two valuation methods are described below in more detail.

3.3.1. Discounted Cash Flow Valuation (DCF)

The DCF valuation estimate the value of a company by discounting its expected cash flows to the present at an appropriate rate reflecting the cash flows' risk (Damodaran, 2007; Fernandéz, 2002). The value of a company depends on their capacity to generate cash flow, and usually the ones that have higher and stable cash flows worth more than the ones with lower and volatile cash flows (Damodaran, 2011).

The cash flows corresponding to the company being valued are normally planned for a period of 5 to 10 years assuming its growth thereafter at a constant rate (g), which is called terminal value (Schmidlin, 2014). Within an established period, a forecast is made for each of the financial items that influence the generation of cash flows related to the company's operations, such as, sales, cost of goods, operating costs, taxes, capital expenditures, and financial costs. In addition, it is important to determine a suitable discount rate which considers the risk and historic volatilities. The terminal value on a certain period considers the discounting of the cash flows after that period. For this, a stable growth rate (g) is assumed, representing an indefinite duration of cash flows after that period. However, the growth rate can be ignored after a certain period, since the present value of the cash flows decreases with longer time horizons (Fernandéz, 2002). In fact, it is hard to estimate the growth rate and as an alternative the GDP growth rate or the inflation rate can be used (Pignataro, 2013). Therefore, the value to be determined will be composed by the present value of each cash flow from the forecasted period and the present value of the terminal value.

Types of DCF Model

Fernandéz (2002) shows that all DCF methods use the expression given by equation 3.1:

$$V = \frac{CF_1}{1+k} + \frac{CF_2}{(1+k)^2} + \frac{CF_3}{(1+k)^3} + \cdots + \frac{CF_n + RV_n}{(1+k)^n} \tag{3.1}$$

Where:

$CF_i =$ Cash Flow generated by the company in the period i

$RV_n =$ Residual Value of the company in the year n

$k \quad =$ Appropriate discount rate for the cash flows' risk

The residual value is given by $RV_n = \frac{CF_n(1+g)}{(k-g)}$ (3.2)

Where g is the growth rate

Each method differs by the type of cash flow and the corresponding discount rate. According to Fernandéz (2002), there are three main cash flows types: free cash flow, equity cash flow, and debt cash flow.

The equity cash flows help to calculate the value of equity, that is, to valuate only the equity stake in the business. It can be given by the equation 3.3 (Damodaran, 2012):

$$FCFE = Net\ income - (Capital\ expenditure - Depreciation) \\ - (Change\ in\ noncash\ working\ capital) \\ + (New\ debt\ issued - Debt\ repayments) \tag{3.3}$$

The present value of equity is calculated by discounting the expected cash flows to equity at the cost of capital. In this case the cash flows to equity are obtained through the residual cash flows after meeting all expenses, reinvestment needs, tax obligations, and interest and principal payments (Damodaran, 2012).

The debt cash flow will account for all cash flows related to debt, that is, all the interest to be paid on the debt and the principal repayments. The present market value of the debt is obtained by discounting the cash flows of debt at a required rate of return to debt (cost of debt) (Fernandéz, 2002).

The free cash flow is used to obtain the total value of the firm, that is, to evaluate the entire business, which includes equity and bonds. It can be calculated using the following expression (Damodaran, 2012):

$$FCFF = EBIT(1 - Tax\ Rate) + Depreciation - Capital\ expenditure \\ - \Delta\ Working\ capital \tag{3.4}$$

The present value of the firm is obtained by calculating the expected cash flows to the firm at the weighted average cost of capital (WACC), which is the cost of the equity and debt used by the company, weighted by their market value proportions. The free cash flow is calculated using the residual cash flows after operating expenses, reinvestment, and taxes, but prior to any payments to either debt or equity holders (Damodaran, 2012).

Using different definitions of cash flow and discount rates these models yield consistent estimates of the value for equity if the assumptions are consistent as well. Depending on the method, the result will be either the fair value of the firm or the fair value of equity. The value of the firm also known as Enterprise Value is given by the equation 3.5 (Schmidlin, 2014):

$$EV = Equity\ Value + Value\ of\ net\ debt \tag{3.5}$$

where you can get the equity value by rearranging the equation.

3.3.2. Relative Valuation

Relative valuation is the most used type of valuation in the real world (Damodaran, 2012), and it is usually used as a complement to other valuations (Fernandéz, 2002). As shown before, in this kind of valuation, the value of a company is calculated using the value of comparable companies considering appropriate sales, cash flows, earnings, and book value multiples (Schmidlin, 2014). The relative valuation can be also called multiple valuation because it uses an indicative value (multiple) of comparable companies, precedent transactions, or industry averages to estimate an approximate value of the company being evaluated (DePamphilis, 2019). A comparable company can be defined as one that presents similar risks, cash flows, and growth potential (Damodaran, 2007). However, it is difficult to find an adequate comparable company given that they must be similar in size, product, and geography (Pignataro, 2013). This approach is largely dependent on the efficiency of the market, being more likely to fail when determining individual multiples, but more likely to be right when determining an industry average multiple. A comparison of multiples will help to give an approximated valuation of a company assuming that the market valued similar assets correctly (Damodaran, 2012).

Besides the analysis of comparable companies, the value of the company is estimated by using multiples of earlier transactions. For instance, purchase prices of similar companies can offer an approximate value for the company. Although it is very difficult to identify relevant transactions, it is necessary to consider transactions within the industry of the company (Pignataro, 2013).

Damodaran (2007) highlighted three steps when doing relative valuation. The first step is to identify comparable companies in the same sector and with the same size. The second step is to standardize market prices to make them comparable, especially when companies have different sizes or units. The last step is to adjust for the differences found across companies when comparing the standardized values.

There are several multiples in relative valuation, and some of the most used multiples in business valuation are price-earnings ratio (PER), price to book value ratio, price to sales ratio and EV to EBITDA (Damodaran, 2012; Fernandéz, 2002). According to Fernandéz (2001) there are three different group of multiples, related to equity, to enterprise value and to growth as can be seen in the following table:

Table 2 - Types of multiples

Multiples based on capitalization (Equity)	Multiples based on the company's value	Growth Multiples
• **PER (Price Earnings Ratio)** = market capitalization/total net income	• **Enterprise value to EBITDA** = EV/EBITDA	• **PEG (PER to Earnings per share growth)** = PER/g
• **P/S (Price to Sales)** = market capitalization/sales	• **Enterprise value to Sales** = EV/Sales	• **Enterprise value to EBITDA growth** = EV/EBITDA (historic) or EBITDA growth in the next few years
• **P/BV (Price to Book Value)** = market capitalization/book value of equity	• **Enterprise value to unlevered free cash flow** = EV/(EBIT*(1-T) + D&A – increase in WC – Capex)	

3.3.3. Adjusted Net Asset Valuation

The adjusted net asset valuation is also known as adjusted book value method, asset valuation method, or asset accumulation method and has slightly different versions.

This method involves assessing each asset or liability using its replacement value or market value in order to calculate a fair market value each asset and liability (Coulon, 2021). It evaluates individually all the company's assets, tangible, intangible, and even off-balance sheet items (Laro & Pratt, 2011). The method becomes more complex according to the relative size and nature of the intangible assets (Coulon, 2021).

The starting point is analysing the company's most recent balance sheet and if possible the balance sheet prepared just before the valuation date (Miller & Reilly, 2018). This method incorporates a set of adjustments so that the value of the equity reflects the current and fair market value of the various components of the business, instead of the book value, which is at historical levels (Coulon, 2021).

Table 3 - Adjusted equity methodology. Source: Coulon (2021).

	Book Value	Adjustments	Fair Market Value
Current Assets			
Fixed Assets			
Total Assets			
Equity	Equity		Adjusted Equity
Liabilities			
Total Liabilities and Equity			

$$Adjusted\ Equity = ANAV = Shareholders'Equity + Revaluation\ of\ Assets - Revaluation\ of\ Liabilities \quad (3.6)$$

Therefore, the adjusted net asset value (ANAV) is represented by the equation 3.6 and includes all the adjustments relatively to the tangible operating assets, intangible operating assets, non-core assets, and all liabilities. (Coulon, 2021). Therefore, the difference between the fair market value of all assets and all liabilities, determines the fair market value of the company's equity (Trugman, 2016).

So, the perspective of the adjusted net asset value is summarized in the following table (Coulon, 2021):

Table 4 - ANAV method

Adjusted Book Value or Adjusted Net Asset Value Method	
Assets at a Fair Market Value	Adjusted Equity at a Fair Market Value
	Liabilities at a Fair Market Value
Including non-core or non-operating assets + off-balance sheet items + unrecorded items (lease contracts, litigation risks…)	

Adjusted Net Asset Value

According to Trugman (2016), these are some adjustments to the balance sheet and the aspects to be considered:

- *Cash & Equivalents:* Usually no adjustment is needed, only in cases where the excess can be considered non-operational being thus removed from what is used for Working Capital. It's usually done this way because it doesn't affect value.
- *Marketable Securities:* Should be adjusted to their fair market value usually using an average of the high and low prices on the valuation date.
- *Accounts Receivable:* Must be reviewed to determine potential collectables. It is most probable to not receive the older receives but it may require an adjustment to the present value. Usually, should be made a ratio comparison (receivables to turnover) with a composite data of the industry to see if there are any significant differences.
- *Inventory:* Should be adjusted to their fair market value considering the current cost to replace saleable inventory. Some procedures must be followed with respect to inventory:
    - Determine the method used to value the inventory (LIFO, FIFO…).
    - Determine if the inventory can be sold, and if it cannot, adjust the book value accordingly.
    - In case company uses LIFO, adjust the value to reflect the current cost to replace the inventory.
    - Consider if there is any necessary adjustment in case the company does not have a proper inventory record to compensate for possible errors. It is always a possibility to suggest a physical count.

- *Prepaid Expenses:* Should be reviewed to reflect fair market value of their balance on the balance sheet. For instance, prepaid insurance may worth less than its face value due to short ratings by the insurance company.
- *Land:* It should be evaluated at fair market value and proceed with the adjustments. Generally, it is required services of a real estate appraiser, and they use a concept called market value which may not fit always with the valuation.

- *Buildings:* It should be evaluated as well at fair market value and proceed with the adjustments. Generally, it is adjusted by the estimated depreciated replacement cost, considering such factors as age and economic depreciation. Other alternative is to value the property using an income or market approach which can require the services of a real estate appraiser.
- *Machinery & Equipment:* It should be adjusted to their estimated fair market value in use. Assets belonging to the company that are not used may be valued as if those assets will be sold.
- *Leaseholds improvement:* There are cases when the improvement could be significative or not. In situations when the expected life of the improvements is greater than the term of the lease or when the probability of a renewal of the lease is high, it is necessary to adjust the leasehold improvements to their fair market value.
- *Leaseholds interest:* It is important to determine if the leasehold interests have some value to lessee. Usually leases that are transferable and where the rental payments agree with the current market conditions for that type of property, are favourable and the fair market value is determined discounting the future benefits to the lessee. Nonetheless, the lease could be a liability for the company in case they are not favourable. This probably will affect profitability and make the company worth less.
- *Identifiable intangible assets:* It is fundamental to estimate the remaining useful economic life of the asset. All three approaches to value may be used, depending on the type of asset being valued. A market approach could be complicated given the difficulty to find information about comparable sales of similar intangible assets. For assets such as an assembled workforce, architectural drawings, or computer software, a cost approach may be the right one. However, the most appropriate for patents, copyrights, and trademarks could be the income approach.
- *Contracts:* Companies have sometimes many types of contracts with diverse entities and many times they may also have a value. For instance, there are royalty agreements which provide future income to the business, but there are contracts as well that may require the business to make payments and the company need to recognize a corresponding liability in some instances.

- *Accounts Payable:* This item must be reviewed in order to determine what will be actually paid. In case there is a payable amount recorded for a long time, the valuation analyst may want to discount the liability based on when it might be paid.
- *Notes Payable:* It must be reviewed, especially the current portion, to determine if it is valid and properly classified as short term. These information's are used in the financial analysis, so it is important to ensure a correct classification for further ratio comparisons.
- *Credit Lines:* It should be carefully examined whether the credit lines relating to working capital are a debt of a temporary or permanent nature. The credit lines used and paid down on a regular basis should be considered as a temporary or short-term debt. However, there are long-term financing credit lines, and some companies use them to permanent finance the company's needs as the company grows, with no principal reductions taking place. It is considered a form of invested capital.
- *Long Term Debt:* This item should be analysed similarly to the current portion. If the interest rate does not reflect market rate of interest, all notes payables should be adjusted to their fair market value.
- *Deferred taxes:* This account can be adjusted to its market value. Deferred taxes are like an interest free loan and so, the present value is calculated using a discount rate based on the current market rate of interest. However, the analyst may be able to remove this account from the balance sheet in case the liability can be permanently deferred.

For many of these adjustments, there are times that is necessary to look to other appraisers to provide the values of certain assets (Trugman, 2016). Usually, the analyst receives some contemporaneous appraisals of the tangible assets from the management board (Miller & Reilly, 2018).

In most cases, companies are valued on a going-concern premise of value but there are circumstances when they are valued at liquidation premise of value (Laro & Pratt, 2011), which helps to establish a minimum value based on the underlying value of assets and liabilities (Oster, 2020).

The adjusted net asset method typically yields a controlling interest value. However, if the purpose of valuation is to value a controlling interest, it may be applicable a discount for lack of marketability, but if the purpose of valuation is to value a minority interest, it would be appropriate the discounts for the lack of control and lack of marketability (Laro & Pratt, 2011). For instance, a discount for lack of marketability is used when the company is private, and it is not possible to quickly sell the shares of stock. So, it compensates the difficulty of selling, reflecting the reduction in the market value for not providing liquidity to the shareholder. (Trugman, 2016).

This method is relevant when the company object of the valuation intends to liquidate or is not profitable in the future. It is also relevant for operating companies intensive in assets, such as financial institutions, distribution companies, and natural resources companies (Laro & Pratt, 2011).

3.4. Analysis of the Valuation Methods

Among the various approaches to business valuation, there is no generally applicable valuation method, but it is necessary to select the methods and analyse the results according to the situation (Schmidlin, 2014).

The income-based approach conveys a more accurate image of the company's value, although it is more complicated its calculation once they are made taking into account the projections and predictions, which increases the probability of biases due to human factors (Köseoğlu & Almeany, 2020). Damodaran (2007) stated that the DCF valuation is one of the most widely used methods in the academic world as it presents the best theoretical credentials. And also it can be considered the only conceptually correct valuation method (Fernandéz, 2002). On the contrary, there are some situations where the DCF valuation may be in trouble and need to be adapted: firms in trouble, cyclical firms, firms with unutilized assets, firms with patents or product options, firms in the restructuring process, firms involved in acquisitions, and private firms (Damodaran, 2012). The results are more reliable in a firm with a reliable business development. Many times, it is not possible to use the DCF model to valuate companies with a highly uncertain future (Schmidlin, 2014).

Relative valuation can be considered a much more pragmatic, simple, and user-friendly method than DCF valuation method, which is a theoretically well founded approach

(Schmidlin, 2014). On the other hand, valuations through multiples can be questionable since there is a large dispersion of multiples and the results are all different (Fernandéz, 2002). The definition of comparable companies is somewhat subjective since does not exist two companies exactly alike in terms of risk and growth (Damodaran, 2012). The most complicated task in the market-based approach is to find and identify similar companies in terms of performance, size, sector, and region. This approach is considered to be not very flexible since the future expectations and related risks are not included in the valuation (Köseoğlu & Almeany, 2020).

The asset-based approach provides more accurate results than the income-based valuation models, but it is not enough to give an accurate and complete picture of the company's value (Köseoğlu & Almeany, 2020). The adjusted net asset valuation enhances the balance sheet credibility using the fair market value in replacement of book value (Coulon, 2021). However, it is considered to be a static valuation method leaving aside the expectations and future cash flows of the company, the company's situation within the sector and even all the factors that are not included in the company's financial statements (Köseoğlu & Almeany, 2020). It is difficult to revaluate the intangible assets and usually they are valued by the income approach (Laro & Pratt, 2011). Even after revaluing the assets, the method can remain based to the historical values when determining the floor value for a business. So, the asset based is more suitable to companies with significant tangible assets rather than companies with few tangible assets or companies growing fast. A valuation should reflect current and future trends incorporating market values and not be only based on accounting and historical dimensions, that is, moving from a static and past vision to a dynamic and advanced analysis (Coulon, 2021).

3.5. Using Business Valuation for Strategy

Business valuation helps to understand the impact of the company’s strategies and policies on the creation of destruction of economic value (Fernandéz, 2007).
A business strategist that understands the differences and nuances between the business valuation methods can get a sense of the value of the company (Litman & Frigo, 2004).

Many managers and company’s owners often have an inaccurate idea and give a questionable answer about the company's value. In fact, the value of a company is related to strategy, being an essential tool for a properly preparation of medium and long-term plans (Köseoğlu & Almeany, 2020). Strategic planning puts in practice the mission and vision of the company, and it becomes more necessary when the business grow, and the complexity of the business environment increases. Companies that systematically elaborate the strategic plan will be better prepared to evolve as the market changes and to face market demands in terms of products or services. It simplifies effective decisions-making process, improves the selection of tactical options, and increases the probability of achieving the goals and objectives of owners or stakeholders. During the strategic planning process, it becomes important to collect a broad and significant database, think creatively about differentiation, define gaps, assess essential competencies, and know how to identify critical resources and skills (Dix & Mathews, 2002).

Since the objective of most of the companies is the maximization of the firm value, managers can always help the company maximize the creation of financial value if they are true experts in business strategy, that is, they must have one firm goal in mind where they base all their analysis and decision making, and have a superior understanding of what drives financial value creation (Litman & Frigo, 2004). Managers with those capabilities show a value-based management approach, and nowadays it is one of the most popular concepts of the management philosophies (Sivitska, 2015). It is an approach based on determining all kinds of decisions, such as long-term strategies, performance, and future targets having in mind the value maximization objective. The first step in this type of management is to identify the internal and external variables and factors that affects the firm value. The internal factors that create value must be monitored its performance and improved.

It is related to all types of operational and managerial processes, activities, measurements, and performance linked directly or indirectly with the company's field of activity. Furthermore, the company's investments should be considered as value creating factors where each investment decision contributes to the value of the company. The external factors that create value are merger, acquisition or buying processes. These processes have been much more important nowadays and the results should be monitored in terms of capacity to create value. In the literature, any variables and factors that affects the firm value are considered value drivers. It is important for the management to have it well identified and defined in order to focus their attention on activities that have greatest impact on the firm value, and thus make effort to create value (Köseoğlu & Almeany, 2020).

4. Methodology

A case study is considered a research method where it allows to explore and understand many complex issues in a real-world case. It is a deep empirical investigation of a phenomenon considering its real-world context, especially when is not evident the boundaries between phenomenon and context (Yin, 2009). Even though case study can be considered a mainly qualitative research method, it can use both quantitative and qualitative evidence explaining the process and outcome of a phenomenon through complete observation, reconstruction and analysis of the cases under investigation (Tellis, 1997).

In order to make a more in-depth investigation, it was chosen a company addressed during the internship of Triple A – Capital & Finance. The chosen company belongs to the mining sector and represents an interesting and motivating choice for the author because even though the company has not been operating in recent years, it has been using some of its assets strategically for the development and implementation of a tourist project.

This report is based on information and contemporaneous appraisals provided by the internship supervisor, which was obtained directly from the management board of the company under study. There were obtained the financial report for the year 2020 and the respective financial statements and the trial balance for 2021, as well as a real estate appraisal report on the company's assets and other documents relating to the investment project. The financial report of 2021 wasn't provided by the management board because it wasn't ready at the time, making it difficult to understand more details of what was made during the year. It was also accessed the Sabi database to double-check some company data. However, in order to respect the anonymity of the company, the information that could identify the company was altered, including its name and the name of its partners.

Choice of Valuation Method

The company has not operated and has not shown any revenues during the last 10 years reflected in a constant negative operating results and net profit. However, it holds several assets, and it is investing in a tourist project.

Considering the theoretical background and the knowledge acquired during the internship, it was possible to conclude that the two most used methods, Discounted Cash Flow valuation and Multiple valuation, are not adequate given the company characteristics.

The Discounted Cash Flow method prizes for a reliable estimation of cash flows and in this case, it is not possible to make an accurate estimate because there are no cash flows related to the company's operations in the last 10 years, being difficult to base our estimations. It is also difficult to predict any growth for the business since there is no provision for that and there is no intention to start again the mining activity. There will be a problem when determining the free cash flow given by the equations 3.3 and 3.4 being difficult because it will have to start from net income or EBIT which are, in this case, negative. This, results in a negative value free cash flow. As stated by Schmidlin (2014) the DCF model may not be possible to use when valuating companies with a highly uncertain future. Therefore, the author concluded that DCF is not appropriate in this case, because it doesn't make much sense to calculate cash flows of a company that only has some real estate assets, which are not being used.

The Relative valuation method is not adequate as well because there are no comparable companies, given the situation of the company, its growth and risk. In addition, it is not possible to use multiples such as EV/Sales or EV/EBITDA because the company does not have any sales and has a negative EBITDA. In addition, it is equally difficult to find previous market transactions where it is possible to identify the respective multiples. Therefore, the author concluded that multiples do not work in this case because it will result in a negative value.

Regarding to the financial profile and information analysed for the specific case, the company has not presented any activity and operating results obtained have been negative. However, it holds several assets as well as an investment project which have a substantial value in the company. In this case, the reality of the company reflects an amount of tangible fixed assets bigger than the amount that the activity can generate. Given its characteristics, the author considers that the Adjusted Net Asset Method is the most adequate method, reflecting an adjustment in terms of fair value to the assets and liabilities of the company's balance sheet. It will be possible to evaluate individually all the company's assets and to include the net present value of the project which will help to obtain an approximate value of the company.

The methodology used is based on the Adjusted Net Asset method and the starting point was to analyse the company's most recent balance sheet provided by the management board, which was from December 31st of 2021. After a careful analysis, some adjustments were done in order to obtain the fair market value of the assets and liabilities, and consequently the fair value of equity. The adjustments made were based mainly on Trugman (2016) and the knowledge acquired in the business valuation course that were also applied during the internship in similar cases. Thus, they were adapted to the specific characteristics of the company under study. Adjustments were made to tangible fixed assets, namely land and building, investments in course, revaluation reserves and consequently to the net income by the gains or losses resulting from the adjustments. It was considered the real estate appraisal report to adjust the current value of the tangible fixed assets namely Lands and Buildings. Relatively to the project under development, a valuation through the net present value was incorporated into investments in course in order to adjust the fair value in the balance sheet. This value was obtained in the respective documents calculated by an independent entity. After analysing all the other items, it was not necessary to make any other adjustments, thus maintaining the book value. Finally, the adjusted equity (ANAV) is calculated using equation 3.6, and the respective value of the assets is also obtained.

5. Case Study – Melo, Lda.

MELO, LDA, is a limited liability company created on January 1st, 1970, and headquartered in the city of Maia, Portugal. In December 2021, the corporate structure of the controlled subsidiary was represented by three holders, in common and without determining part or right, representing 100% of the share capital.

The official corporate purpose of the company is the exploration of mines of Várzea de Trevões for the extraction and preparation of other non-ferrous metallic ores and, consequent, industry, and commerce. MELO, LDA was awarded from the concession and the mining permit that gave it the right to explore the mine in the region of Várzea de Trevões. The company carried out these exploration activities since 1980. However, in 2011 after several years of suspension of activity, the license was revoked by the government. The company does not have any activity in the mining sector at the time of this study. It didn't register any operating results during the past ten years and in the last two years 2020 and 2021 it has been very active in terms of investments and asset management, reflecting an increase in its assets from €189,480 in 2020 to €203,666 in 2021.

So, the management board decided to dedicate to the development and implementation of a tourist project in Várzea de Trevões and the acquisition of real estate, having acquired three urban buildings also in Várzea de Trevões in 2020. The project included the construction of a tourist resort with a spa and a 4-star apartment hotel. The relation to the former activities of the company is the fact that the resort is supposed to be built in plots of land that were previously intended for mining exploration. Considering the past of the region, MELO, LDA will seek to foster and maximize its patrimonial value through the creation of links to the heritage routes and history of mining. MELO, LDA will invest about 7.8 million euros in the development of this project where 30% is derived from equity, through the constitution of supplementary payments, and 70% comes from foreign capital, regarding the application incentives to be submitted within the scope of the Productive Innovation Incentive System, Portugal 2030. According to an estimate made by an independent study, this project is valued at 948 thousand euros. It is expected to be ready in 2023, and it can be sold, operated, or given to an operator who will manage the establishment, increasing the value of the company.

This case represents a company without activities, having no revenues but with significant tangible assets and a project in course. It is relevant to understand the most appropriate method to use in these situations and if the company can take advantage of its assets in order to create value and avoid liquidating the business as happens many times under these conditions. This study is pertinent considering the time in which we live, after the Covid-19 pandemic, where many companies have drastically reduced their activity, and many have liquidated the business. Besides that, it is a time of constant change and adaptation, therefore, it becomes important to have a transversal knowledge of other areas and preparate to use the necessary resources to face these situations. This case is also motivating because it represents the characteristics of several national companies in Cape Verde, the author's country of origin, being fundamental for the author to draw essential knowledge and instruments of how to address similar situations that may arise later. Given its characteristics, the case is a good example to study how to conduct the valuation and understand which method is the most appropriate.

However, as seen above, these characteristics limit the use of the DCF and multiple methods, so an approximated valuation will be presented and substantiated through only one method, thus making it impossible to present a range of values that would give more reliability to the valuation. The adjusted net asset method normally presents lower values than the other methods since it is based only on the balance sheet where the values of the items are historical and where every year the value of some assets decrease by accounting for depreciation and amortization having therefore a direct impact on the company's value. The method can be seen as a static method because it does not account for the dynamism of market variation and the associated risk. However, in this case may not make difference since the company does not have those aspects to be considered. The adjustments can also be biased since, although they are made by specialists in the area, there is a tendency of error due to market inefficiency in appraising the assets.

According to these characteristics and even with some weaknesses, the adjusted net asset will be the most suitable and through which off-balance sheet items can be added, allowing for a more complete picture of the company. It is possible to know and evaluate in detail every asset that the company has in possession and their respective value, and through this evaluation understand if it is possible to use them in order to create value.

This case leads us to the idea that a company should not be static and should always use its assets in order to create value. Therefore, it is possible to understand that a company, even if it is not developing any activity, has a value and can maximize it.

Sector Highlights

In Portugal there is a great complexity and diversity of mineral resources despite being a small country. Because of this, the extractive industry has gained a strong protagonist, although, nowadays, this activity presents challenges at various levels. The extraction of non-ferrous metallic ores is the subsector that registers more than half of the exploration gains in Portuguese mines and quarries. Over the last 9 years, it was found that the amount extracted in this subsector has been increasing, in contrast to the value of these materials, which has been falling. Revenues of around 377 million were projected for 2020, 11.3% less when compared to 2019. Naturally, there is a certain competitiveness in the exploitation of these resources, which has been reflected in the slight increase in the number of active companies, reaching 22 companies in 2020. Currently the mining activity has changed its paradigm with the concern of the environmental impact and, therefore, the extraction has demanded new forms and methods of work. It becomes very important to maximize the extracted resources in order to guarantee economic and environmental sustainability, taking into account the responsibility towards local populations.

6. Valuation using Adjusted Net Asset Method

6.1. Macroeconomic Aspects – Highlights

The current pandemic situation forced a profound restructuring of the economy in 2020. Not only in Portugal but in the rest of the world, economic activity suffered an unprecedented drop, forcing governments adjustments in order to adapt monetary and fiscal policies. After a long period of restrictions during 2020, the economic activity returned and continued a positive recovery in 2021. Banco de Portugal projected a growth economy activity of 4.8% during 2021 and 5.8% in 2022, followed by a moderate expansion in 2023 and 2024. Advances in vaccination and the maintenance of economic policy support the expectations for a safer return to activity.

	Pesos	BE dez. 2021					BE out. 2021		BE jun. 2021			
	2020	2020	2021 (p)	2022 (p)	2023 (p)	2024 (p)	2020	2021 (p)	2020	2021 (p)	2022 (p)	2023 (p)
Produto Interno Bruto	100	-8,4	4,8	5,8	3,1	2,0	-8,4	4,8	-7,6	4,8	5,6	2,4
Consumo privado	64,2	-7,1	5,0	4,8	2,2	1,8	-7,1	4,3	-5,9	3,3	4,9	2,3
Consumo público	19,1	0,4	4,8	1,4	-1,3	-0,1	0,4	5,2	0,4	4,9	0,4	-0,2
Formação bruta de capital fixo	19,1	-2,7	4,9	7,2	6,6	3,9	-2,7	5,6	-1,9	7,6	8,2	5,8
Procura interna	102,1	-5,6	5,1	4,6	2,4	1,9	-5,6	4,9	-4,6	4,5	4,7	2,6
Exportações	37,0	-18,6	9,6	12,7	7,8	3,9	-18,6	9,6	-18,6	14,5	13,1	4,8
Importações	39,1	-12,1	10,3	9,3	6,2	3,6	-12,1	9,7	-12,0	13,2	10,6	5,1
Contributo para o crescimento do PIB líquido de importações (em pp) [a]												
Procura interna		-3,0	3,1	2,6	1,2	1,1	-3,0	3,0	-2,3	2,4	2,5	1,3
Exportações de bens		-0,8	1,1	0,2	0,6	0,4	-0,9	1,3	-0,7	1,9	0,3	0,3
Exportações de serviços		-4,6	0,6	3,0	1,2	0,6	-4,5	0,5	-4,5	0,5	2,8	0,8
Emprego (número de indivíduos) [b]		-1,9	2,5	1,6	0,5	0,3	-1,9	2,6	-1,7	1,3	1,3	0,4
Emprego (horas trabalhadas) [b]		-9,3	8,3	4,0	0,6	0,3	-9,3	8,4	-9,2	5,9	4,1	0,5
Taxa de desemprego [c]		7,0	6,6	6,0	5,7	5,6	7,0	6,8	7,0	7,2	7,1	6,8
Balança corrente e de capital (% PIB)		0,0	0,2	1,8	2,6	1,8	0,0	1,0	0,1	0,9	2,1	1,8
Balança de bens e serviços (% PIB)		-1,8	-3,0	-2,1	-1,2	-1,0	-1,8	-2,3	-1,8	-2,1	-1,4	-1,3
Índice harmonizado de preços no consumidor		-0,1	0,9	1,8	1,1	1,3	-0,1	0,9	-0,1	0,7	0,9	1,0
Bens energéticos		-5,2	7,8	6,3	-1,3	-0,8	-5,2	6,9	-5,2	5,6	1,0	-1,3
Excluindo bens energéticos		0,3	0,4	1,3	1,4	1,5	0,3	0,4	0,3	0,3	0,9	1,2

Figure 1 - Bank of Portugal's projections 2021-24

The constraints on economic growth are associated with a new wave of the pandemic crisis in Europe and the reintroduction of measures to contain it, as well as the difficulties presented in global supply chains, namely in the scarcity and increase in the cost of raw materials and other assets. On the other hand, despite the end of temporary support and subsidies for sectors and companies most affected by the pandemic, economic growth was projected to be supported by maintaining favourable financial conditions and receiving funds from the European Union.

The Portuguese economy continues to evolve and recover from the pandemic crisis, reaching the pre pandemic level in the first half of 2022. Portugal was affected mainly in the service sectors, resulting in a GDP decrease higher than the one registered in the Euro area between 2019 and 2021. The average GDP growth between 2022 and 2024 was expected to be 3.6% in Portugal, higher than the 2.9% projected for the euro area.

Some of the most important indicators of the economic activity, such as, private consumption, public consumption, investments, and exports reflected strong dynamism during 2021 and tend to decelerate until 2024 (fig2). The accumulation of wealth throughout the crisis and other aspects such as favourable financial conditions, slight increase in employment, wages and social benefits translated into an increase in real disposable income and, consequently, the growth of private consumption. The increase in the number of hours worked in public services was responsible for the growth of public consumption. Relatively to investment, it is showing high growth due to the receipt of European funds, the prospects for demand recovery and also a favourable financing condition. Finally, exports of goods and services have been recovering as well due to the lifting of restrictions on international mobility and an increase in confidence.

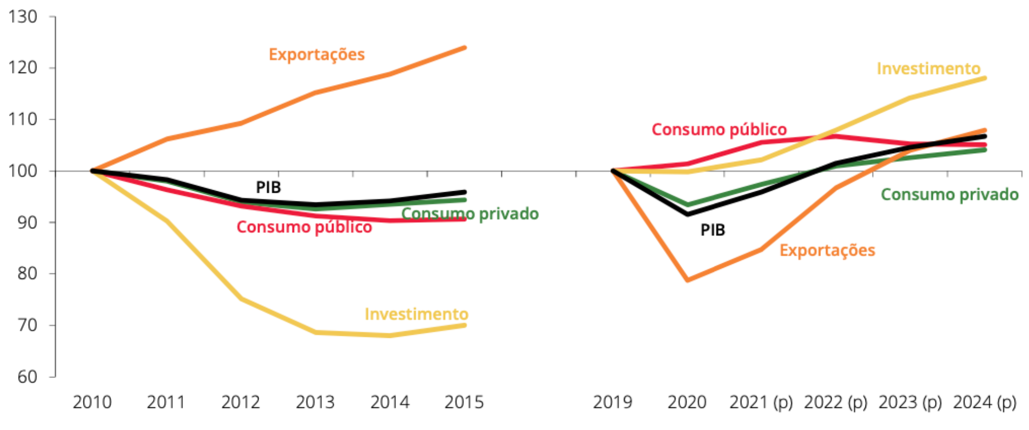

Figure 2 - GDP and main components of net demand for imported content comparison

The Portuguese economy faces many challenges in the coming years, being crucial to define the economic policy responsible for a sustained growth and a resumption of convergence with Europe. The decision on economic policies is essential to counterbalance the increase in uncertainty that characterizes the processes of exiting economic crises.

6.2. Financial Information

Looking at the financial information provided by the management board, the company has not shown any results because it has hardly operated in the last ten years to 2021. The emergence of the pandemic during 2020 was, like in many other companies, a constraint, although management considered that the effects of the pandemic on the company's activity did not call into question the continuity of operations. The economic and financial developments of the company in the financial year 2019, 2020 and 2021 can be summarised as follows:

The company recorded a negative net result of €16,091 in 2021, higher than the negative €9,569 and €2,061 recorded in 2020 and 2019 respectively meaning an increase in expenses. In terms of assets, the value amounted to €203,666 in 2021, compared to €189,479 in 2020 and €159,190 in 2019, in view of the acquisition of some properties during 2020 and some investments in course related to tangible fixed asset. The company acquired three urban buildings in Várzea de Trevões in addition to the tourist establishment that it is developing. However, it was not possible to identify the type of fixed tangible asset in course. As for liabilities, these have been increasing, registering in 2021 an amount of €174,434 compared to €144,156 and €104,297 of 2020 and 2019 respectively. This increase is mainly due to the increase in debts to third parties. In turn, equity has been decreasing from €54,893 in 2019 to €45,324 in 2020 and reaching €29,233 in 2021 since it has been consistently showing negative results.

Neither in the 2020 financial year nor in 2021, there is a situation that could give rise to the impairment of assets or their enforceability. Also, during the 2021 year was also developed a significant work of regularization of real estate records held by the company. There were neither in 2019 nor in 2020 debts in arrears to the State or any other public entities including social security, but in 2021 there was a debt of €414, making it unclear because it was not possible to obtain the 2021 financial report.

In detail you can find the results in tables 5 and 6, the balance sheet and the profit and loss respectively.

Balance Sheet

Table 5 - Balance Sheet

Unit €	2021	2020	2019
Tangible assets	157,612	158,734	144,713
Investments in course	33,302	15,375	-
Investments at equity	2,257	2,257	2,257
Non-current Assets	**193,171**	**176,366**	**146,970**
Trade debtors	9,560	9,560	9,560
Other receivables	500	500	500
Cash and short-term deposits	435	3,053	2,160
Current Assets	**10,495**	**13,113**	**12,220**
Total Assets	**203,666**	**189,479**	**159,190**
Loans from shareholders	43,410	43,410	20,410
Non-current Liabilities	**43,410**	**43,410**	**20,410**
Trade creditors	7,380	5,904	4,428
State and other public entities	414	-	-
Other payables	123,230	94,842	79,459
Current Liabilities	**131,024**	**100,746**	**83,887**
Total Liabilities	**174,434**	**144,156**	**104,297**
Capital	14,964	14,964	14,964
Retained earnings	(117,002)	(107,433)	(105,371)
Revaluation reserve	147,361	147,361	147,361
Net profit of the year	(16,091)	(9,569)	(2,061)
Total Shareholders' Equity	**29,232**	**45,323**	**54,893**
Total Liabilities and Shareholders' Equity	**203,666**	**189,479**	**159,190**

Profits & Losses

Table 6 - Profit & Losses

Unit €	2021	2020	2019
External supplies and services	(14,270)	(8,191)	(1,721)
Other costs	(699)	(443)	(340)
EBITDA	**(14,969)**	**(8,634)**	**(2,061)**
Depreciation and amortization	(1,122)	(935)	-
EBIT	**(16,091)**	**(9,569)**	**(2,061)**
EBT	**(16,091)**	**(9,569)**	**(2,061)**
Tax	-	-	-
Net Profit	**(16,091)**	**(9,569)**	**(2,061)**

6.3. Business Valuation

This section presents the valuation results using the adjusted net asset method with all the necessary adjustments made to the balance sheet of December 31st of 2021. This valuation is based on a going-concern premise of value and will not be considered any deferred taxes in case there are any appreciation of the assets. This valuation will help as well to establish a minimum value of assets and liabilities in case the company decide to liquidate the business. The following two tables presents the normalization of the balance sheet and profits & losses.

Adjusted Balance Sheet

Table 7 - Adjusted balance sheet

Unit €	2021	Adjusts	2021 Adj.
Tangible assets	157,612	(6,759)	150,853
Investments in course	33,302	948,121	981,423
Investments at equity	2,257	-	2,257
Non-current Assets	**193,171**		**1,134,533**
Trade debtors	9,560	-	9,560
Other receivables	500	-	500
Cash and short-term deposits	435	-	435
Current Assets	**10,495**		**10,495**
Total Assets	**203,666**		**1,145,028**
Loans from shareholders	43,410	-	43,410
Non-current Liabilities	**43,410**		**43,410**
Trade creditors	7,380	-	7,380
State and other public entities	414	-	414
Other payables	123,230	-	123,230
Current Liabilities	**131,024**		**131,024**
Total Liabilities	**174,434**		**174,434**
Capital	14,964	-	14,964
Retained earnings	(117,002)	-	(117,002)
Revaluation reserve	147,361	948,121	1,095,482
Net profit of the year	(16,091)	(6,759)	(22,850)
Total Shareholders' Equity	**29,232**		**970,594**
Total Liabilities and Shareholders' Equity	**203,666**		**1,145,028**

Adjusted Profits & Losses

Table 8 - Adjusted Profit & Losses

Unit: €	2021	Adjusts	2021 Adj.
External supplies and services	(14,270)	-	(14,270)
Other costs	(699)	-	(699)
Impairment losses	-	(6,759)	(6,759)
EBITDA	**(14,969)**		**(21,728)**
Depreciation and Amortization	(1,122)	-	(1,122)
EBIT	**(16,091)**		**(22,850)**
EBT	**(16,091)**		**(22,850)**
Tax	-		-
Net Profit	**(16,091)**		**(22,850)**

Adjustments

Tangible Fixed Assets

The tangible fixed assets are composed by Lands and natural resources and Buildings and other constructions. The book value of Lands and natural resources remains unchanged because this type of tangible fixed assets does not depreciate. On the other hand, it is necessary to account for depreciation and amortization for the book value of Buildings and other constructions. The book value of Buildings and other constructions was €11,217 subtracting €2,057 of accumulated depreciation, the final book value was €9,160.

According to the appraisal in the real estate valuation report provided by the management board, it was followed the Market Method and the Replacement Method for the attribution of value to the lands and buildings, taking into account the morphology, configuration, accesses, infrastructure and potential for the land and the state of abandonment or ruin and the constructive potential for what remains of the buildings. The land in a state of abandonment but with constructive potential, was attributed values ranging from €1,5 to €3,5 per square meter. The buildings were assigned unit values of €10 and €25 per square meter, given their characteristics and especially their constructive potential. The company was in possession of two lands classified as rustic accounting for 70,212 square meters and eight buildings classified as urban accounting for 794 square meters.

The attribution of these values was achieved through a site visit and an analysis of the topographic survey, the extract of the plans of the Municipal Master Plan, the matrix certificates of urban and rustic articles and the certificates of content from the land registry office. Therefore, both values were adjusted to their current fair market value, reflecting the extent of the total value for which they would be acquired in case of liquidation and not business continuity. The fair market value of land was €139,245 and the fair market value of buildings was €11,608 reflecting a total impairment loss of €6,759 reflected in the P&L. These adjustments were based on balance sheet adjustments considered by Trugman (2016) in respect to Lands and Buildings.

Table 9 - Adjustments to fixed tangible assets

Unit: €	*Lands and natural resources*	*Buildings and other constructions*	TOTAL
Book Value 31.12.2021	148,452	9,160	**157,612**
Fair market value of fixed tangible assets	139,245	11,608	**150,853**

Investments in course

The company already has an investment in course in the balance sheet of €33,302, which was not possible to determine the type. Therefore, this value remained unchanged. Nonetheless the company is carrying out the project of a four-star apartment hotel. This resort & spa apartment hotel will be the first tourist establishment in Várzea de Trevões and will have different types of accommodation, located both in the main building and in autonomous buildings along the property. According to the feasibility study provided by an independent entity, there was carried out a cautiously projection of the activity of the establishment, especially in a current context that reinforces the spirit of exigency in face of the investments that are made and the control of risk. The project showed an internal rate of return in the order of 6.84% compared to a reference rate of 4.5% and a net present value around €948,121. In this way, the project presents itself as a good investment opportunity, achieving very interesting profitability indicators. Even though this project is expected to be ready in 2023, the return on investment is expected to be in 6.53 years. It will become a fixed tangible asset for the company in a few years and will increase substantially the company's value.

It was included the net present value of the project in the adjustment of company's investments in course. The project was considered an investment in course due to its nature and the structure of the company's balance sheet where it was registered an investment in course relatively to tangible fixed assets. This adjustment was applied in the internship regarding other similar case.

Table 10 - Adjustments to investments in course

Unit: €	*Investments in course*	*Project*	TOTAL
Book Value 31.12.2021	33,302	-	**33,302**
Adjustments to investments in course	-	948,121	**981,423**

Investments at equity

It corresponded to the financial participation in one company which was valued at the acquisition cost €2,257, and there was no movement in 2021, thus keeping its book value.

Accounts receivable

The current value was the same as the book value, trade debtors plus other receivables, €10,060 since the company still expected to receive the value.

Cash and short-term deposits

There were no changes because the value €435 is insignificant for the final impact, so there was no excess cash to subtract from what was left to be used in working capital. Therefore, this item maintained unchangeable.

Revaluation reserve

In this case, it incorporated the adjustment made in investments in course regarding the project. The previous value of €147,361 was related to the revaluation surplus of the company's tangible fixed assets explained in their financial report of 2020. Adding the value of the project, the adjusted value was of €1,095,482 having a great impact on the adjusted equity value. This adjustment was based on what was learned in the business valuation course and applied in the internship, thus this item registered the revaluation on the assets.

Net profit of the year

The net profit of the year in the P&L reflected additionally the impairment loss on the tangible fixed assets created by their current market value. There were no other changes in the P&L and so this net profit of the year appears in the balance sheet with the adjusted value of €22,850 negative. This adjustment is the consequence of the adjustments made in the balance sheet and was also applied in the internship.

Liabilities

There are no changes in the company's liabilities. Every item maintained at their book value since no changes were expected. The company still had to pay its debt and there was no evidence of off-balance sheet items or any auction where the company was expected to pay.

Adjusted Net Asset Value

According to the adjustments made to the available financial data of the activity and the sector, and using the equation 3.4, the adjusted net asset value of MELO, LDA in the end of the 2021 fiscal year is €970,594. It is believed that the assets value of MELO, LDA will be around €1,145,000, representing its fair value plus the appreciation of the project.

Table 11 - Valuation results

ADJUSTED EQUITY VALUE (ANAV)	**€970,594**
LIABILITIES	**€174,434**
ASSETS VALUE	**€1,145,028**

The financial view on MELO, LDA has dramatically improved from €29,232 to €970,594 in equity. The same is verified in the company's value of assets from €203,666 to €1,145,028. The book value is simply a reflection of history, reflecting the past but not incorporating recent developments. In the case of MELO, LDA this valuation can be seen as provisional since its recent tourist project is not ready and operational yet. The project will generate new recurring profits in the future capable of eliminating the past losses accumulated in equity. Therefore, this valuation allowed to see the impact of the company's strategy on the creation of value.

7. Conclusion

The internship was essential in the development of this report. It was possible to understand and deepen the theories of business valuation learned during the master's degree with the application in real-world practical situations. Therefore, it allowed moving from purely academic analysis to more professional and realistic analysis of these situations together with the theoretical framework. It was possible to broaden the knowledge of the various aspects of corporate finance, the form of financing through private equity, and it was provided various other documents by the supervisor, for example, how to write an effective business plan in order to increase the knowledge. In addition, the student was able to work with other team members, experiencing other perspectives and sharing their knowledge within a dynamic and close environment. In general, the company's boutique concept was an asset for the intern, as it benefits better learning, and the student was able to follow and acquire extra knowledge related to other areas and be better prepared for professional life.

The objective of this work was to select a company with high breaks in the activity and holding a lot of tangible fixed assets and understand how they can strategically use these assets to create value for the company applying an adequate method to evaluate the business. This situation has represented several companies nowadays mainly after the Covid-19 pandemic and thus being relevant to analyse them. Given this situation, the method of adjusted net asset valuation was applied to obtain the closest valuation of the company MELO, LDA.

The results obtained tell that the company at the end of December 31st, 2021, is valued at around €1,145,000, according to its assets and the net present value of the project, showing a significant increase in value compared to the valuation of around €197,000 without considering the project. Thus, given the current situation of the company, and based only on mining activities as initially, it probably would not be able for the company to continue to operate and perhaps the best option would be to liquidate the business. However, the company made the right decision to manage its assets in order to strategically transform itself in the implementation of the tourist project since it will contribute significantly to the increase in the company's value. Another valid option was to take advantage of the acquisitions of the buildings made in 2020 and dedicate themselves to activities in the real estate sector, which could also increase the company's value in the near future.

The adjusted net asset method proved to be simple and pragmatic in this situation, able to show a general picture of the company as well as the current value of its assets and liabilities and the off-balance sheet items. It is a method that works well, especially when the company holds significant fixed tangible assets or shows breaks in activity for years. Therefore, through the applied method, it can be concluded that a company, even with breaks in activity for several years, may be able, to use its assets to create value for the company or adapt strategically to new areas of activity instead of liquidating the business as often happens.

This valuation process has brought some limitations. The company's situation did not allow the valuation using other methods such as DCF and multiples, thus being limited to a value obtained through the adjusted net assets method. Obtaining a range of values would be interesting by allowing comparison and giving a negotiation margin in case the company, or part of it, is sold later. In addition, it was not possible to obtain the 2021 financial report, which would give more detail and explanation of the events that originated in 2021 and, consequently, the need for one or another adjustment. Naturally, I suggest continuing with this case as it will be very interesting to study and understand how the valuation will be, especially after the conclusion of the tourist project. This project will be later sold, operated or given to an operator to operate. Depending on the company's future decision, in case it explores the hotel, it may be possible to a valuation through the DCF method. So, I suggest analysing this possibility since the hotel will be already in operation, allowing for a new estimate of cash flows for the company.

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