Valuation and Exit Strategy: The Case of Visor.ai

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Acknowledgments

The following thesis was executed as the final stage for the completion of the master's degree in management. Performing this in-company project while, at the same time, starting my professional career, allowed me to improve not only my knowledge but also my time management and critical thinking capabilities.

The focus of this thesis was Visor.ai, the company I started working in October 2020, and for this reason, I would like to thank Gonçalo Consiglieri, CFO of Visor.ai, for giving me this opportunity and for all the support during this challenging time. I am also very grateful to my Thesis' Advisor, Professor Luís Laureano, for all the guidance, patience, and time spent throughout this period.

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Abstract

The project aims to perform a valuation of Visor.ai and analyse the viability of several possible exit strategies, especially an Initial Public Offering (IPO). Determining the value of the company and exploring the exit alternatives will strengthen the position of Visor.ai managers towards investors as well as providing the tools for the choice and preparation of the best exit approach.

The theoretical background for the valuation methods is presented, as well as the financial, business, and industry contexts. The methods used to perform the valuation is the Discounted Cash Flow and the Multiple Valuation. It allows to not only derive Visor.ai's value but also compare it with its peers. The result is the average of the values obtained by the two methods, which lead to a valuation of approximately 11 million euros.

Although several exit strategies were studied, emphasis is given to the advantages, disadvantages, timings, and costs of executing an IPO. In the case of an acquisition or an IPO, assuming a market capitalization equal to the shareholder value and maintaining the number of shares, Visor.ai founders would receive approximately 2.4 million euros.

Resumo

O projeto visa realizar uma avaliação da Visor.ai e analisar a viabilidade de várias estratégias de saída possíveis, especialmente uma Oferta Pública de Venda (OPV). Determinar o valor da empresa e explorar as alternativas de saída fortalecerá a posição dos gestores da Visor.ai perante os investidores, além de fornecer as ferramentas para a escolha e preparação da melhor abordagem de saída.

Apresenta-se o enquadramento teórico dos métodos de avaliação, bem como os contextos financeiro, empresarial e setorial. Os métodos utilizados para realizar a avaliação são o *Discounted Cash Flow* e a avaliação por Múltiplos. Através destes métodos consegue-se não só determinar o valor da Visor.ai, mas também compará-lo com o dos seus concorrentes. O resultado é a média dos valores obtidos pelos dois métodos, que conduzem a uma avaliação de cerca de 11 milhões de euros.

Embora várias estratégias de saída tenham sido estudadas, dá-se ênfase às vantagens, desvantagens, prazos e custos de execução de uma OPV. No caso de uma venda ou OPV, assumindo uma capitalização do mercado igual ao valor do acionista e mantendo o número de ações, os fundadores da Visor.ai receberiam cerca de 2,4 milhões de euros cada um.

Palavras Chave: Avaliação, Oferta Pública de Venda, Start-up

Classificação JEL: M13, M41

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Glossary of acronyms

AI – Artificial Intelligence

APV – Adjusted Present Value

CAGR – Compound Annual Growth Rate

CAPM – Capital Asset Pricing Model

CEO – Chief Executive Officer

CIO – Chief Information Officer

CMO – Chief Marketing Officer

CMVM – Comissão do Mercado de Valores Imobiliários

COGS – Costs of Goods Sold

CSR – Corporate Social Responsibility

CTO – Chief Technology Officer

D&A – Depreciation and Amortization

DCF - Discounted Cash Flow

DDM - Dividend Discount Model

EBIT – Earnings Before Interest and Taxes

EVA - Economic Value Added

FCFE – Free Cash Flow to the Equity

FCFF – Free Cash Flow to the Firm

GDP – Gross Domestic Product

GDPR - General Data Protection Regulation

IPO – Initial Public Offering

M&A – Merger and Acquisitions

MBO – Management Buyout

OECD - Organisation for Economic Co-operation and Development

R&D – Research and Development

SG&A - Selling, General & Administrative

SME – Small and Medium Enterprise

WACC – Weighted Average Cost of Capital

R&D – Research and Development

1. Introduction

1.1. Background

The purpose of this in-company project is to produce helpful information for Visor.ai managers, by computing the value of the firm and analysing the possible exit strategies, such as an Initial Public Offering (IPO).

Visor.ai is a small and medium-sized enterprise (SME) based in Portugal, and it can be perceived as a start-up, as explained later in the literature review. The firm delivers to its customers a low code/no code conversational AI platform for the enterprise sector, which intends to reduce repeated, and with small added value, interactions in their contact centres. Automating these interactions allows them to save millions of euros every year on customer support and increase customer satisfaction.

The company already has some maturity and traction, demonstrated by having large European groups as clients, such as Generali, BNP Paribas, Fidelidade, Millennium BCP, Galp, CaixaBank, and Janssen. Regarding the team structure, the Visor.ai management team is composed of the three founders of the company, each one leading one of the following business units: (i) the Technology business unit, which encompasses Web and Artificial Intelligence, and is responsible for platform development and algorithms training; (ii) the Clients business unit, which includes Customer Support and Sales; and (iii) the Operations business unit that aggregates Human Resources, Marketing and Finance.

The project was developed internally at the company during a 9-month internship under the supervision of one of the company's founders responsible for leading the Operations business unit, more specifically the Finance team. Furthermore, the project was performed under the scope of the master's in management and will serve mainly as support to the management team. It will not add many theoretical contents to the literature, but it will use appropriated methods and assumptions to quantify a company's value, which will be crucial not only for Visor.ai but also for other companies and managers that lack financial skills.

1.2. Managerial Contribution

To access the viability of an IPO, a valuation of the company was made, which enables the owners to have a better idea of the intrinsic value of their shares. Also, a substantial amount of information was collected to update managers on the benefits, costs, risks, and timings associated with the implementation of an IPO. Several other exit strategies were also addressed to complement the analysis.

However, although valuation models are quantitative, there is always subjectivity inherent in the inputs and, therefore, it is unlikely to embark on a valuation without bringing bias to the equation (Damodaran, 2006). Moreover, start-ups entail a significant amount of uncertainty and bankruptcy risk and, typically, have short financial records (Sievers et al., 2013). Evaluations should include a set of features, such as product attributes, management experience and skill, market size and growth, the venture team, and expected returns (Milkova et al., 2018).

Thus, the management team must understand that the valuation is not 100% precise, however, combining a range of valuation methodologies provides a more valuation accuracy (Köhn, 2017). Moreover, the methods used are also the ones most used and well-known by investors across many European countries (Dittmann et al., 2004; Manigart et al., 2000; Pintado et al., 2007).

1.3. Research Aim

The aim of this project is to estimate the value of Visor.ai, using the most appropriate methods and assumptions reflected in the literature, and advise Visor.ai's owners of the possible exit strategies, more specifically an IPO.

1.4. Research Questions

1. What is the value of Visor.ai?
2. What are the benefits, cons, and risks of implementing an IPO?

1.5. Research Objectives

1. Estimate the value of Visor.ai, having in account the methods and assumptions reflected in the literature review.
2. Understand the benefits, cons, and risks of performing an IPO and verify its viability in the context of the company.
3. Understand how much each shareholder would receive in case of an IPO or acquisition.

2. Literature Review

2.1. Brief Overview

Knowing what an asset is worth and what determines that value is essential for intelligent decision-making choices (Damodaran, 2006). The valuation may be performed to analyse the company's growth, forecast revenues or costs, buy, or sell the company, compare with competitors or even in making financing and dividend choices.

To evaluate a company, it is fundamental to understand the concept of value. In business, the value consists in the cash flows generated in the form of revenue and income (Garcia, 2018). The intrinsic value is the value that would be attached to a firm by an unbiased analyst, who not only correctly estimates the expected cash flows of that firm, given the information available at the time, but also attaches the right discount rate to those cash flows (Damodaran, 2012).

Furthermore, valuing young companies carries substantial uncertainty. This uncertainty is split into firm-specific uncertainty, estimation uncertainty and macroeconomic uncertainty and the only source of uncertainty that can be minimized by the analyst is the estimation uncertainty (Damodaran, 2006). In conventional discounted cash flow valuation, the way to adjust a risky asset for uncertainty is either by adjusting the discount rate for the risk or the cashflows, using certainty equivalents (Damodaran, 2018).

2.2. Start-up

In the literature, there is not a unanimous definition of start-up. Davila and Foster (2005) defined a start-up as being a company with the following characteristics: (i) minimum of 50 and maximum of 150 employees; (ii) less than ten years old; (iii) independent; and (iv) being in a limited geographic area. Granlund et al. (2005) referred to start-ups as fast-growing companies that operate either in communication and technology businesses or in the biotech industry. A basic and commonly accepted definition is that start-ups are new businesses that are started from scratch (Kolvereid and Isaksen, 2006). Kollmann et al. (2016) stated that a company is considered a start-up when the following features comply: (i) be younger than ten years old; (ii) have highly innovative technology and/or business models; and (iii) have (or strive for) significant employee and/or sales growth. In Forbes (Baldridge, 2021), some CEO's call it "a state of mind" while others try to define some requirements to be considered a start-up. According to Business Insider (Shontell, 2014), there is no definition any two

entrepreneurs or investors agree on. Most say a start-up is determined by its age, growth, revenue, profitability, or stability.

Although the definition of a start-up is controversial and non-consensual, a recent definition was proposed by Steve Blank, a famous entrepreneur, who defined it as a temporary organization in search of a scalable, repeatable, and profitable business model (Blank, 2019).

2.3. Valuation Models

According to Damodaran (2005), there are four approaches to valuation: (i) Discounted Cash Flow Valuation; (ii) Liquidation and Accounting Valuation; (iii) Relative Valuation; and (iv) Contingent Claim Valuation. Table 2.1 summarizes these approaches.

Table 2.1 – Valuation approaches and metrics

Discounted Cash Flow Valuation	Liquidation and Accounting Valuation	Relative Valuation	Contingent Claim Valuation
Firm Value Models:	Book Value	**Multiples:**	Binomial
Free Cash Flow to Firm (FCFF)	Fair Value Accounting	Price/Earnings Ratio	Black and Scholes
Economic Value Added (EVA)	Liquidation Valuation	Price/Cash Earnings	
Equity Value Models:		Price/Sales	
Dividend Discount Model (DDM)		EV/EBITDA	
Free Cash Flow to Equity (FCFE)		EV/Sales	
Adjusted Present Value			

Source: Damodaran, A. (2005). ***Valuation approaches and metrics: A survey of the theory and evidence***. Now Publishers Inc.

2.3.1. Discounted Cash Flow Valuation

In the Discounted Cash Flow (DCF) Valuation, the value of an asset corresponds to the present value of its expected cash flows, discounted at a rate that reflects the associated risk. Thus, the value of an asset is not measured by what it is perceived to be worth, but rather by the expected cash flows stream. Therefore, assets with high and predictable cash flows should be more valuable than assets with low and volatile cash flows (Damodaran, 2006). The following formula describes the calculation of the value of an asset.

$$Value\ of\ Asset = \frac{E(CF_1)}{1+r} + \frac{E(CF_2)}{(1+r)^2} + \frac{E(CF_3)}{(1+r)^3} + \cdots + \frac{E(CF_n)}{(1+r)^n} \qquad (1)$$

Where,

E(CF) = Expected Cash Flow

r = Discount Rate

When using this formula, variations may occur either in the numerator or in the denominator. In the numerator, the expected cash flows will vary from asset to asset, being dividends for stocks, coupons (interest) and face value for bonds, and after-tax cash flows for a business (Damodaran, 2006). The numerator can acquire different values based on the model being used, which can be one of the following: (i) Firm Value Models (FCFF and EVA); (ii) Equity Value Models (DDM and FCFE); and (iii) Adjusted Present Value (APV) model (Agarwal, 2013). The denominator will be a function of the riskiness of the estimated cash-flows. When evaluating a company, the discount rate usually is either the cost of equity (i.e., the rate of return required by equity investors in the firm) or the Weighted Average Cost of Capital (WACC), which is the cost of the different components of financing used by the company, weighted by their market value proportions (Damodaran, 2012).

Although these approaches use different definitions of cash flow and discount rates, they will yield consistent estimates if the assumptions are also consistent (Damodaran, 2012). The author stresses that the key error to avoid is mismatching cash flows and discount rates. Discounting cash flows to equity at the cost of capital will lead to an upwardly biased estimate of the value of equity while discounting cash flows to the firm at the cost of equity will generate a downwardly biased estimate of the value of the firm.

2.3.2. Liquidation and Accounting Valuation

In the liquidation and accounting model, the valuation corresponds to the sum of the individual assets owned by the firm (Damodaran, 2012). This model has three main approaches, the liquidation approach, the book value approach, and the fair value accounting approach.

The first one, the liquidation approach, is obtained by estimating the value of assets if they were sold right away. This approach only looks at assets in place and estimates their value based on what similar assets are priced in the market (Damodaran, 2012). Nevertheless, this urgency to sell the assets may result in higher discount rates and, therefore, it may underestimate the real value (Garcia, 2018).

The second one, the book value approach, values a company based on the income statement and balance sheet. This model relies on the assumption that financial statements reveal the true earnings potential of a company (income statement) and a reliable estimate of the value of the assets and equity

in the firm (balance sheet). Accountants have defined different rules for different assets. For fixed assets, the book value should reflect the original cost of the asset and the following depletions or additions. The current assets should be estimated by their market value. The problem arises with intangible assets which are difficult to access the value as there is no consensus regarding the methodology used to calculate it (Fernandez, 2004).

Lastly, the fair value accounting approach is defined by Damodaran (2005) as the push from both accounting rule makers and regulators towards fair value accounting. As the author stresses, "this push has been a return to the original idea that the book value of assets on a balance sheet and the resulting net worth for companies be good measures of the fair value of these assets and equity" (Damodaran, 2005, p.58).

All valuation models intend to value assets, the difference is how to identify those assets and how to attach value to them. Although, for firms with significant growth opportunities and, consequently, possible excess returns, the valuation may differ from the true value (Damodaran, 2005). Hence, in the case of a start-up, it is preferable to use other methods.

2.3.3. Relative Valuation

In relative valuation, the value of an asset is determined from the pricing of comparable assets, usually using common variables as standards, such as earnings, cash flow, book value, or revenues. To perform this valuation, two key components must be accounted for. The first one is which assets may be comparable. Damodaran (2006) stated that comparable assets are assets with similar cash flows, risk, and growth potential. In practice, this means companies that are in the same business as the company being valued. The second component that must be accounted for is related to standardized prices, since the price per share of the company is arbitrary, meaning it is just a function of the number of shares outstanding. By dividing the price by a measure that is somehow related to that value will yield a standardized price. This measure is usually called the fundamental.

Basically, this method relies on the assumption that the market is correct in the way it prices stocks on average, although it can be mistaken in pricing individual stocks (Damodaran, 2012). It also assumes that a comparison of multiples allows identifying these errors and they will be corrected over time.

Price multiple valuation has several advantages. It is simple and easy to implement, uses market information directly, and values a company relative to its competitors (Nissim, 2012). However, as Nissim (2012) stated, in contrast to the premise of price multiple valuations, the typical value/fundamental relationship is nonlinear, and value is determined by more than one fundamental. Moreover, it has important implementation issues since the value can only be estimated for companies with positive values for the fundamental, which rules out many firm/fundamental combinations. Also, real comparables are rarely available, which can contribute to biased evaluations. Inefficient market

pricing of comparables or temporary shocks to the fundamental result in wrong estimations (Nissim, 2012).

2.3.4. Contingent Claim Valuation

To perform this valuation method, firstly, it is important to introduce the definition of a financial option (option henceforth), which is a financial derivative. An option is a contract that provides the owner with the right, but not the obligation, to either buy or sell a financial asset during a certain period or on a specific date in the future at a predetermined price (strike price). An option that provides the right to buy is called a call option and an option that provides the right to sell is called a put option. A contingent claim or option is a claim that pays off only under certain contingencies – if the value of the underlying asset exceeds a predetermined value for a call option or is less than a predetermined value for a put option (Damodaran, 2012).

These models were initially used to value traded options, however, there has been an attempt in recent years to extend the reach of these models into the more traditional valuation. Nevertheless, when the underlying asset is not traded, the inputs and variance for the valuation cannot be extracted from financial markets and have to be estimated. Thus, the final values from the adoption of option pricing models have much more estimation error when applied with non-traded assets. Furthermore, this methodology is mainly used to analyse projects' investments or operational decisions where firms have the option to expand, temporarily suspend, postpone, and abandon the investment (Schwartz, 2013).

The most common contingent claim valuation approaches are the binomial and the Black-Scholes model. These methods are mainly used to evaluate firms that operate in the sectors that explore natural resources or commodities which can be traded in the secondary market, such as oil, gold, or gas (Garcia, 2018). Therefore, the company's value is related to the market price of the resource/commodity being explored and the company can increase or decrease production depending on the market price.

Since Visor.ai's business and sector are not related to a resource or a commodity that is exchanged at secondary markets, these methods are not appropriated to value the company under analysis.

2.4. Initial Public Offering (IPO)

Most researchers and academics define Initial Public Offering (IPO) as the first sale of stocks to the public to raise capital and, therefore, expand the business activities. However, the decision process of executing it is complex, requiring choices regarding the timing of the issue, the market flotation that does not exist in other sources of financing, the steps that are taken to ensure an offer's success, and the ways of identifying and dealing with the uncertainties that await firms after a successful launch (Burton, et al., 2006).

The literature suggests that the main motivations for going public are to raise capital, to cash out in the future, to facilitate acquisitions, to take advantage of the stock price over the valuation, and as a strategic corporate move (Lee et al., 2020). Bancel and Mittoo (2009) refer that the decision to go public cannot be explained by one single theory, because firms seek multiple benefits from going public. These motivations are influenced by the firm's age, size, and investment and financial opportunities (Breinlinger and Glogova, 2002). Lee et al. (2020) added that the firm's ownership structure also influences the decision to go public. Furthermore, the IPO decision may also depend on external factors, such as GDP, industrial production growth, interest rates, sentiments on financial markets and regulatory constraints (Ritter, 2011).

Many studies have emphasized the traditional trade-off between the benefits and costs of going public. The main benefits identified include diversification, the possibility of equity financing beyond the initial entrepreneur's limited wealth, less costly access to the capital market, increased liquidity of the firm's shares, and outside monitoring (Boot et al., 2006). Regarding the costs, these include registration and underwriting costs, underpricing costs, annual disclosure costs, and the cost related to the separation of ownership and control (Lee et al., 2020).

Small and young companies are expected to have more difficulties in listing according to either "adverse selection" or fixed costs considerations (Lee et al., 2020). Highly leveraged or high investment firms are more likely to go public to overcome their financial constraints (Pagano et al., 1998). For firms with a high market-to-book ratio, which are associated with future growth opportunities, performing an IPO is an optimal method to transfer control or to exploit mispricing in the market.

3. Visor.ai – Company Overview

3.1. Company Presentation

The idea behind Visor.ai was born in 2016, where the founders Gonçalo Consiglieri, Gianluca Pereyra and Bruno Matias noticed that large companies were dealing with large volumes of contacts every day and, many of those contacts were repeated. To solve this issue, companies were handling each contact manually, one by one, and hiring more and more contact centre personnel as contacts were raised. These, of course, represents huge costs for the companies, and it is not scalable. As such, Gonçalo, Gianluca, and Bruno understood that there was an opportunity to automate the interactions between contact centres and their clients, and the Visor.ai platform was born, firstly to address the chat channel, via chatbots for customer support and marketing, and now to address all channels (voice, email, chat, and social media), complying with security, compliance, and architecture standards required by the enterprise sector. Furthermore, the Visor.ai platform was 100% developed in-house, having its own AI, which provides the company with full autonomy. Moreover, the platform is low code/ no code, which provides full autonomy to contact centres personnel since they do not need any IT knowledge/skill to use it.

3.1.1. Revenue Model

Visor.ai is a service provider, with all services centred around its platform. Each new client requires a setup, which usually includes the creation of an account, the creation of a knowledge base, tests, and training sessions. It functionates basically as a consulting service, and the pricing range is typically from 10,000€ to 25,000€ depending on the client's need and the effort required, and it is charged one time for each implementation. After the setup period, usually four weeks, the client starts paying a monthly fee, which ranges from 1,000 € to 10,000 €, to use the platform. The amount of the fee depends on the number of interactions between the bot (chatbot, email bot, or voice bot) and the end-user. If a client wants to upgrade, for example, to another channel, a new setup is billed, and the monthly fee is updated.

Furthermore, partnerships will be a driver of Visor.ai expansion, which until 2020 have been reaching the company only through inbound channels and still more than 13% of total revenues came from partnerships. Thus, Visor.ai managers foresee that by implementing a good and attractive outbound strategy, it will be easier to get partners and the company will benefit a lot from that. Visor.ai has had as partners small consulting companies, software providers, and marketing agencies. The

latter is not the ideal partner for the company since it usual delivers one-shot projects that just stay active for a couple of months. The strategy for the future is to attract software providers and small consultant companies, based on a revenue share model that will start with a 10% commission for the partner and, as they bring more customers, the commission can go up until 25%, which will motivate them to bring more business.

3.1.2. Internationalization & Go-to-market Strategy

From 2016 to 2020, Visor.ai had been focused on the Portuguese market, always with the knowledge that this market would function as a pilot to test and improve the product according to customer needs, but also understanding that the ambition has always been global, and that the growth plan is to go abroad. In the Portuguese market, Visor.ai was able to accumulate more than 25 clients, mainly large corporations from the banking & insurance sector, reach a substantial amount of revenue, and build up a team of more than 25 people. These, of course, increased Visor.ai brand awareness and recognition, which made the founders decide that the company would start the internationalization process at the beginning of 2022. The year 2021 would serve as a year to define the strategy and prepare a funding round that would finance that strategy.

Firstly, before explaining the go-to-market strategy, it is important to refer that Visor.ai already had clients abroad, however, there was no planning or investment, things did not work quite well, and the company took lessons from those mistakes when defining the internationalization strategy. To decide which countries to go to, the company analysed its resources and capabilities and did its market research to understand market opportunities. The decision was based on the following two questions:

- Where can Visor.ai deliver faster?
- Which markets are less mature and where is there less competition?

By analysing and answering these questions, the decision was made very simple since the Visor.ai platform was only set for Portuguese, Spanish, and English, and the results of the market research were that Anglo-Saxon markets were already very mature and crowded, whereas Portuguese and Spanish speaking countries were less mature and with less competition. Furthermore, according to Global AI Adoption Index (2021), 79% of IT professionals in Latin America reported as the main barrier to implement and develop AI solutions, the lack of skills. This perfectly fits with the Visor.ai platform since contact centre personnel do not need any technical skill as the platform is low code/no code. To sum up, Visor.ai is going to broaden its sales by entering Spain and Brazil in 2022, and Mexico during 2023 (phase 1). At the beginning of 2024, the company is going to examine its performance in those markets and decide the next expansion steps that will include entering four countries of one of the following options: (i) rest of Latin America; (ii) European countries in which the native language is not English; and (iii) U.A.E. and Arabic countries (phase 2).

The approach to implement the strategy is to allocate a specific team to each country of the expansion plan, composed of people from customer success and sales positions. Each team will be led by one country manager, preferably with experience in the sectors of banking & insurance, and with the capacity to develop partnerships with small consulting companies and software providers. Supporting all the team in the country of expansion, it will be one of Visor.ai founders, and a marketing team dedicated to each country, either performing inbound marketing (Content Marketing, Digital Advertising, Landing pages, social media, etc) or outbound marketing (email & LinkedIn outreach, Webinars, networking events, etc).

To build the latter mentioned expansion structure six months are required for each new market. Therefore, as the plan will start being implemented at the beginning of 2022, it is expected that phase 1 will be fully executed by the end of 2023, which represents a huge investment in the year 2022. The same logic applies to the year 2024 when Visor.ai will enter other four new countries and, therefore, the huge investment will take place during all year of 2024 to fully implement phase 2 of expansion.

3.2. Industry Presentation

Before analysing the financial indicators of Visor.ai that will be relevant for the company valuation, it is important to contextualize the market in which the company operates, describe the main competitors and how they can affect the company's profitability, and address other external factors that can affect the industry that the company is operating in.

For these reasons, it was decided to use Porter's 5 Forces to analyse the industry's competitive intensity and attractiveness, the PESTEL analysis to monitor macro-environmental factors that impact the organization, and the SWOT analysis to access the company's strengths, weaknesses, threats, and opportunities.

3.2.1. Conversational AI Market

In 2016, the year Visor.ai was founded, the company was just focusing on developing and attending to the customer needs of the chat channel. In those days, chatbots were a big trend, and the opportunity was huge, so from 2016 until 2019 the company built its platform and performed its sales around the chat channel. According to new research, the chatbot market will be worth 6.6 billion euros by 2025, growing at a CAGR of 23.5% during the forecast period (Markets and Markets, 2020). However, in 2019 Visor.ai understood that it was not solving the entire problem that contact centres had since they receive thousands of requests mainly via channels other than chat. For this reason, the company

started developing voice, emails, documents, and social media channels. The product roadmap goal is to be a layer between contact centre assistants and its clients, answering automatically to requests via any channel or forwarding them to the right department when it is impossible to answer automatically. Today, the company is operating in a market that includes chatbots, but that it is bigger than the conversational AI market. According to Markets and Markets (2020), the conversational AI market will be worth 11.7 billion euros by 2025, growing at a CAGR of 21.9% during the forecast period.

3.2.2. Porter's Five Forces

Porter's Five Forces is a powerful tool for understanding the competitiveness of the business environment, and for identifying the strategy potential profitability. This theory, created in 1979 by Harvard Business School professor Michael Porter, is based on the concept that five forces determine the competitive intensity and attractiveness of a market.

Throughout this subchapter, it will address each one of these forces in the context of Visor.ai. By understanding where power lies, the tool can also be used to identify areas of strength, overcome weaknesses, and avoid mistakes.

3.2.2.1. Threat of New Entrants

The seriousness of the threat of entry depends on the barriers present and on the reaction from existing competitors that entrants can expect (Porter, 1979). If barriers to entry are high, newcomers can expect sharp retaliation from the existing competitors and, therefore, they will not pose a serious threat of entering.

Regarding the conversational AI market, although there are no barriers to entry related to economies of scale, capital requirements or access to distribution channels, there is one important barrier to entry related to technological advancements. Moreover, clients from the enterprise sector often require the compliance of issues related to data protection and quality standards. The companies in this market are often updating their products to survive, thus, the bargaining power of the new entrant is moderate.

3.2.2.2. Bargaining Power of Suppliers

Suppliers can exert bargaining power on participants in an industry by reducing the quality of purchased goods and services or by raising prices. Suppliers that exhibit this bargaining power can thereby squeeze profitability out of an industry unable to recover cost increase in its prices (Porter, 1979).

The conversational AI market includes a substantial amount of technology suppliers' players, with similar products and typically firms in the conversational AI industry tend to be larger, well established,

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and globalized. Thus, the threat of suppliers would be lower, however, this does not happen with all the suppliers required. For example, services at the cloud are dominated by Amazon Web Services and Microsoft Azure. If they decide to raise prices, conversational AI companies would have to follow, and they will, of course, lose some profitability. For this reason, the bargaining power of suppliers is moderate.

3.2.2.3. Bargaining Power of Buyers

Likewise, buyers can influence the prices and profitability of the companies in a given industry. Customers can force down prices, demand higher quality or more service, and play competitors off against each other (Porter, 1979). Powerful customers, whose sales are important compared with the overall business, will push down a company's profitability.

Buyers in the conversational AI market shall have high bargaining power, mainly because of the large number of peers operating in the industry. The conversational AI service provider offers multiple features at a reasonable price. Customers can freely select products or services that best fit their preferences. Thus, the bargaining power of a buyer is high.

3.2.2.4. Threat of Substitutes

Substitute products or services may limit the potential and attractiveness of an industry, especially by placing a ceiling on prices. Unless the company can increase the quality of the product or differentiate it (via marketing, for example), the industry will suffer in earnings and growth. Furthermore, the more attractive the price-performance trade-off offered by substitute products, the harder will be for the industry to be profitable (Porter, 1979). Substitute products not only condition profits in normal times but also reduce the bonanza an industry can reap in good times.

If a company operating in this market provides solutions for all contact centre channels, there is no alternative product or service for conversational AI companies so far. Thus, the threat of substitutes is low.

3.2.2.5. Competitive Rivalry in the Market

Rivalry among existing companies in the market takes the form of fighting for position – using tactics like price competition, product introduction and differentiation, and advertising disputes. According to Porter (1979), the following factors contribute for intense rivalry: (i) many competitors or roughly equal in size and power; (ii) industry growth is low; (iii) the product or service lacks differentiation or

switching costs; (iv) fixed costs are high; (v) capacity is augmented in large increments; (vi) exit barriers are high; and (vii) the rivals are diverse in strategy, origin, and "personalities".

Figure 3.1 – Competitive landscape of Conversational AI
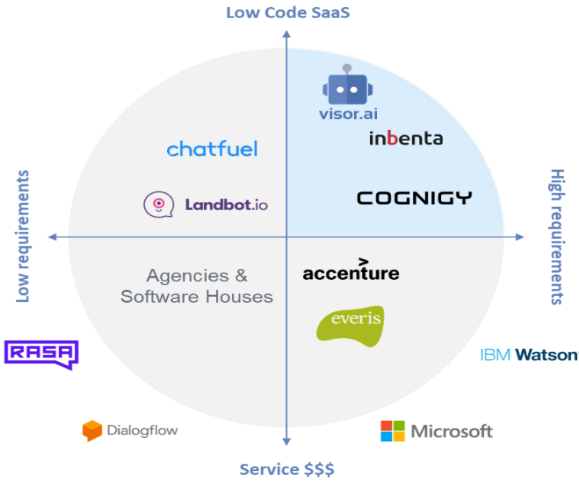
Figure 3.1 summarizes the competitive landscape of the conversational AI industry. The X-axis measures the level of requirements that the solution can provide, whether the Y-axis measures the level of autonomy of the system. The upper left quadrant represents the companies whose solution is low code, very easy to deploy and understand, and does not require any implementations and personal onboarding. The companies' target is SMEs, and the solution does not work for certain industries, such as banking and insurance, since it does not comply with compliance, legal, and data requirements. Examples of companies in this quadrant are Landbot.io and chatfuel. The lower left quadrant exhibits all the small agencies & software houses that implement, and onboard conversational AI solutions tailored to their clients and usually cannot comply with the high level of requirements some clients' demand. The lower right quadrant includes firms that also develop and onboard client-tailored solutions, however, usually, they can deal with high requirements since they are used to work with huge clients that have to comply with legal and data requisites. These solutions are usually very costly, and examples of companies in this quadrant are Accenture and Everis. Finally, the upper right quadrant represents the companies that have a low code solution but that complies with high requirements standards. These include companies like Visor.ai but also others such as Inbenta and Cognigy. Moreover, for the platforms to have AI they usually integrate with solutions from Google (Dialogflow), Microsoft (Microsoft Luis), IBM (IBM Watson) or Rasa, or they develop its AI in-house like Visor.ai, Inbenta and Cognigy do. To sum up, the competitive rivalry in the conversational AI market is rather intense, especially between the global players such as Microsoft, IBM, and Google, but also between smaller chatbot providers, and agencies & software houses. The tech giants are launching their value-

added products and services in the global market and enlarging their footprint. Although the industry growth is fast, competitive rivalry in the conversational AI market is high.

3.2.3. PESTEL Analysis

A PESTEL analysis is a framework used to analyse and monitor the macro-environmental factors that can impact a company's performance. PESTEL is an acronym that stands for Political, Economic, Social, Technological, Environmental and Legal factors. It was decided to use this tool together with SWOT analysis and Porter's Five Forces to provide a clear understanding of Visor.ai and related internal and external factors.

3.2.3.1. Political

Regarding political factors, according to *Worldwide Governance Indicators* (2020), Portugal has 1.1 of political stability on a scale of -2.5 to 2.5, where values nearer to the minimum represent countries with political instability and violence/terrorism, and values nearer to the maximum represent countries with political stability and absence of violence/terrorism. Thus, Portugal can be considered a country of moderate political stability and absence of violence/terrorism. However, the countries where Visor.ai plans to expand have lower values of the index. Spain has 0.3, which also represents moderate political stability, whereas Brazil has -0.5 and Mexico has -0.7, which represent political instability and the presence of violence/terrorism. Moreover, increasing international trade agreements develop the possibility of increasing Visor.ai sales internationally.

Due to the covid-19, the European Union will invest in the Portuguese economy through the Portuguese Recovery and Resilience Plan. Part of these funds will be injected directly into Portuguese small and medium enterprises for the digital transition. It is, of course, a possibility for Visor.ai to get funding.

Furthermore, the political lens is invariably about involving multiple teams for the conversational AI tool implementation. Most of the time, the decision to go ahead with, for example, a chatbot, is not just with the CIO, but also with the CTO, CMO, and their reports. On one hand, from the CTO perspective, for example, the chatbot must integrate with multiple other systems/platforms to either pull information or take action. On the other hand, as the chatbot will possibly be on the company's website, it becomes one more brand element for the CMO to handle.

3.2.3.2. Economic

The economic factors determine the economy's performance by examining economic growth, exchange rates, interest rates, unemployment trends, taxes, etc. These factors affect the purchasing power of clients and could change the demand and supply dynamics of the market.

Looking for economic growth, after Gross Domestic Product (GDP) falling sharply in 2020, it is expected to increase by 3,7% in 2021 and 4,9% in 2022 (OECD, 2021). Consumption will increase, with a gradual reduction in savings, as the sanitary situation has been improving. As for the labour market, according to the OECD (2021), it has been resilient, with a moderate increase in the unemployment rate in 2020 and 2021. Furthermore, by expanding to different countries and Markets, the exchange rate risk needs to be taken into account as Visor.ai will start dealing with currencies other than the euro. Lastly, also because of the covid-19 pandemic, the primary risk to the U.S. is inflation, which is mounting and making a lot of people very nervous. The consumer price index rose at a 7.5 per cent annual rate in the first quarter of 2021, and inflation expectations jumped at the fastest rate since inflation-indexed bonds were introduced a long time ago. From an increase in inflation, the interest rates may rise to contain the inflationary pressures without damaging the economy.

3.2.3.3. Social

By analysing social factors, companies can understand the behaviour patterns of customers and create a customer profile as accurate as possible.

There is no doubt that society is continually changing, especially in the covid-19 pandemic period. In addition to the growing popularity of social media and the fact that young consumers started growing used to mobile phones and computers, the pandemic accelerated the transition to digital channels as traditional channels were required to be closed. For example, a person who used to go to a bank agency to fix a simple problem with his card had to manage the problem digitally as agencies were closed. Clients preferring digital channels may require an increase in investment from the companies in new digital solutions, which creates an important opportunity for companies like Visor.ai.

3.2.3.4. Technological

Everything from AI, automation, and technology research can change the business' potential. Developing awareness around these market trends is crucial to understand potential advantages or disadvantages.

The trend of technology usage has been increasing in recent years and integrating into various industries and markets. It has growth potential and poses a challenge at the same time. It means that the other tech companies are spotting the same trends, and they all want to maximize their market share. Therefore, Visor.ai managers must develop their awareness of how many companies are looking

to this space. Furthermore, both AI & Machine Learning and Cloud Services are becoming more and more popular among individuals and businesses. By offering services at the cloud and turning the tools even more intelligent, Visor.ai can exploit this opportunity. However, the technology market is very competitive, and many tech professionals are thinking of one idea that anyone has ever thought of before, which after launching will disrupt the entire industry. New product developments are a huge threat, that is why Visor.ai should increase its investment in R&D to increase the possibility of coming up with something unique or a better digital experience. Lastly, cybercrime is another external factor that threatens the company as the world is becoming more digital. This threat comes in the form of potential cyber-attacks on online infrastructure.

3.2.3.5. Environmental

Environmental issues have come to the forefront only relatively recently. They have become crucial due to the increasing scarcity of raw materials, pollution targets and carbon footprint targets set by governments. These issues affect mainly industries such as tourism, farming, agriculture, and insurance.

The growing awareness of the potential impacts of climate change affect how companies operate and the products they offer. It led many companies to get more involved in practices such as Corporate Social Responsibility (CSR) and sustainability. Visor.ai could improve its sustainability by utilizing more renewable energy and reducing waste. These efforts also address the opportunity to satisfy the external factor of the rising interest for business sustainability programs.

3.2.3.6. Legal

The governments' rules and regulations will always have a macroeconomic impact on the success of any company. For companies that operate within the jurisdiction of multiple governments, managers must pay even more attention due to the different legal factors within each location.

As the Visor.ai platform deals with huge amounts of data every day, the company must comply with data protection regulations. The General Data Protection Regulation (GDPR) is the toughest privacy and security law in the world. Though it was drafted and passed by the EU, it imposes obligations onto organizations anywhere, as long as they target or collect data related to people in the EU. If a company breaches the privacy of any individual, then it would be liable to pay a certain percentage of its total revenue.

3.2.4. SWOT Analysis

SWOT analysis is a strategic framework for analysing an organization's strengths, weaknesses, opportunities, and threats. Strengths and weaknesses are internal to the company, so they can be changed with work and time. However, opportunities and threats are external to the company, so they do not depend on the company, rather on the surrounding environment.

The goal is to provide a business overview of Visor.ai so that the management team can build on the company's strengths, boost weaker areas, prevent eventual threats, and exploit every opportunity. Table 3.2 summarizes in bullets this analysis.

Table 3.2 – SWOT Analysis

	STRENGTHS (+)	WEAKNESSES (-)
INTERNAL	- Low code and user-friendly solution - Platform that complies with high requirements related to legal and data concerns - High quality of the solution for Portuguese and Spanish languages - Solution totally integrable with other platforms and technologies - High level of customer satisfaction - Skilled and cheap workforce	- Long sales cycle characteristic of enterprise clients - Significant implementation effort - Low international exposure and only working with Portuguese clients - Difficulty working with languages other than Portuguese, English, and Spanish - Need for more investment - Image & Reputation
	OPPORTUNITIES (+)	**THREATS (-)**
EXTERNAL	- The covid-19 pandemic accelerated the transition for digital channels - The diminishing boundaries and rising global interconnectedness - Chatbot usage statistics show a 67% increase between 2018 and 2020	- Intense Competition - The changing regulatory environment - Shortage of skilled labour in the market - Deteriorating economic conditions - Lack of awareness among end users about the usefulness of conversational AI tools - End users still depend on traditional methods

3.3. Financial Indicators

The following section provides an overview of Visor.ai financial indicators since 2017. The variables that will be analysed are the ones required to perform the valuation, more specifically revenue, operating costs, net income, working capital, and CAPEX.

3.3.1. Revenues

The value of revenue was assessed by adding the value of sales to the value of other revenues, which include the values of own work capitalized and operating subsidies.

During its short period of existence, from 2016 until to date, Visor.ai has been performing consistently well in terms of revenue. In 2017, Visor.ai's performance resulted in around 84 thousand euros in revenue, being almost 29 thousand (34%) derived from sales. In the year after, 2018, the company continue to grow at a fast pace, reaching around 251 thousand euros in revenue. Out of these 251 thousand euros, 140 thousand were from sales (56%). Revenue grew approximately 200% and, particularly, the sales growth was 388% from 2017 to 2018. In 2019, Visor.ai obtained around 399 thousand euros in total revenues, which represents an increase of 59% from 2018. Around 293 thousand euros were derived from sales (73%), which had increased by 109% compared with 2018. Finally, in the last year with data, 2020, Visor.ai's results were of approximately 435 thousand euros in revenues, which represents an increase of 9% from 2019. The total value of sales was approximately 378 thousand euros (87%), which represents a sales growth of 29%. Although the pandemic decreased and/or delayed sales, the company still grew in terms of revenue and in terms of sales. Figure 3.3 summarizes the information and enhances the weight of sales as the main driver of total revenue growth.

Figure 3.3 - Revenues
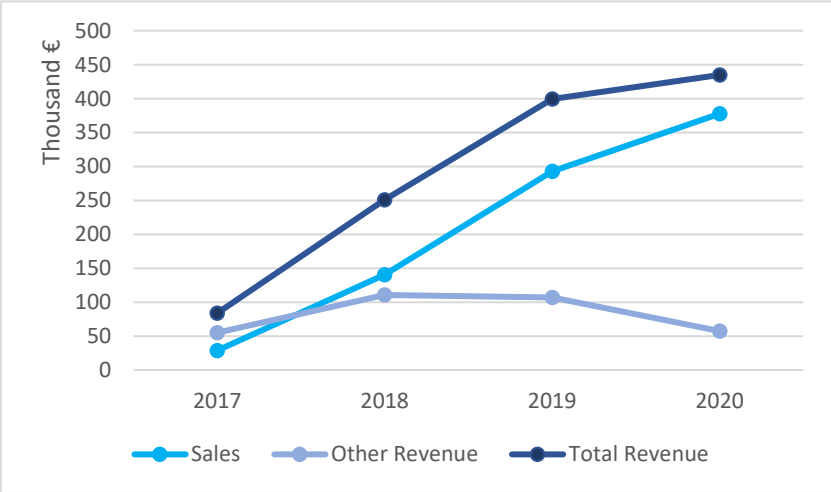
3.3.2. Operating Costs

Operating costs are associated with the maintenance and administration of the business and include costs of goods sold (COGS) and operating expenses, which are usually called selling, general and administrative expenses (SG&A). Since Visor.ai is a services provider, it does not account for COGS and, consequently, it only accounts for operating expenses.

As can be observed in Figure 3.4, Visor.ai has been increasing its total operating expenses over the last years. The company spent approximately 133 thousand euros in 2017. In 2018, Visor.ai's expenditure reached a total of approximately 178 thousand euros, which represents an increase of 34%. In 2019, expenses increased to around 308 thousand euros and in 2020, they continued to increase reaching a total of approximately 525 thousand euros. The expenses growth was 73% in 2019 and 70% in 2020. Furthermore, the company's main operating costs are personnel expenses and external supply and services. In the last two years, it is notorious the impact that personnel expenses have on Visor.ai's total expenses, which reflects the sizeable investment in human resources that the company has been doing.

In summary, as presented in Figure 3.5, Visor.ai has invested in part of the years more than what it produced in revenues, which created income losses. In 2018 and 2019, the company's expenses were less than its revenues.

Figure 3.4 – Operating Costs
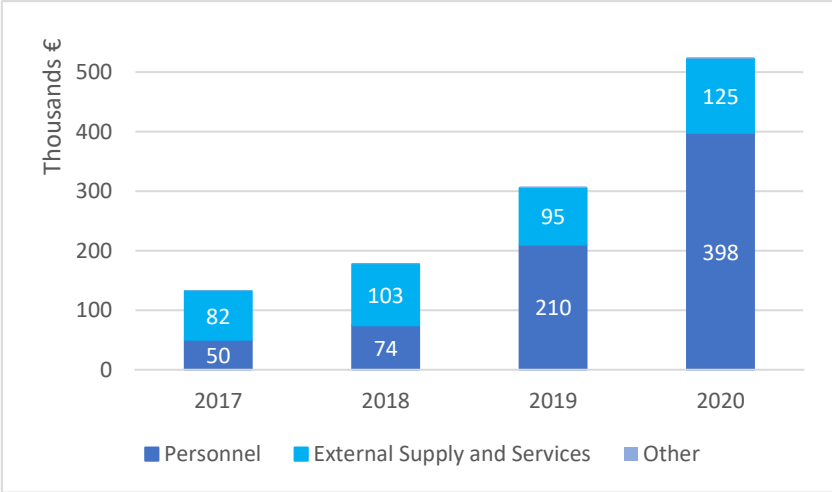
Figure 3.5 – Operating Costs in % of Revenues
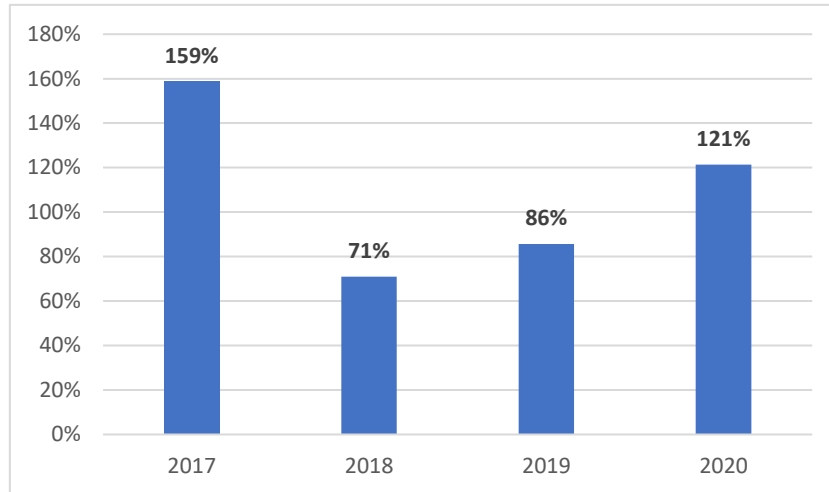
3.3.3. Net Income

To assess whether the company is profitable it is fundamental to access the net income, which is derived by subtracting the total expenses from the total revenue. Total expenses include not only operating costs but also depreciation, amortization, taxes, and interest expenses.

As it can be observed in Figure 3.6 and considering the ratio of operating cost as a percentage of revenue previously described, it was expected that in the years 2017 and 2020, the net income would be negative since operating expenses were higher than revenues. Furthermore, in the years 2018 and 2019, the company presented a positive net income.

It is important to refer that in 2020, the company decided to start investing more, by recruiting new employees, as the number of leads had grown a lot, mostly because many companies started transitioning to digital channels to attend to customer needs as the stores were closed during the lockdown. Yearly employer evolution of Visor.ai is shown on Figure 3.6. On the other hand, many contracts were delayed and were not closed until the end of 2020, so revenues did not follow the company's expenses, resulting in a significant net loss. For the future, Visor.ai will continue to invest heavily as the opportunity is huge, so the net income will probably continue to be negative.

Figure 3.6 – Net Income
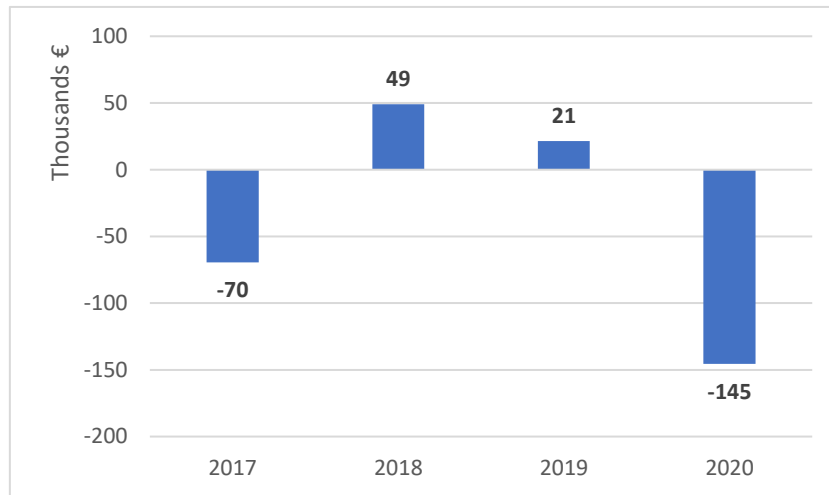
Figure 3.7 – Employer Evolution
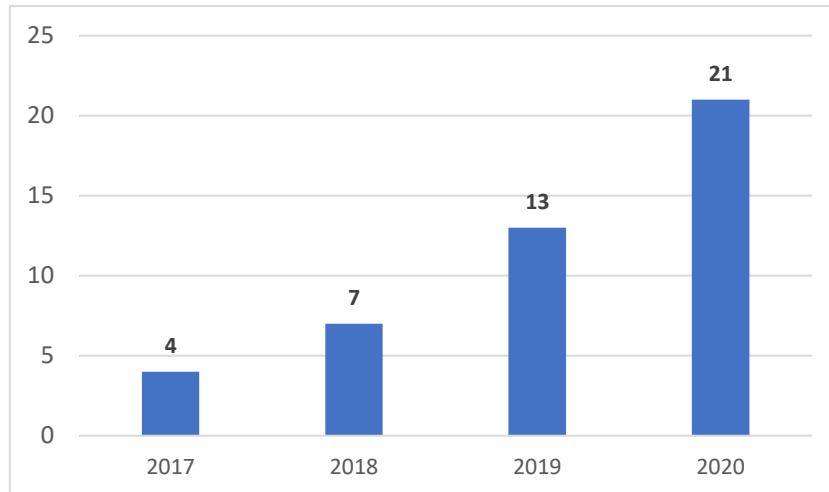
3.3.4. Working Capital

Working capital is a measure of a company's liquidity and short-term financial health. It is calculated by subtracting the company's operating current liabilities from the company's operating current assets. Operating current assets are those short-term assets used to support the operations of the business, it includes trade receivables and inventories, and excludes cash and equivalents. Operating current liabilities represent the company's obligations to suppliers within one year and exclude taxes and other debts. Figure 3.8 summarizes the evolution of Visor.ai's working capital from 2017 to 2020 and annex A shows the calculations performed. Working capital had been positive and increasing from year to year until 2020 mainly because accounts receivable had also been increasing, while accounts payable remain with low values.

Figure 3.8 – Working Capital
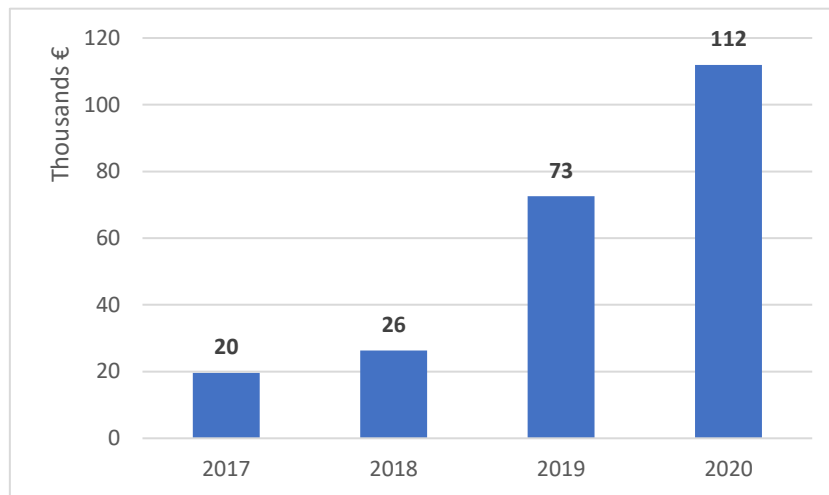
Positive working capital may be due to unsold inventories or uncollectable accounts receivable, which reduces the company's capacity to invest. As a services provider, Visor.ai does not have inventories so the problem may arise from accounts receivable, as Figure 3.10 shows that the company's operating current assets are mainly accounts receivable in most of the years. Thus, it is important to analyse the average collection period, which is calculated by the following formula:

$$Avg\ Colection\ Period = \frac{Accounts\ Receivable_n}{Total\ Sales_n} \times 365 \qquad (2)$$

Where,

n=year

This indicator provides information on how long it takes for the company to receive payments owed by its clients. Table 3.9 proves that Visor.ai has been facing this challenge since 2017 until now, with average collection periods of over 100 days in most of the years. The company is already implementing more aggressive collection policies to shorten these time frames, expecting to have better results by the end of 2021.

Table 3.9 – Average Collection Period

Year	2017	2018	2019	2020
Average Collection Period	111	77	121	149

Figure 3.10 – Operating Current Assets Dispersion
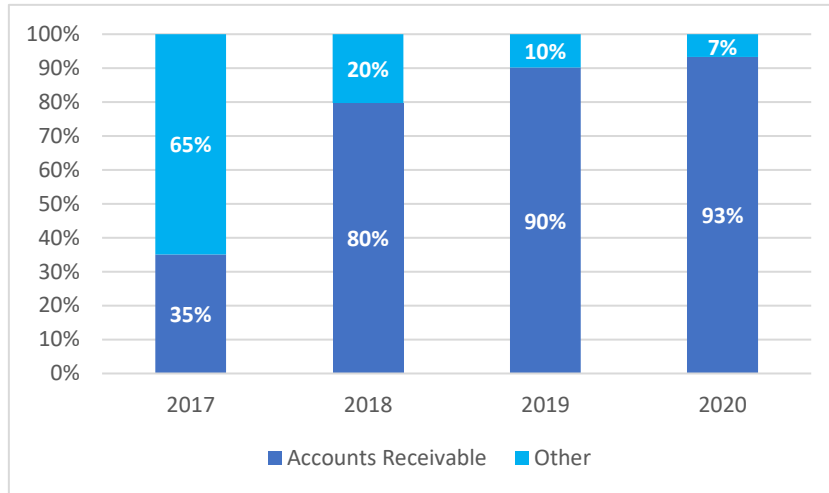
Figure 3.11 shows Visor.ai operating current liabilities dispersion, and indicates that over the last years, the company's accounts payable weight over total operating current liabilities is very low. This happens because of Visor.ai's policy of paying suppliers as soon as possible, keeping the values of accounts payable low.

With that said, positive working capital may result from the difference in timings regarding receiving from clients and paying to suppliers. The company pays suppliers earlier than it receives from customers.

Figure 3.11 – Operating Current Liabilities Dispersion
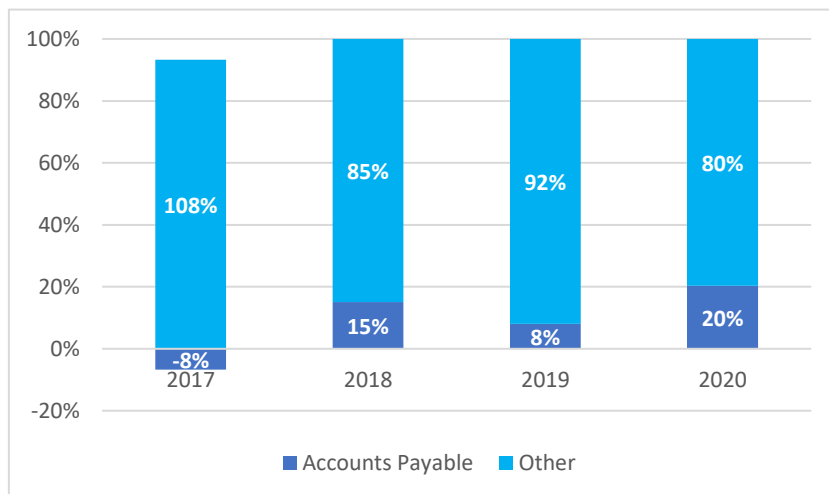
4. Methodology

4.1. Data and Assumptions

In this project, it was used secondary data from the financial statements of Jesbeetech, Lda (now called Visor.ai Portugal S.A.) and Visor Travel SL, which were disposed of by the managers. These two companies are owned by the same founders and represent the business activity of Visor.ai. The first one is responsible for the business activity in Portugal, while the second one is a Spanish company and is responsible for the business activity in Spain. Therefore, the data needed to be treated to represent the total financial overview and provide consolidated financial data. This process was already performed internally.

Furthermore, financial records from the peers that were used to perform a Multiples Valuation were retrieved from Yahoo Finance, as well as their betas and debt-to-equity ratios. The risk-free rate was collected from Bloomberg's website, and the market risk premium was obtained from Damodaran's Country Default Spreads and Risk Premiums, as it is shown in annex D.

To access the value of Visor.ai some assumptions needed to be assembled. Regarding the time horizon for the projections, it was defined as five years. The selected time horizon is an acceptable amount of time, and after this period it would be mere speculations. Therefore, it was implemented a terminal value in which it was assumed that after five years the company will reach maturity, having stable growth for perpetuity. The growth rate of perpetuity was defined to be 5%. Moreover, the projections will be made given the data of the last four years, 2017 to 2020, and do not account for the first year of the company existence since there is little financial information and because from 2016 to 2017 the company experienced very high growth rates, which will be hard to be achieved in this stage of development.

4.2. Approach

The company valuation was made using two of the valuation methods described in the Literature Review: The Free Cash Flow to Firm (FCFF) and the Multiples valuation.

4.2.1. The Free Cash Flow to Firm (FCFF)

For this methodology to be accurate, forecasts need to be precise, and assumptions must be reasonable. Therefore, all estimations will be based on the company's business plan, which was constructed by the management team for the years 2021 to 2025. This entails credibility in the model

since managers have more information regarding the business they are conducting and the risks they faced and will face in the future. The business plan was elaborated having in mind contracted revenue, which is revenue from existing clients, and contacted costs, which are costs already planned, especially from team increase and marketing.

After revenues and costs have been forecasted, the next step is to estimate CAPEX and working capital. Afterward, the cost of equity was computed using the CAPM model and it was adjusted given the size of the company. The risk-free rate selected was a 10-year government bond from the USA and the risk premium was obtained from Damodaran's Country Default Spreads and Risk Premiums. For the cost of debt, the approach used was to look in Visor.ai's borrowings and obtain the average interest rate charged.

Finally, having both the cost of equity and the cost of debt, the Weighted Average Cost of Capital was obtained to discount the EBIT (EBIT = Revenues – Operational Costs – Depreciations) and get the Free Cash Flow (FCF). Along this section, all estimations and assumptions will be explained.

4.2.1.1. Revenues

The projection for the upcoming years is that revenues will always be increasing, however, the growth rates differ from year to year. In 2021, sales will be mostly from actual clients since the pandemic delayed many contracts from 2020 to 2021, and 2021, as stated before, is the year where the expansion strategy and the funding round are prepared, therefore, there is not much effort into new sales from new clients. Nevertheless, it is expected that the revenue growth rate from 2020 to 2021 is going to be around 76%. In 2022, the company will have the necessary cash to implement its strategy to internationalize and ameliorate its platform to accommodate new markets and channels and optimize clients onboarding to reduce implementation effort. Thus, at the beginning of the year, Visor.ai will enter Spain, while in the second half of the year, the company will enter Brazil. Portugal will still accommodate most of the sales (80%), however, the company will already be selling a significant value in Spain and Brazil. It is expected that the sales growth will be approximately 212% from 2021 to 2022. In 2023, the company will consolidate its positioning in the new markets and open its operations in Mexico at the beginning of the year. The expectation is that the huge investment in 2022 will have repercussions in 2023, where the growth rate of sales will be 218%. For 2024 and 2025, the forecast is that foreign markets will be predominant in terms of sales and Portugal will reach a ceiling of around 5 million euros in sales. Brazil and Mexico are expected to deliver the most potential ate the end of 2025 since the market size is huge and it lacks competition. It is expected that in 2025, Visor.ai will reach almost 30 million euros in sales, which represents a growth of 98% from 2024 to 2025, and a growth of 106% from 2023 to 2024.

There are other revenues originated from public funds that contribute to the net income and should be accounted for. The company will also participate in a Portuguese AI consortium that will deliver approximately 27 thousand euros, 371 thousand euros, 643 thousand euros, 929 thousand euros, and 1 million euros respectively from 2021 to 2025.

4.2.1.2. Operating Costs

The operating costs presented in table 3.4 showed that the costs with personnel have been playing a major role in Visor.ai's expenditure and, as the business plan shows, their weight in the overall cost of the company is expected to maintain high. Moreover, it is important to mention that, as partnerships will be a fundamental driver of Visor.ai expansion strategy, the cost of the revenue share to partners will tend to be high. The costs from partnerships are included in SG&A costs.

The company expects to fundraise 3 million euros from private investors, being most of the money to invest in personnel, either technologic personnel or business personnel, and the remaining to invest in marketing. As such, it is expected that costs (variable and fixed) will significantly increase to generate the forecasted revenue.

In 2021, although the capital from investors has not been injected yet, the company plans to hire more people as it has cash available. The intention is to finish 2021 with a team of 32 employees, which means 11 more people than at the end of 2020. This implies a significant increase in costs, representing an operating expenses growth of around 80%. In 2022, with the capital increase, Visor.ai will invest the total amount resulting from the funding round, the 3 million euros plus approximately 632 thousand euros from revenue savings. The actual team at that time (32 employees) will represent 31% of the operating costs and new hirings will represent nearly 42% and include both technological employees (web development, Artificial Intelligence, QA & Automation, Security, Infrastructures, and UX/UI design) and business employees (Sales, Partnerships, Customer Success, Marketing, Human Resources, and Projects). Digital Marketing costs will represent 5% of operating costs, and the remaining 22% incorporate partnership costs and other external supplies and services. Operating costs growth from 2021 to 2022 will be approximately 287%. Regarding 2023, the company will continue increasing its operating costs by growing the team to support Mexico's expansion, and in structural positions in business such as Human Resources, Finance and Customer Success, and technology such as Security and Infrastructures. The actual team at that time (73 employees) will represent 62% of total operating costs, new hirings will represent 9% and digital marketing will weigh 8%. Operating costs growth from 2022 to 2023 will be approximately 68%.

In 2024, as explained in the internationalization strategy, Visor.ai will expand to four new markets which may include one of the following options: i) rest of Latin America; ii) European countries in which the native language is not English, and iii) U.A.E and Arabic countries. Of course, the cost will differ depending on the option because wages in Latin America are, in most cases, lower than wages in most countries of Europe, for example. Nevertheless, it is expected that costs continue to grow at a fast pace, representing an increase of 97% comparing to 2023, mainly due to the establishment of local business teams (Sales, Partnerships, Customer Success, and Projects) at the countries of expansion, and the reinforcement of the marketing team to address these four new markets. Lastly, in the year 2025, the company will adjust in the same way it did in 2023, by hiring for structural positions in business such as Human Resources, Finance and Customer Success, and in technology such as Security and Infrastructures. As the team grows, operational costs increase, representing a 105% increase compared to 2024.

Annex B summarizes the financial information regarding Visor.ai revenue and operating costs forecast, as well as the values for the growth rates during the selected time horizon.

4.2.1.3. CAPEX and Depreciations

Capital Expenditure (CAPEX) is the money spent by a company to acquire, upgrade, and maintain its physical assets, and it can be divided into Maintenance CAPEX and Growth. Maintenance CAPEX are the expenses incurred by the company to continue operating in its current form, this is, the expenses necessary to keep the daily operations working at full capacity, which include, for example, the replacement of old technology or the repair of machinery. Growth CAPEX is expenditure on new assets that are intended to grow the company's productive capacity or attract new customers, such as building a new factory or purchasing equipment. For accounting purposes, CAPEX does not go through the company's Income Statement. Rather, the expenditure is registered in the Cash Flow Statement and is capitalized as an asset on the Balance Sheet.

Depreciation is the expensing of a fixed tangible asset over its useful life whether amortization is the practice of spreading an intangible asset's cost over its useful life. Examples of fixed assets include buildings, vehicles, equipment whereas examples of intangible assets include patents, trademarks, copyrights, for example. It is important to mention that, although depreciation and amortization are non-cash expenses, meaning there is no cash spent, these expenses must be recorded every year in the Income Statement.

Since depreciations are not divided per asset in the Income Statement, it is impossible to calculate the growth of each one individually and, therefore, they should be analysed as a whole. Having access to the company's trial balance by month and at the end of the year allowed to differentiate depreciation from amortization and forecast them individually.

The assumptions made to estimate for the following years the value of depreciation, amortization, and CAPEX were the following:

1- To forecast the value of fixed tangible assets it was used the average rate of the Tangible Assets Turnover in the last four years, from 2017 to 2020, which is calculated by dividing the value of revenues to the value of tangible assets. The average ratio obtained was 25.43;

2- To forecast the value of intangible assets, it was used the same method as in point 1, but with intangible assets instead of fixed tangible assets. The average rate of the Intangible Assets Turnover in the last four years was 13.89;

3- To forecast the value of depreciation, it was applied the average rate of depreciation in relation to the value of fixed tangible assets in the last four years. The value obtained from the calculation was 35.36%;

4- To forecast the value of amortizations, it was applied the same logic as in point 3 but using the value of intangible assets and amortization instead of fixed tangible assets and depreciation. The value obtained from the calculation was 35.64%.

Table 4.1 summarizes all the information required to calculate the value of the CAPEX. To forecast the value of CAPEX, the following formula was used:

$$CAPEX = (Non\ Current\ Assets_t - Non\ Current\ Assets_{t-1}) + Depreciation_t + Amortization_t \qquad (3)$$

Table 4.1 – CAPEX Forecast

Indicator	2017	2018	2019	2020	2021	2022 F	2023 F	2024 F	2025 F	Terminal Value
Revenue	83,730 €	250,790 €	399,462 €	434,784 €	767,153 €	2,681,636 €	7,980,184 €	16,035,553 €	30,975,383 €	32,524,152 €
Tangible Assets	4,962 €	13,143 €	14,431 €	11,412 €	30,163 €	105,436 €	313,763 €	630,482 €	1,217,884 €	1,278,778 €
Turnover	16.87	19.08	27.68	38.10	25.43	25.43	25.43	25.43	25.43	25.43
Intangible Assets	17,220 €	24,958 €	16,348 €	60,474 €	55,227 €	193,048 €	574,486 €	1,154,384 €	2,229,888 €	2,341,382 €
Turnover	4.86	10.05	24.43	7.19	13.89	13.89	13.89	13.89	13.89	13.89
Total	22,182 €	38,101 €	30,779 €	71,886 €	85,389 €	298,484 €	888,249 €	1,784,866 €	3,447,771 €	3,620,160 €
Depreciation	918 €	2,930 €	5,290 €	7,302 €	10,665 €	37,279 €	110,937 €	222,920 €	430,607 €	452,137 €
% Tangible Assets	18.50%	22.30%	36.65%	63.98%	35.36%	35.36%	35.36%	35.36%	35.36%	35.36%
Amortization	8,610 €	8,610 €	8,610 €	3,270 €	19,684 €	68,808 €	204,763 €	411,454 €	794,794 €	834,533 €
% Intangible Assets	50.00%	34.50%	52.67%	5.41%	35.64%	35.64%	35.64%	35.64%	35.64%	35.64%
CAPEX				51,678 €	43,852 €	319,182 €	905,464 €	1,530,991 €	2,888,305 €	1,459,059 €

4.2.1.4. Working Capital

As mentioned before, Working Capital is a measure of a company's liquidity and short-term financial wealth. It is calculated by subtracting the company's operating current liabilities from the company's operating current assets.

To forecast the value of working capital, it was calculated working capital as a percentage of revenue in the last four years, and it was assumed that the average rate will remain for the future. The value obtained from the computation was 19% and Table 4.2 summarizes the later explained methodology.

Table 4.2 – Working Capital Forecast

Indicator	2017	2018	2019	2020	2021	2022 F	2023 F	2024 F	2025 F	Terminal Value
Revenue	83,730 €	250,790 €	399,462 €	434,784 €	767,153 €	2,681,636 €	7,980,184 €	16,035,553 €	30,975,383 €	32,524,152 €
Working Capital	19,645 €	26,274 €	72,542 €	111,916 €	149,287 €	521,841 €	1,552,928 €	3,120,487 €	6,027,749 €	6,329,137 €
% Revenue	23%	10%	18%	26%	19%	19%	19%	19%	19%	19%

4.2.1.5. WACC

To calculate the FCFF it is required to access the value of the discount rate, the WACC, which combines all sources of capital such as common stock, preferred stock, bonds, and other long-term debts to calculate the company's cost of capital in which each category of capital is proportionally weighted. The WACC is a measure of risk, meaning that an increase in WACC results from higher risks and, therefore, a lower valuation.

The following formula is used to access the value of the WACC:

$$WACC = \left(\frac{E}{E+D} \times R_E\right) + \left(\frac{D}{E+D} \times R_D \times (1-T)\right) \quad (4)$$

Where,

E = Market value of the firm's equity

D = Market value of the firm's debt

R_E = Cost of Equity

R_D = Cost of Debt

T = Corporate Tax Rate

4.2.1.5.1. Corporate Tax Rate

Accessing Visor.ai's taxes was a hard task since it is a multinational company, with operations in both Portugal and Spain, where each country has different corporate taxes. Besides the difficulty, another

issue that needs to be addressed is the case when a company has negative net income, it has a tax benefit.

Consequently, some simplified assumptions were required. Regarding the value of the corporate tax rate, two approaches could be realized. The first one would be to calculate the weighted average corporate tax rate between Portugal (21%) and Spain (25%), with weights based upon the income of the company in each of these countries. The problem with this approach is that the weights will change over time if income grows at different rates in different countries. Therefore, it was decided to use the second approach, which is simply assuming the value of the corporate tax rate of the country in which the company is domiciliated, being in this case Portugal. This decision was due to two main reasons, which are the following: i) the income generated in other countries will eventually have to be repatriated to the country in which the company is incorporated, at which point the firm will have to pay the inherent tax; ii) Visor.ai has been diminishing the operations of the company in Spain, by switching the clients of the Spanish company to the Portuguese company and changing the billing details to reduce the number of expenses of the Spanish firm. Therefore, in the future, it is expectable that the income of the company in Spain will tend to a residual value, which will have minimum impact on the valuation.

Consequently, the corporate tax rate assumed to perform the valuation was 21%, which is the value defined by the Portuguese government.

4.2.1.5.2.   Cost of Debt

To calculate the cost of debt, it is essential to understand the company's borrowings in the last years. Visor.ai has been growing bootstrap on revenue since its beginning, but in the last two years it found out good opportunities to borrow capital from banks to grow its operations. In 2019, Enisa, a Spanish public company dedicated to the financing of viable business projects, lent 75,000 € to Visor.ai at an interest rate of 3.48% and, in 2020, Santander Totta lent 100,000 € at an interest rate of 1.5%. The cost of debt was obtained using the weighted average interest charged on these loans.

To consider the amount of debt associated with each spread, instead of doing a normal average, it was decided to divide the total amount of annual interest expense by the total amount of debt, as shown in table 4.3. The cost of debt obtained and that is going to be used to calculate the WACC was 2.35%, as demonstrated in annex C.

Table 4.3 – Visor.ai borrowings

Bank	Date	Amount of Debt	Spread	Annual Interest Expenses
Santander Totta	08/07/2020	100,000 €	1.500%	1,500 €
Enisa	21/02/2019	75,000 €	3.478%	2,609 €
Total	-	175,000 €	-	4,109 €

4.2.1.5.3. Cost of Equity

The cost of equity, R_E, will be computed using the CAPM formula, which is commonly used to determine the appropriate rate of return of an asset. The formula that was used to calculate the cost of equity is the following:

$$R_E = R_f + \beta_i(R_M - R_f) \tag{5}$$

Where,

R_f = Risk-free rate

β_i = Beta coefficient

R_M = Average Return of the Market

$(R_M - R_f)$ = Market Risk Premium

The risk-free rate is the theoretical rate of return of an investment that bears zero risk, or the risk of default is minimum. Therefore, a 10-year government bond from the United States of America (USA) was used to obtain the risk-free rate since the USA is rated AA+ by Standard & Poor's, and AAA by Moody's and Fitch, and, consequently, the probability of default is minimum. According to Bloomberg on 25/08/2021 the yield of a 10-year government bond from the USA is 1.34%, which will represent the risk-free rate during this analysis.

The Market Risk Premium is the difference between the expected return on a market portfolio and the risk-free rate. It provides a quantitative measure of the extra yield demanded by market participants for the increase in risk. For this project, the Market Risk Premium was accessed from Damodaran's Country Default Spreads and Risk Premiums estimates, updated on the 8th of January 2021. As Visor.ai main activities and operations are based in Portugal, the company is more subject to Portuguese political and economic instabilities. Therefore, the value that will be assumed for the Market Risk Premium will be the one of Portugal, which is 6.85%.

The Beta, primarily used in the CAPM model, is a measure of the volatility, or systematic risk, of a security or portfolio when compared to the market as a whole. Damodaran (2012) stated that there are three approaches to estimate the beta of a security or portfolio. The first one is to use historical data on market prices by regressing the returns of any asset against an index representing the market

portfolio, over a certain period. The slope of this regression would be the beta of that asset. Alternatively of performing a regression against a market index, it can also be used the standard deviation in stock prices.

Secondly, another option is to estimate the beta from the firm's accounting data, this is, using accounting earnings or revenues. Lastly, the third approach to estimate the beta is by looking at the fundamentals of the business and its current financial leverage. Since Visor.ai is not a publicly traded company, it is not possible to use the first approach. Therefore, it was decided to use the approach that investigates the fundamentals of the business, using a method called the bottom-up betas, which states that the beta of two assets put together is a weighted average of the individual asset betas, with the weights based on upon market values (Damodaran, 2012).

The bottom-up method uses the unlevered beta of the industry because companies operating in the same industry face similar operating risks and therefore have similar operating betas (Goedhart et al., 2005). Therefore, the following formula can be applied:

$$\beta\mu_{business} = \frac{\beta_{comparable\ firms}}{\left(1 + (1-t)\left(\frac{D}{E}_{comparable\ firms}\right)\right)} \tag{6}$$

Where,

β_μ = Unlevered Beta

t = Marginal Tax Rate

The first step to access the value of the beta for comparable companies and their debt-to-equity ratio is to define a peer group. The definition of this peer group was important not only for the calculation of the beta of the company but also to perform the multiples valuation. For the selection of the firms that constitute the peer group usually two criteria are required. The first one is that the peers should operate in the same sector as Visor.ai, and the second one is that comparable firms should be similar to Visor.ai in terms of size, growth rate and cash flows. However, it is impossible to access the financial information of companies in similar phases of growth and cash flows as Visor.ai since these companies are private and, therefore, are not obligated to share their financial statements with the public. Having this limitation disallowed the compliance of the second criteria and, consequently, the peer group was composed only of mature public companies operating in the same sector of Visor.ai. Therefore, the group encompasses US companies from both Nasdaq and NYSE, which

are the ones with more accessible information, with the Standard Industrial Classification (SIC) 7372 – Prepackaged Software. Basically, the peers are US computer software providers traded at Nasdaq and NYSE. With accessible information regarding betas, debt-to-equity ratios, and multiples, it was possible to gather 74 companies that can be found in annex E.

For the next step, Damodaran (2012) provides the following two options: (i) calculate the average beta for the peers and their average debt-to-equity ratio, using both averages to compute the average unlevered beta of the business; and (ii) calculate the unlevered beta for each competitor and then calculate the average of the unlevered betas. The decision was to use the first option since unleveraging an erroneous regression beta is likely going to compound the error. The results from averaging the regression betas of the competitors and their debt-to-equity ratio can be found in annex E.

After computing the unlevered beta of the firm (annex E), and as stated in the literature, it is required to adjust the value for the absence of diversification. As Visor.ai is mainly held by its founders (68%) and small business angels (14%), whose wealth is not diversified and tied up with this investment, the cost of equity must be higher. To account for this increase in risk, it was used the total beta, which is given by the formula 7, and the result was 1.70.

$$Total\ Beta = \frac{(Unlevered)\ Market\ Beta}{Correlation\ with\ market_{Comparable\ firms}} \tag{7}$$

It is important to mention that, as there is no data regarding the correlation of the peers with the market, it was used the average correlation of the software industry with the market, which according to Damodaran (2021), is 28.04%.

In case the company is operating in more than one business, it is required to correct it according to the following formula:

$$\beta_{\mu_{firm}} = \sum_{j=1}^{j=k} \beta_{\mu_j} \times Value\ Weight_j \tag{8}$$

Where,

K = the number of businesses the company is operating in

Visor.ai sells its platform that gathers chat, email, and voice channels in one single platform that can be identified as a product of this market. All revenue earned comes from the licensing of the

platform, meaning that Conversational AI is the only business/market that the company operates in, and, therefore, the unlevered beta of the business will equal the unlevered beta of the firm.

Finally, the levered beta of the company can be calculated using the Debt-to-Equity ratio of the firm, as follows:

$$\beta_L = \beta_\mu \left[1 + (1 - t) \left(\frac{D}{E} \right) \right] \tag{9}$$

4.2.1.6. WACC Inputs

The previously mentioned assumptions and formulas allowed the calculation of the cost of debt and the cost of equity. Table 4.4 presents both the inputs needed to obtain the WACC and, at the end, the value of the WACC obtained using the formula previously presented in equation 4.

Table 4.4 – WACC Calculation

WACC	
Debt (2020)	286,644 €
Equity (2020)	233,242 €
Corporate Tax	21%
Cost of Debt	**2.35%**
Cost of Equity	**24.36%**
Beta	3.36
Risk Free Rate	1.34%
Risk Premium	6.85%
WACC	**11.95%**

4.2.1.7. FCFF

Following all the assumptions and calculations, it is possible to unroll Visor.ai cash flows and obtain the FCFF through equation 10. Table 4.5 summarizes all the information required to compute the FCFF.

$$FCFF = EBIT \times (1 - T) - (Capital\ Expenditures - Depreciation) \\ - Change\ in\ Working\ Capital \tag{10}$$

Table 4.5 – FCFF calculation

Indicator	2020	2021	2022	2023	2024	2025	Terminal Value
Revenue	434,784 €	767,153 €	2,681,636 €	7,980,184 €	16,035,553 €	30,975,383 €	32,524,152 €
Operating Costs	522,455 €	938,785 €	3,631,816 €	6,102,536 €	13,521,044 €	26,943,141 €	28,290,298 €
% of Revenue	120%	122%	135%	76%	84%	87%	87%
D&A	10,571 €	30,349 €	106,087 €	315,700 €	634,374 €	1,225,401 €	1,286,671 €
EBIT	**-98,242 €**	**-201,980 €**	**-1,056,266 €**	**1,561,948 €**	**1,880,135 €**	**2,806,841 €**	**2,947,183 €**
t	21%	21%	21%	21%	21%	21%	21%
EBIT*(1-t)	- 77,611 €	- 159,564 €	- 834,450 €	1,233,939 €	1,485,307 €	2,217,405 €	2,328,275 €
CAPEX	51,678 €	43,852 €	319,182 €	905,464 €	1,530,991 €	2,888,305 €	1,459,059 €
D&A	10,571 €	30,349 €	106,087 €	315,700 €	634,374 €	1,225,401 €	1,286,671 €
Change in NWC	39,374 €	37,371 €	372,555 €	1,031,087 €	1,567,559 €	2,907,262 €	301,387 €
FCFF	**-158,092 €**	**-210,439 €**	**-1,420,100 €**	**-386,913 €**	**-978,870 €**	**-2,352,762 €**	**1,854,499 €**

As mentioned during the thesis, Visor.ai intends to invest a lot, mainly in human resources, to grow abruptly, which is demonstrated by the negative EBIT and FCFF until 2022. In 2023, the company will see revenues surpassing costs, and the EBIT will start being positive, however, FCFF will only start being positive from 2026 onwards. This happens because of the high values of CAPEX and change in Working Capital. High CAPEX values are mainly because of the increase in tangible and intangible assets, and consequently the increase in depreciation and amortization. High changes in Working Capital come from the high growth the company will experience, which will reflect accumulations in accounts receivable, given the high historically collection period. On the other hand, Visor.ai's policy is to pay suppliers as soon as possible, so this difference in timings will lead to increases in the change in Working Capital. However, it can be noticed that the company walks to a more stable and mature lifecycle of the business, with more stable revenue growth and a reduced percentage of operating costs.

The fast growth of the company is possible not only by the reinvestment of the earnings but also mainly because of the substantial funding round that the company will raise in 2021 from private investors. Moreover, it is important to mention that the fact Visor.ai is a start-up could more easily bring results that are different from expectations.

4.2.2. The Multiples

Even though multiples are a frequent valuation method used by venture capital investors, they usually cause wide dispersion on results. Therefore, and as stated in the literature review, they should be used as the second stage of the valuation to complement another valuation method, in this case, the DCF Model. Furthermore, it was decided to only use multiples based on the company's valuation, as multiples based on capitalization are not possible to compute with firms not publicly traded. Being a

private company also invalidates the use of some multiples based on growth references, such as the PEG (PER/Growth of Earnings per share). Lastly, it was decided not to use multiples based on EBITDA since Visor.ai will have negative EBITDA in most of the explicit forecast years.

For these reasons, the multiple selected to evaluate Visor.ai is based on its valuation and revenues, the Enterprise Value/Revenue. The peer group chosen was the same used for the calculation of the beta.

Annex F presents the values collected for the peer group. It is important to mention that the Market Capitalization and Enterprise Values were adjusted to euros using the conversion rate USD/EUR of 0.8453.

Prior to deepening the analysis on the multiples, it is fundamental to reinforce the differences between the companies of the peer group and Visor.ai, which is notorious by looking to the values of the average valuation and market capitalization of the peer group. Moreover, although it is not mandatory for all firms, the sample shows that companies with the highest valuations and market capitalizations have lower values of Enterprise Value/Revenue.

According to the expectations, the multiples of the peers present a dispersed range of values, being the minimum 2,38 for Magic Software Enterprises Ltd. and the maximum 264,04 for Datasea Inc. Using a substantial number of companies was important since it provided higher credibility to the average of the group.

5. Company Valuation

To access the value of Visor.ai, and as mentioned in the Methodology, it will be used the following two valuation methods: the Free Cash Flow to the Firm (FCFF) and the Multiples valuation. Although there is no perfect method to value a company, and it is even more difficult in the cases of younger companies, these two valuation approaches will be used as they are the most commonly accepted and experienced methods by investors in Visor.ai context. Thus, firstly, the FCFF will be determined and then, as a second stage to complement the values obtained, the Multiples valuation will be executed, using EV/Sales.

5.1. FCFF Valuation

To perform the FCFF valuation of Visor.ai the only variables required are the FCFF and the WACC, which were previously calculated. The final value of the valuation is going to be the sum of the present value for the explicit forecast period, and the present value of the terminal value, that corresponds to the value of the perpetuity with a stable growth rate of 5%. Table 5.1 presents the results from the calculation of the FCFF valuation.

Table 5.1 – FCFF Valuation

Indicator	2021	2022	2023	2024	2025	Terminal Value
FCFF	-210,439 €	-1,420,100 €	-386,913 €	-978,870 €	-2,352,762 €	1,854,499 €
WACC	11.55%	11.55%	11.55%	11.55%	11.55%	11.55%
Discounted FCFF	-188,646 €	-1,141,203 €	-278,727 €	-632,139 €	-1,362,033 €	16,385,139 €

PV Explicit Forecast Period	**-3,602,747 €**
PV Terminal Value	**16,385,139 €**
Visor.ai Valuation	**12,782,392 €**

As it is shown in the Table 5.1, although the present value for the explicit forecast period is negative (due to negative FCFF in all years), the value obtained from Visor.ai valuation was approximately 12.8 million euros.

5.1.1. Sensitivity Analysis

As a final step of the FCFF valuation, it is important to perform a sensitivity analysis, which determines how different values of an independent variable affect a particular dependent value under a given set of assumptions. In this case, since changes for the explicit forecast period do not impact that much the

value of the firm due to high growth and investment, it will be studied the impact of changes in growth rate of perpetuity and the operating costs of perpetuity (independent variables), on the firm valuation (dependent variable). These indicators were chosen not only because of the impact on the firm valuation, but also because these are variables that the firm cannot control, in contrast, the other variables are more susceptible to economic and market conditions. The rest of the assumptions will remain equal for this analysis.

As stated before, the values of the revenue growth rate in perpetuity and operating costs in perpetuity were, respectively, 5% and 87% (relative to revenue). In this scenario analysis, it was tested the value of the firm both for revenue growth rates in perpetuity between 3% and 7% and for operating costs in perpetuity between 85% and 89%. In the Table 5.2, it is possible to observe the value of Visor.ai for different values of the variables mentioned.

Table 5.2 – Scenario Analysis - Revenues and Operating Costs in Perpetuity

	85.0%	85.5%	86.0%	86.5%	87.0%	87.5%	88.0%	88.5%	89.0%
3.0%	11,931,604 €	11,078,536 €	10,225,468 €	9,372,400 €	8,519,332 €	7,666,264 €	6,813,196 €	5,960,128 €	5,107,060 €
3.5%	13,028,311 €	12,117,873 €	11,207,436 €	10,296,999 €	9,386,561 €	8,476,124 €	7,565,686 €	6,655,249 €	5,744,812 €
4.0%	14,270,235 €	13,294,832 €	12,319,428 €	11,344,025 €	10,368,622 €	9,393,219 €	8,417,815 €	7,442,412 €	6,467,009 €
4.5%	15,688,264 €	14,638,683 €	13,589,101 €	12,539,520 €	11,489,939 €	10,440,357 €	9,390,776 €	8,341,195 €	7,291,613 €
5.0%	17,322,714 €	16,187,633 €	15,052,553 €	13,917,472 €	**12,782,392 €**	11,647,311 €	10,512,231 €	9,377,150 €	8,242,070 €
5.5%	19,227,223 €	17,992,516 €	16,757,810 €	15,523,103 €	14,288,397 €	13,053,690 €	11,818,983 €	10,584,277 €	9,349,570 €
6.0%	21,474,752 €	20,122,476 €	18,770,200 €	17,417,923 €	16,065,647 €	14,713,370 €	13,361,094 €	12,008,818 €	10,656,541 €
6.5%	24,167,145 €	22,674,027 €	21,180,910 €	19,687,793 €	18,194,676 €	16,701,559 €	15,208,441 €	13,715,324 €	12,222,207 €
7.0%	27,450,987 €	25,786,090 €	24,121,193 €	22,456,296 €	20,791,399 €	19,126,501 €	17,461,604 €	15,796,707 €	14,131,810 €

Analysing the table above, it can be that the two selected parameters have opposite effects on the firm's valuation. The higher the growth in perpetuity, the higher the valuation (ceteris paribus), in the opposite direction, the higher the operating costs in perpetuity, the lower the valuation (ceteris paribus).

As it can be observed in the table, on one hand, the best-case scenario with a revenue growth rate in perpetuity of 7% and operating costs representing 85% of total revenue, the company would be worth 27.5 million euros. On the other hand, in the worst-case scenario a revenue growth rate in perpetuity of 3% and operating costs representing 89% of total revenues, Visor.ai would still be valued at 5.1 million euros.

5.2. Multiples Valuation

Lastly, the multiple valuation was used to obtain a different valuation of the firm that will complement the one previously done. It was applied the average of the multiple of the peers on the 2020 revenues

of Visor.ai, which allows the comparison between the values obtained from the FCFF valuation and Multiples Valuation. The table below summarizes the calculation of the valuation using the Multiples approach.

Table 5.3 – Multiple Valuation

Visor.ai	2020
Revenue	434,784 €
Average (EV/Revenue)	21.01
Enterprise Value	**9,134,525 €**

By applying the Multiples methodology, based on the EV/Revenue multiple, Visor.ai is valued at approximately 9.1 million euros. An increase in revenue will, of course, increase the valuation. For this reason, it is important to mention that if it was used the last twelve-month revenue (LTM revenue), which in July 2021 was around 476.000 euros, the multiples valuation of Visor.ai would be approximately 10 million euros. Using the same logic, if it was used the contracted revenue for 2021, which in July 2021 was around 650.000 euros, the multiples valuation of Visor.ai would be approximately 13.7 million euros.

Since the results from both the valuations were different, and for sake of simplicity, it was decided to perform an average of the values computed. The result from the average was approximately 11 million euros, which will be considered the valuation of Visor.ai.

6. Exit Strategies

This final chapter will cover the possible exit strategies and their main advantages and disadvantages. Once this is addressed, the method that fits the most to Visor.ai will be applied.

An exit strategy is an entrepreneur's strategic plan to sell their ownership in a company either to investors or another company. It provides the business owner with a solution to reduce or liquidate their stake in a business and, if the business is successful, make a substantial profit. Therefore, every firm should build an exit strategy, regardless of it being successful or not. These occur not only when the company is failing and operating at a loss but also when the company is being profitable and successful.

Regarding the reasons to implement an exit strategy, they can be divided, on one hand, by the perspective of the entrepreneur and, on the other hand, by the perspective of the investor. Once a start-up reaches a certain level of maturity, some entrepreneurs, who are often not used to manage mid-size companies, will not feel comfortable or simply get bored with daily managerial routines. They usually feel more comfortable with the struggle of conducting an early start-up and will look for a new opportunity, perhaps, more challenging. Also, entrepreneurs may feel the market their start-up is operating in is no longer appellative, and revenue forecasts are no longer favourable. Nevertheless, an exit strategy will provide them with the earnings of taking this high risk of starting and running a start-up. On the other hand, the investors' goal is to profit from its previous investment, meaning selling its position in the company for more than what it has invested. Although they are entitled to receiving dividends, the board of directors is the one that decides whether dividends are distributed to shareholders and, even if they are distributed, it will take several years for them to profit. Therefore, it is from the investors' interest the planning and execution of an exit strategy.

Furthermore, developing and planning an exit strategy earlier also enhances the value of the business ("The Art of Designing Early Exits," 2018). Firstly, an exit strategy shows potential buyers a clear vision for the company's future, and that plans to ensure the strategic direction for its growth were thought and executed. Moreover, the exit strategy may provide the founders with a suitable framework for the company's future, allowing them to visualise future goals, and making it easier to understand if the firm's performance is satisfactory or not. Lastly, founders will be better emotionally prepared to exit a business they have nurtured and may smooth the transition for the subsequent management team.

In addition, mature and well-structured companies are often looking and analysing other, usually smaller, companies to perform eventual Mergers and Acquisitions (M&As). It is the act of consolidating

companies or assets with the goal of increasing market share, stimulating growth, gaining competitive advantage, or influencing supply chains. By having an exit strategy, a less mature and structured company will be better prepared for eventual unexpected proposals from usually larger firms and will for sure not miss this eventual opportunity (Garcia, 2018).

6.1. Possible Exit Strategies

There are several possible exit strategies available for the founders. In the context of this project, it will be present the ones that Visor.ai founders consider the most interesting of pursuing, which are also the following well-known exit strategies: i) Management Buyout (MBO); ii) Liquidation of the Company; iii) Merger & Acquisition (M&A); and iv) Initial Public Offering (IPO). Each possible strategy has its benefits and cons, therefore, the decision will depend mainly on the management team goals but also the private investors' judgement.

It is important to refer that this analysis is merely informative and will not favour any possible choices. The goal is to provide Visor.ai founders with accurate and credible information, for them to make the best decision in the current context.

6.1.1. Management Buyout (MBO)

A MBO is a transaction where a company's management team acquires a part or the whole of their own business. Basically, the management team will pool resources, typically from personal savings, debt, or private equity, to acquire all or part of a business they manage.

Usually, this exit strategy is preferred either by large corporations with strong and stable cashflows that intend to sell a certain division or by private businesses where the owners wish to retire (Castellaneta et al., 2019). It is not often seen in the case of start-ups since usually the founders are the management team and own all or part of the business. If that is not the case, the main advantage of this exit strategy is that the owner will receive compensation for its shares, providing him with liquidity, while the company keeps the same managerial team. Furthermore, the management team may also be interested as they will start having a share of the company they are conducting.

6.1.2. Liquidation of the Company

The term liquidation refers to a process in which a company stops operating. The firm shuts down, all the assets are sold, and any realization of revenue is redistributed amongst creditors and shareholders, according to a specific order. It is the less attractive and rewarding strategy as shareholders will only receive the equivalent to the market value of the company's assets after using the proceeds to repay creditors. Additionally, intangible assets cannot be considered, which worsens the situation as it may

result in significant losses. This exit strategy should be avoided, and it is most commonly used in cases of insolvency.

6.1.3. Merger & Acquisition (M&A)

As mentioned before, Merger & Acquisition is the act of consolidating companies or assets to increase market share, stimulating growth, gaining competitive advantage, or influencing supply chains. In the case of a merger, two existing similar companies fuse into one new company whereas, in the case of an acquisition, a company acquires another either with stock or cash. An M&A is a strong exit option for any company with their business for sale and a particularly attractive and proven successful option for start-ups and entrepreneurs (Cotei et al., 2021).

Regarding advantages of executing an M&A, usually, these financial transactions are very price negotiated, which benefits founders as they can set their terms or even try to drive the price upper. For the company, it will benefit from the increase in revenue and market share and may also benefit from the decrease in operating costs because of realizing economies of scale. Regarding disadvantages of executing an M&A, it may cause the creation of unemployment since it is the acquirer that decides what to do with the management team and employees. Moreover, it can create divergences in corporate culture that are not easy to consolidate, and it may increase the amount of debt of the company. For the founders, usually, this process is highly time-consuming, costly, and regularly fail. For these reasons, it is fundamental to prepare the exit strategy and value the company.

6.1.4. Initial Public Offering (IPO)

Besides M&A being a popular and strong exit strategy, performing an IPO is also a very powerful and valid exit possibility for the entrepreneur. There is no perfect strategy that should be applied for all the companies. The best strategy will depend on the context of the company and the sector, but also on the perception that private and public markets have about the company. Moreover, the alignment between the management team goals and investors will favour one choice, often between acquisition or selling stocks to the public.

Although going public is a challenging, risky, and time-consuming process, it is still an interesting long-term possibility to study for Visor.ai. As it is very complex and influenced by several factors, it was decided to provide a more in-depth analysis, including advantages, disadvantages, costs, and timing.

6.1.5. Advantages of going public

Performing an IPO brings several benefits for the company, being the most obvious the financial motive. In fact, Pagano et al. (1998), Brau and Fawcett (2006), Meluzín and Zinecker (2014), and Meluzín et al. (2018) stated the financial gain as the most important motive for IPO launching. Usually, the capital raised serve the purposes of capital restructuring since the weighted average cost of capital is minimized, or for acquisitions, development investments, working capital, and so on. Pagano et al. (1998) further emphasise that going public improves the bargaining position towards banks and reduces debt costs. Moreover, Auret and Britten (2008) emphasise that IPO yields are often used to repay debts. Issuing an IPO may also constitute a form of partial or full exit of current owners or investors that have participations since the early stages of development. From the perspective of the existing shareholders, the creation of a market with the shares of the issuing company results in increased liquidity (Kim & Weisbach, 2008).

Furthermore, there are more advantages of going public that are non-financial related. The increase in visibility and credibility of the company can improve its performance and attract new stakeholders, such as investors and employees. In the case of employees, it is possible to retain and attract talent by providing liquid equity shares. However, the firm will be more scrutinized mainly by auditors and investment banks which, depending on the company's financial statements, may have positive or negative effects.

6.1.6. Disadvantages of going public

Even though there are multiple benefits of an IPO, public companies usually face several disadvantages that cause them to hesitate on the decision to go public. One of the most challenging aspects is the need to comply with additional regulatory requirements and disclosures. Moreover, being scrutinized and obligated to provide specific information to the public brings an opportunity for competitors and suppliers that can use it for their advantage and gain competitive advantage. Another essential aspect to consider is the process being very time-consuming, it can take several years or even not be complete. The IPO process may result in an opportunity cost of missed growth opportunities. Furthermore, entrepreneurs are used to managing long-term goals. By going public, they have now to decide based on the interest of its shareholders, which usually tend to prefer short-term quarterly results instead of the long-term perspective of the company.

Lastly, one important issue that must be accounted for, especially for start-ups, is the cost of issuing an IPO and comply with the demanding regulatory requirements. Usually, these costs include financial intermediaries, audits, market commissions, fees and taxes, financial reporting expenses, underwriter, and restructuring.

6.1.7. Costs of going public

This subchapter will present the costs that Visor.ai will need to incur to execute an IPO. It is fundamental to refer that these costs will not represent the total cost of the process since there are many expenses difficult to track or estimate.

According to *Comissão do Mercado de Valores Imobiliários* (CMVM), which is the Portuguese Securities Market Commission, a company is required to have a financial intermediary, usually a bank, to perform an IPO. At CMVM's website[1], it is possible to consult what each bank in Portugal charges to be the financial intermediary of an IPO. The costs are mainly brokerage commissions and custody commissions. In the case of *Banco Santander Totta*, which is the main bank of Visor.ai, it charges a fee of 0.26% on the total value issued, if the company will be listed on the Euronext Lisbon.

Furthermore, Visor.ai will have to pay other fees and taxes to the market in which is going to be listed. Assuming it is in Euronext Lisbon, it will have to pay the following fees: i) admission fees; ii) annual fees; and iii) subsequent admission fees. Regarding admission fees, these are one-time fees payable at the time of the initial listing and include one fixed fee and one variable fee, depending on the Euronext market of listing. The most well-known market Growth/Euronext has a fixed fee of 12,000 € and a variable fee that depends on the market capitalization. The annual fees, as the name implies, are payable annually by the company to remain listed on the exchange. If Visor.ai would be listed on the Growth/Euronext, it would pay annually a value between 3,000 € and 57,000 €, depending on the number of equity securities and market capitalization, to remain listed on the exchange. Finally, subsequent fees will only be paid in the event a company chose to raise additional capital once listed.

6.1.8. The Timing of going public

To maximize the capital raised and the share price, it is fundamental to choose the best timing to go public, which depend on incentives relative to the company, the industry, and the overall stock market conditions. These incentives to go public are constantly changing and require a detailed analysis. According to the survey made by Brau (2006), the main factors affecting the timing of the IPO are the overall stock market conditions, followed by the general industry conditions.

According to the pecking-order theory (Myers, 1984), raising capital via IPO comes into consideration when the possibility of internal funding, such as retained earnings, and external funding, such as bank loans, have been exhausted. Thus, performing an IPO is interpreted as the last option to

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[1] CMVM's website: https://web3.cmvm.pt/english/sdi/ifs/app/pesquisa_nome.cfm?nome

raise capital since the cost of equity, including IPO funds has been considered to be higher than the cost of debt financing.

6.1.9. Shareholder's Value

The following section will analyse the cap table[2] of Visor.ai to understand the value each investor would approximately receive in case of performing an IPO or an acquisition. Table 6.1 shows the cap table of the company at 20/03/2020 and the corresponding values.

Table 6.1 – Cap Table

Shareholder	Ownership	Total Value
Gonçalo Nuno Félix Consiglieri	22.69%	2,421,435 €
Gianluca Pereyra	22.69%	2,421,435 €
Bruno Ricardo Vilhena Matias	22.69%	2,421,435 €
Redangels, S.A	17.01%	1,815,276 €
Travel Tech 1 Smart Investments	11.60%	1,237,931 €
FCR LCV I - Subfund A	1.34%	143,002 €
FCR LCV I - Subfund B	1.98%	211,302 €
Total	**100.00%**	**10,671,815 €**

To access the value each shareholder would receive, it is required to calculate the shareholder value, which is obtained by subtracting the debt of the company from its value. The value of Visor.ai, which was accessed during this project, was approximately 11 million euros and the debt of the company at the end of 2020 was 175,000 €, the shareholder value is approximately 10.5 million euros. Therefore, the value each investor would get in case of an IPO or acquisition is obtained by multiplying their ownership to the shareholder value.

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[2] A cap table, or capitalization table, is a chart typically used by start-ups to show ownership stakes in the business.

7. Conclusion

The project aim was to estimate the value of Visor.ai, using the most appropriate methods and assumptions reflected in the literature, and advise Visor.ai's founders of the possible exit strategies available, more specifically an IPO.

The value obtained from the FCFF and Multiples valuation was respectively 12.8 million euros and 9.1 million euros. It was considered the average of both valuations, 11 million euros, as the final result and, therefore, the answer to research question 1. Regarding research question 2, it was presented valuable information regarding the benefits, cons, timings, and costs of implementing an exit strategy, more specifically an IPO. Therefore, Visor.ai founders now have the tools to decide each one should be executed and can anticipate eventual future concerns when performing the exit.

It is fundamental to understand that valuations are not 100% accurate, they are very subjective and the exercise of valuing a company is even more difficult in the case of a start-up. Nonetheless, this project sought to mitigate these uncertainties to the maximum extent by applying the most suitable methodologies reflected in the literature and discuss the forecasts internally at the company using privilege and more valuable information. For these reasons and given the fact that the value is being accepted by venture capitalists during the fundraising process that started during 2021, it can be considered that the result represents a fair and accurate assessment of the company.

Nevertheless, some issues are hard to get around when valuing a start-up. Firstly, Visor.ai has been showing high growth rates every year, even presenting 3-digit growth rates in some of the years, therefore the assumption of reaching maturity in just five years may be too conservative. Secondly, comparing Visor.ai with companies in a completely different lifecycle, such as Google or IBM, was just the better solution given the disposable information. When applying the Multiples valuation, the peer group should encompass companies operating in the same sector and a similar lifecycle.

For future research, as DCF methods are the methods most used for mature companies, it would be interesting to apply similar methods when the company reaches a level of maturity with more predictable growth rates. Thus, it would be easier to have access to the financial records of peer companies, allowing a more precise Multiple's valuation. An alternative would be to request privileged information from companies in a similar lifecycle as Visor.ai. Lastly, to provide credibility and support to the results from the valuation, it would be interesting to look out for the post IPO value of companies with similar age, growth, and cash flows, and compare it with Visor.ai valuation.

Although the project does not provide a considerable theoretical contribution, its managerial contribution is substantial, either for Visor.ai founders or for any other entrepreneur or investor.

Within its usability possibilities, the main highlights are the possibility of being used to defend Visor.ai valuation towards investors during an acquisition or a fundraising process and to analyse and study potential exit strategies, mainly an IPO.

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Annexes

Annex A – Working Capital calculation

Year	2017	2018	2019	2020
Accounts Receivable	8,735 €	29,743 €	97,099 €	154,595 €
Other	16,159 €	7,575 €	10,536 €	11,131 €
Operating Current Assets	24,894 €	37,318 €	107,634 €	165,726 €
Accounts Payable	- 411 €	1,661 €	2,817 €	10,923 €
Other	5,659 €	9,383 €	32,276 €	42,887 €
Operating Current Liabilities	5,249 €	11,045 €	35,092 €	53,810 €
Working Capital	**19,645 €**	**26,274 €**	**72,542 €**	**111,916 €**

Source: Retrieved from Visor.ai Business Plan in July 2021

Annex B – Visor.ai Revenue & Operating Costs Forecast

		2017	2018	2019	2020	2021 F	2022 F	2023 F	2024 F	2025 F
	Portugal	28,730 €	140,240 €	292,557 €	377,592 €	740,242 €	1,858,123 €	3,426,198 €	4,411,438 €	4,713,726 €
	Spain	- €	- €	- €	- €	- €	257,024 €	2,009,216 €	3,388,093 €	6,670,232 €
Sales	Brasil	- €	- €	- €	- €	- €	195,548 €	1,518,770 €	4,575,079 €	11,187,696 €
	Mexico	- €	- €	- €	- €	- €		382,928 €	2,731,712 €	7,326,848 €
	Total	28,730 €	140,240 €	292,557 €	377,592 €	740,242 €	2,310,694 €	7,337,112 €	15,106,321 €	29,898,502 €
	Public Funds	- €	94,202 €	60,591 €	9,797 €	26,911 €	370,942 €	643,073 €	929,232 €	1,076,881 €
Other Income	R&D Benefits	55,000 €	16,348 €	46,314 €	47,395 €					
	Total	55,000 €	110,550 €	106,905 €	57,192 €	26,911 €	370,942 €	643,073 €	929,232 €	1,076,881 €
Revenue	Total	83,730 €	250,790 €	399,462 €	434,784 €	767,153 €	2,681,636 €	7,980,184 €	16,035,553 €	30,975,383 €
	HR Costs	50,426 €	74,499 €	210,246 €	397,705 €	709,871 €	2,619,479 €	4,308,335 €	7,752,484 €	15,892,592 €
Operating Costs	FSE Cost	82,662 €	103,365 €	95,344 €	124,750 €	228,914 €	1,012,336 €	1,794,201 €	4,268,560 €	8,750,549 €
	Total	133,088 €	177,864 €	305,590 €	522,455 €	938,785 €	3,631,816 €	6,102,536 €	12,021,044 €	24,643,141 €
EBITDA	Total	- 49,358 €	72,925 €	93,872 €	- 87,671 €	- 171,631 €	- 950,179 €	1,877,648 €	4,014,509 €	6,332,242 €
Revenue Growth		-	200%	59%	9%	76%	250%	198%	101%	93%
Operating Costs Growth		-	34%	72%	71%	80%	287%	68%	97%	105%

Source: Retrieved from Visor.ai Business Plan in July 2021

Annex C – Visor.ai Cost of Debt

Total Debt	175,000 €
Total Annual Interest	4,109 €
Cost of Debt	**2.35%**

Source: Retrieved from Visor.ai Business Plan in July 2021

Annex D - Damodaran Country Default Spreads and Risk Premium

Country	Moody's rating	Adj. Default Spread	Equity Risk Premium	Country Risk Premium	Corporate Tax Rate
Portugal	Baa3	1.95%	6.85%	2.13%	21.00%

Source: Retrieved from Damodaran Country Default Spreads and Risk Premiums, visited in July 2021

Annex E – Beta calculation

Company	Country	Exchange	Corporate Tax Rate	Beta	Debt/Equity	Unlevered Beta Business	Total Beta	Unlevered Beta Firm	Levered Beta Firm
2U, Inc.	USA	Nasdaq	27%	0.97	0.6411				
3D Systems Corporation	USA	NYSE	27%	1.24	0.7019				
ACI Worldwide, Inc.	USA	Nasdaq	27%	1.12	1.8070				
ANSYS, Inc.	USA	Nasdaq	27%	1.23	0.4497				
Absolute Software Corporation	USA	Nasdaq	27%	0.77	7.7977				
Adobe Inc.	USA	Nasdaq	27%	1.03	0.8308				
Alarm.com Holdings, Inc.	USA	Nasdaq	27%	1.13	0.5643				
Altair Engineering Inc.	USA	Nasdaq	27%	1.50	1.1876				
Alteryx, Inc.	USA	NYSE	27%	0.69	2.0732				
Anaplan, Inc.	USA	NYSE	27%	1.91	1.6586				
AppFolio, Inc.	USA	Nasdaq	27%	1.03	0.3622				
Appian Corporation	USA	Nasdaq	27%	1.76	0.7280				
Atlassian Corporation Plc	USA	Nasdaq	27%	0.80	5.7687				
Autodesk, Inc.	USA	Nasdaq	27%	1.34	6.5399				
Avalara, Inc.	USA	NYSE	27%	0.72	0.4834				
Black Knight, Inc.	USA	NYSE	27%	0.73	1.3178				
Blackbaud, Inc.	USA	Nasdaq	27%	1.09	3.7982				
BlackLine, Inc.	USA	Nasdaq	27%	0.83	1.6382				
Cadence Design Systems, Inc.	USA	Nasdaq	27%	1.05	0.5847				
Ceridian HCM Holding Inc.	USA	NYSE	27%	1.36	2.1938				
Commvault Systems, Inc.	USA	Nasdaq	27%	0.70	1.2947				
Coupa Software Incorporated	USA	Nasdaq	27%	1.47	1.9840				
CrowdStrike Holdings, Inc.	USA	Nasdaq	27%	1.33	2.1341				
CyberArk Software Ltd.	USA	Nasdaq	27%	1.28	1.2089				
Datadog, Inc.	USA	Nasdaq	27%	1.01	0.9743				
Datasea Inc.	USA	Nasdaq	27%	1.01	0.2656				
DocuSign, Inc.	USA	Nasdaq	27%	0.91	2.4615				
Dropbox, Inc.	USA	Nasdaq	27%	0.92	6.1516				
Duos Technologies Group, Inc.	USA	Nasdaq	27%	1.80	2.4002				
Dynatrace, Inc.	USA	NYSE	27%	1.44	1.0261				
Electronic Arts Inc.	USA	Nasdaq	27%	0.89	0.6949				
Everbridge, Inc.	USA	Nasdaq	27%	0.76	2.8087				
Fastly, Inc.	USA	NYSE	27%	1.13	0.1489				
Guidewire Software, Inc.	USA	NYSE	27%	1.28	0.5029				
HubSpot, Inc.	USA	NYSE	27%	1.67	1.5875				
Intelligent Systems Corporation	USA	NYSE	27%	0.94	0.2916				

Company	Country	Exchange	Corporate Tax Rate	Beta	Debt/Equity	Unlevered Beta Business	Total Beta	Unlevered Beta Firm	Levered Beta Firm
Intuit Inc.	USA	Nasdaq	27%	1.03	1.1408				
Ipsidy Inc.	USA	Nasdaq	27%	2.49	2.0295				
LivePerson, Inc.	USA	Nasdaq	27%	1.17	3.1258				
Magic Software Enterprises Ltd.	USA	Nasdaq	27%	1.37	0.6631				
Manhattan Associates, Inc.	USA	Nasdaq	27%	1.96	1.1262				
MicroStrategy Incorporated	USA	Nasdaq	27%	1.51	1.6501				
Microsoft Corporation	USA	Nasdaq	27%	0.80	1.3508				
Mimecast Limited	USA	Nasdaq	27%	1.42	1.5902				
National Instruments Corporation	USA	Nasdaq	27%	1.08	0.5385				
New Relic, Inc.	USA	NYSE	27%	0.90	2.3785				
Nuance Communications, Inc.	USA	Nasdaq	27%	1.21	2.1849				
Okta, Inc.	USA	Nasdaq	27%	1.01	3.7530				
Oracle Corporation	USA	NYSE	27%	0.78	8.4080				
PTC Inc.	USA	Nasdaq	27%	1.23	1.3520				
PagerDuty, Inc.	USA	NYSE	27%	1.26	1.1690				
Paycom Software, Inc.	USA	NYSE	27%	1.40	2.9776				
Paylocity Holding Corporation	USA	Nasdaq	27%	1.26	4.0634				
Ping Identity Holding Corp.	USA	NYSE	27%	0.97	0.3735				
Progress Software Corporation	USA	Nasdaq	27%	1.18	2.0108				
Q2 Holdings, Inc.	USA	NYSE	27%	1.50	1.2020				
Qualys, Inc.	USA	Nasdaq	27%	0.65	0.8216				
Rapid7, Inc.	USA	Nasdaq	27%	1.35	11.7645				
SAP SE	USA	NYSE	27%	0.95	0.9538				
SPS Commerce, Inc.	USA	Nasdaq	27%	0.83	0.2513				
SailPoint Technologies Holdings, Inc.	USA	NYSE	27%	1.86	1.3151				
ServiceNow, Inc.	USA	NYSE	27%	0.94	2.0747				
Shopify Inc.	USA	NYSE	27%	1.49	0.2128				
ShotSpotter, Inc.	USA	Nasdaq	27%	1.34	0.9332				
Smartsheet Inc	USA	NYSE	27%	1.46	0.7304				
SolarWinds Corporation	USA	NYSE	27%	0.91	0.8967				
Splunk Inc.	USA	Nasdaq	27%	1.22	2.6816				
Square, Inc.	USA	NYSE	27%	2.43	2.6805				
Synopsys, Inc.	USA	Nasdaq	27%	1.11	0.6347				
Tenable Holdings, Inc.	USA	Nasdaq	27%	1.62	3.5836				
Twilio Inc.	USA	NYSE	27%	1.50	0.1224				
Varonis Systems, Inc.	USA	Nasdaq	27%	1.22	4.9049				
Veeva Systems Inc.	USA	NYSE	27%	0.79	0.3441				
Workiva Inc.	USA	NYSE	27%	1.45	9.9994				
Average	-	-	**27%**	**1.21**	**2.0953**				
Visor.ai	**Portugal**	-	**21%**	**1.21**	**1.2290**	**0.48**	**1.70**	**1.70**	**3.36**

Source: Retrieved from Yahoo Finance, visited in July 2021

Annex F – Enterprise Valuation/Revenue calculation

Company	Country	Exchange	Market Cap. (Billion)	Enterprise Value (Billion)	Enterprise Value/Revenue
2U, Inc.	USA	Nasdaq	2.00 €	2.05 €	2.74
3D Systems Corporation	USA	NYSE	2.84 €	2.78 €	5.32
ACI Worldwide, Inc.	USA	Nasdaq	3.07 €	3.95 €	3.48
ANSYS, Inc.	USA	Nasdaq	27.29 €	26.38 €	17.34
Absolute Software Corporation	USA	Nasdaq	0.59 €	0.45 €	3.60
Adobe Inc.	USA	Nasdaq	258.84 €	249.25 €	19.13
Alarm.com Holdings, Inc.	USA	Nasdaq	3.42 €	3.22 €	5.56
Altair Engineering Inc.	USA	Nasdaq	5.05 €	4.82 €	11.17
Alteryx, Inc.	USA	NYSE	4.14 €	4.43 €	9.90
Anaplan, Inc.	USA	NYSE	8.20 €	7.80 €	18.05
AppFolio, Inc.	USA	Nasdaq	3.89 €	3.77 €	13.75
Appian Corporation	USA	Nasdaq	5.71 €	5.50 €	19.70
Atlassian Corporation Plc	USA	Nasdaq	90.42 €	87.79 €	49.71
Autodesk, Inc.	USA	Nasdaq	57.35 €	55.10 €	16.13
Avalara, Inc.	USA	NYSE	12.97 €	12.12 €	24.09
Black Knight, Inc.	USA	NYSE	9.69 €	11.34 €	9.83
Blackbaud, Inc.	USA	Nasdaq	3.04 €	3.53 €	4.61
BlackLine, Inc.	USA	Nasdaq	6.19 €	6.11 €	18.68
Cadence Design Systems, Inc.	USA	Nasdaq	39.02 €	36.03 €	14.74
Ceridian HCM Holding Inc.	USA	NYSE	16.22 €	16.22 €	21.04
Commvault Systems, Inc.	USA	Nasdaq	2.96 €	2.64 €	4.26
Coupa Software Incorporated	USA	Nasdaq	15.40 €	16.64 €	30.62
CrowdStrike Holdings, Inc.	USA	Nasdaq	54.66 €	51.83 €	53.88
CyberArk Software Ltd.	USA	Nasdaq	6.18 €	5.78 €	14.22
Datadog, Inc.	USA	Nasdaq	42.55 €	39.96 €	61.85
Datasea Inc.	USA	Nasdaq	37.19 €	39.09 €	264.04
DocuSign, Inc.	USA	Nasdaq	45.68 €	43.39 €	28.60
Dropbox, Inc.	USA	Nasdaq	10.21 €	10.47 €	6.09
Duos Technologies Group, Inc.	USA	Nasdaq	0.02 €	0.02 €	2.90
Dynatrace, Inc.	USA	NYSE	18.93 €	18.39 €	28.70
Electronic Arts Inc.	USA	Nasdaq	33.94 €	30.91 €	6.39
Everbridge, Inc.	USA	Nasdaq	5.04 €	4.89 €	18.35
Fastly, Inc.	USA	NYSE	4.75 €	4.50 €	16.47
Guidewire Software, Inc.	USA	NYSE	8.67 €	8.00 €	12.74
HubSpot, Inc.	USA	NYSE	32.35 €	31.01 €	34.21
Intelligent Systems Corporation	USA	NYSE	0.31 €	0.28 €	7.92
Intuit Inc.	USA	Nasdaq	136.38 €	126.29 €	15.51
Ipsidy Inc.	USA	Nasdaq	248.95 €	235.52 €	127.08
LivePerson, Inc.	USA	Nasdaq	3.22 €	3.37 €	9.40
Magic Software Enterprises Ltd.	USA	Nasdaq	0.87 €	0.86 €	2.38
Manhattan Associates, Inc.	USA	Nasdaq	9.04 €	8.79 €	16.77
MicroStrategy Incorporated	USA	Nasdaq	6.26 €	8.28 €	19.32
Microsoft Corporation	USA	Nasdaq	1,961.94 €	1,893.47 €	13.35
Mimecast Limited	USA	Nasdaq	3.86 €	3.74 €	8.37

Company	Country	Exchange	Market Cap. (Billion)	Enterprise Value (Billion)	Enterprise Value/Revenue
National Instruments Corporation	USA	Nasdaq	4.55 €	4.44 €	3.86
New Relic, Inc.	USA	NYSE	4.26 €	3.80 €	6.56
Nuance Communications, Inc.	USA	Nasdaq	14.65 €	15.36 €	11.86
Okta, Inc.	USA	Nasdaq	34.04 €	32.91 €	38.22
Oracle Corporation	USA	NYSE	227.04 €	256.98 €	7.44
PTC Inc.	USA	Nasdaq	12.71 €	13.51 €	9.31
PagerDuty, Inc.	USA	NYSE	3.02 €	2.76 €	13.41
Paycom Software, Inc.	USA	NYSE	27.22 €	26.33 €	33.43
Paylocity Holding Corporation	USA	Nasdaq	13.69 €	13.69 €	24.12
Ping Identity Holding Corp.	USA	NYSE	1.94 €	1.93 €	8.40
Progress Software Corporation	USA	Nasdaq	1.90 €	2.02 €	4.65
Q2 Holdings, Inc.	USA	NYSE	3.84 €	4.07 €	10.61
Qualys, Inc.	USA	Nasdaq	3.86 €	3.51 €	10.79
Rapid7, Inc.	USA	Nasdaq	5.93 €	5.96 €	15.25
SAP SE	USA	NYSE	141.37 €	152.79 €	6.67
SPS Commerce, Inc.	USA	Nasdaq	4.99 €	4.80 €	16.36
SailPoint Technologies Holdings, Inc.	USA	NYSE	3.69 €	3.64 €	11.03
ServiceNow, Inc.	USA	NYSE	114.98 €	110.80 €	25.35
Shopify Inc.	USA	NYSE	150.43 €	144.65 €	44.41
ShotSpotter, Inc.	USA	Nasdaq	0.35 €	0.35 €	7.82
Smartsheet Inc	USA	NYSE	7.55 €	7.13 €	18.41
SolarWinds Corporation	USA	NYSE	2.50 €	3.93 €	4.45
Splunk Inc.	USA	Nasdaq	22.87 €	23.19 €	11.38
Square, Inc.	USA	NYSE	98.46 €	94.93 €	7.05
Synopsys, Inc.	USA	Nasdaq	41.40 €	38.76 €	11.25
Tenable Holdings, Inc.	USA	Nasdaq	4.67 €	4.41 €	10.78
Twilio Inc.	USA	NYSE	55.29 €	50.16 €	26.31
Varonis Systems, Inc.	USA	Nasdaq	5.82 €	5.22 €	18.40
Veeva Systems Inc.	USA	NYSE	42.18 €	38.27 €	27.21
Workiva Inc.	USA	NYSE	6.39 €	6.22 €	17.91
Average	-	-	**58.26 €**	**56.86 €**	**21.01**

Source: Retrieved from Yahoo Finance, visited in July 2021

Annex G - Euronext Lisbon Admission Fee

STANDARD INITIAL ADMISSION FEE – TABLE			
	TYPE OF FEE	**INITIAL ADMISSION FEE**	
ACCESS	#1 - Fixed fee	€5,000	
	+		
	#2 - Variable fee	0.125% per € of Market Capitalisation	
	Maximum Fee (#1 + #2)		**€300,000**

	#1 - Fixed fee	€12,000		
		Market Capitalisation (in €m)		
		Tranche (Greater than – Up to or equal)	Fee	Cumulative Maximum Fee
GROWTH / EURONEXT	+	0 – 50	0.06%	€30,000
		50 – 100	0.055%	€57,500
		100 – 200	0.050%	€107,500
		200 – 500	0.040%	€227,500
	#2 - Variable fee	500 – 1,000	0.030%	€377,500
		1,000 – 2,500	0.020%	€677,500
		2,500 and above	0.010%	-
	Maximum Fee (#1 + #2)			**€2,250,000**

Source: Retrieved from Euronext's Website, visited on July 2021

Annex H - Euronext Lisbon Annual Fee

STANDARD ANNUAL FEE – TABLE		
ACCESS	Annual Fee	
	€3,000	

	#1 - Number of Equity Securities^5 (in m)	
	Tranche (Greater than – up to or equal to)	Annual Fee (#1)
	0 – 2.5	€3,000
	2.5 – 5	€4,000
	5 – 10	€9,500
	10 – 50	€15,000
	50 – 100	€20,000
	100 and above	€25,000
GROWTH / EURONEXT	#2 - Market Capitalisation^6 (in €m)	
	Tranche (Greater than – up to or equal to)	Annual Fee (#2)
	0 – 150	Not applicable
	150 and above	€10 for each million of Market Capitalisation exceeding €150m
	Maximum Annual Fee (#1 + #2)	**€57,000**

Source: Retrieved from Euronext's Website, visited on July 2021

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STANDARD SUBSEQUENT ADMISSION FEE – TABLE			
	Amount Admitted in (€m)	Fee	Cumulative maximum Fee (min €500)
	Tranche (Greater than – Up to or equal)		
ACCESS, GROWTH AND EURONEXT	0 – 10	0.1%	€10,000
	10 – 100	0.04%	€46,000
	100 – 250	0.035%	€98,500
	250 – 500	0.03%	€173,500
	500 – 1,000	0.025%	€298,500
	1,000 – 2,000	0.015%	€448,500
	2,000 and above	0.0075%	€1,250,000
	Maximum fee		€1,250,000

Source: Retrieved from Euronext's Website, visited on July 2021