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The Start-up Business

Analysis of the phenomenon in the initial funding
and capital structure decisions

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1. Introduction

The Start-up business in the modern market is important and worthy of being analyzed.

In the first chapter of this work, I will first present the interesting features of the Start-up phenomenon, defining the more distinctive characteristics, both of the Start-up, in terms of success drivers, and of the Entrepreneur, the founder, presenting some literature studies that emphasize his traits.

Then, in the second chapter, I will more deeply study the funding theory of Startups, developing an analysis of the available different sources of funds, defining the financing methods, and differentiating them between Equity ones and Debt. I will dedicate a major focus on Venture Capital, as one of the most common sources of funds for Startups, studying which characteristics of Startups affect investors the most, and Debt Capital, highlighting the advantages and disadvantages of both of them. I will conclude the chapter with an analysis of the funding rounds, their characteristics, and their impact on the different stages of life of the Start-up.

In the third chapter, I will examine how the funding decisions affect the future profitability of the Start-up. To implement an analysis, I will first present some theories regarding capital structure decisions and their impact, then, I will analyze the financial results of successful companies born as Startups, studying how the selected funding methods have impacted their results and their capital composition.

Finally, I will conclude the work by presenting a Case Study that summarizes the concepts presented. Through the application of the Gioia methodology, I will study some interesting traits of a successful German Start-up in the Pharmaceutical industry.

I will demonstrate how to conduct a qualitative rigorous analysis regarding the link between funding choices, profitability, and the selected business model.

2. Chapter 1: The Start-up Industry: the beginning of a relevant phenomenon

This chapter aims to introduce the purposes and literature studies about the creation of a new business, which will be referred to as the “Start-up phenomenon” and the figure of the entrepreneur linked with it.

The chapter will present the main characteristics of Startups, highlighting what differentiates them from established companies. The I will continue with an analysis of the figure of the entrepreneur, which is the key one for the formation of a new business.

The scope of this first chapter is to understand why during the last years a huge interest in Startups has developed and why their role is important for the economy, as regards innovation and business growth.

In order to proceed in this sense, I will define the Start-up and explain its main features, presenting empirical data to prove the importance of the phenomenon, describing what are the different types of Startups and what peculiarities make them interesting, and finally I will explain the success’ drivers for the Start-up business.

Then I will present the figure of the entrepreneur, and why is so crucial for the creation and further expansion of the new born company.

2.1. Elements of a Start-up: definition, characteristics, classification

In order to classify and analyze the Start-up business it is required to define it. “Forbes Advisor” defines Startups as “young companies founded to develop a unique product or service, bring it to market and make it irresistible and irreplaceable for customers” (Curry Benjamin and Rebecca Baldrige, 2022), “Tech target” defines it as “a newly formed business with particular momentum behind it based on perceived demand for its product or service. The intention of a Start-up is to grow rapidly as a result of offering something that addresses a particular market gap” (Pratt Mary, 2017).

In both definitions, the authors highlight the features of a breakthrough innovation, both regarding product and services, that is perceived by the market as innovative,

useful, unique and that is able to respond to a particular demand, filling a market gap.

Another perspective is given by an article of Startups.co.uk, an online advice platform about Startups' world, and it gives an interesting point of view to differentiate Startups from other established companies; in the article, to define a Start-up, is considered both the actual business that has been started and the spirit and mentality that leads to the new business; the key principles pointed up to recognize a Start-up refer to: the **fast-paced**, build an idea very quickly with the needs of changing decisions often and moving faster in different directions, the **funders role**, that is a central role as key of business' operations, the **funding**, that is mostly self-founding or through investors, the **global view**, so the applicability and marketability in a global scale, and this particular feature, the applicability and marketability in a global scale, is also the one that differentiate a Start-up from a small business; continuing with Start-up characteristics, the **team culture** and the **active collaboration**, in which each component strongly believe and make an impact on the business idea developed, and finally the formal recognition: what differentiate a Start-up from a business idea is the formal registration of the business (Cook Scarlett, 2022).

In order to better analyze the peculiar characteristics of this type of business, an interesting definition of Start-up is given by Eric Ries, in the book "The Lean Startups: how today's entrepreneurs use continuous innovation to create radically successful businesses": "A Start-up is a human institution designed to create a new product or service under conditions of **extreme uncertainty**" (Ries Eric, 2011, p. 37); the definition highlights some important aspects, especially in what it omits: a Start-up is not defined by the size, by the industry in which operates, the product or business that is creating, or the sector in the economy, it is only defined by an entrepreneur working in condition of uncertainty (Ries E., 2011), it could be concluded that the essence of a Start-up is linked with the disruptive thinking, the ability to adapt and change, and the willingness to be different.

2.1.1 Empirical Data on the Startups Phenomenon

“Starting a business is not an event, but a process which may take many years to evolve and come to fruition” (Birley Sue, 1987, p. 1), despite the difficulties and adversities that starting a new business may lead, data about the number of new Startups are each year increasing, with an explosion in the last two years (Newman Daniel and Kenan Fikri, 2022), and the United States as a leading country. One explanation for this phenomenon is related to the Covid-19 Pandemic, which has changed the economy in many unexpected ways: even if some of them are undeniably negative, one potential benefit is the huge number of new business applications, that can be considered a promising indicator for the recovery after the prior economic crisis, that had slowed down the rates of creation of new companies (Newman D. and Kenan F., 2022).

U.S. total annual business applications

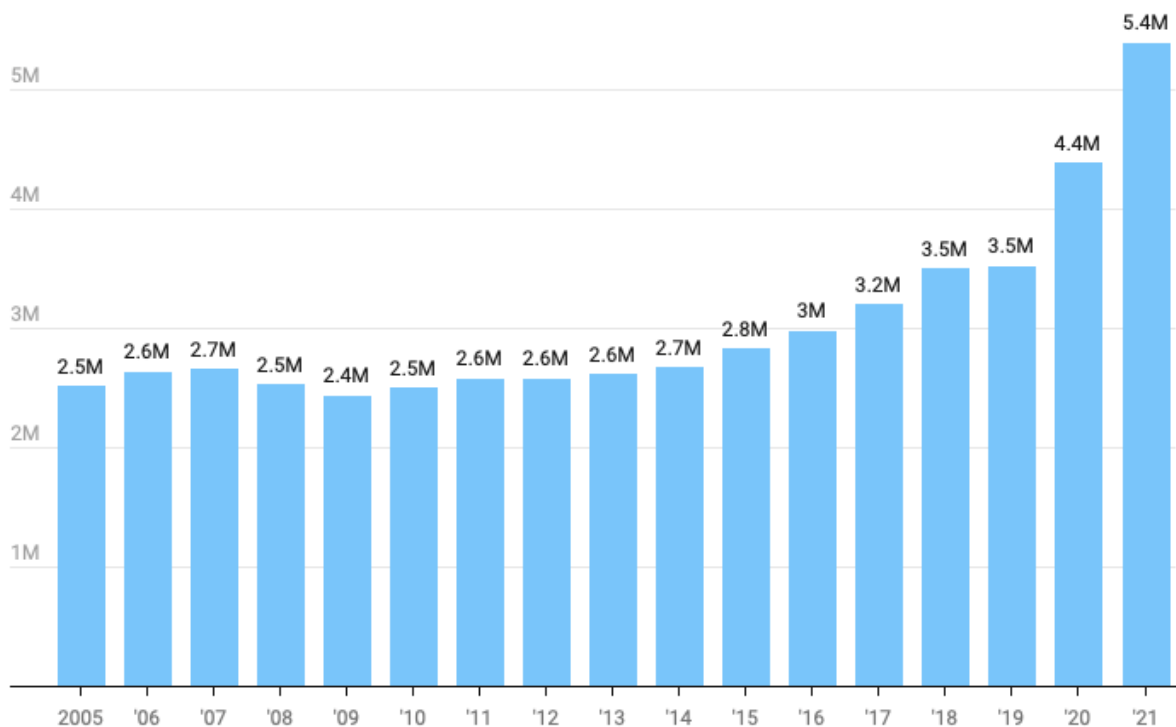


Table 1. U.S. total annual business applications, from eig.org/new-start-ups-break-record-in-2021-unpacking-the-numbers/ (eig.org, 2022)

The phenomenon of Startups is a global one, and the numbers regarding the creation of new businesses are each year increasing, however, as it has already

been mentioned, the United States is the country with the highest number of Startups, 77,307, followed by India with 17,227.

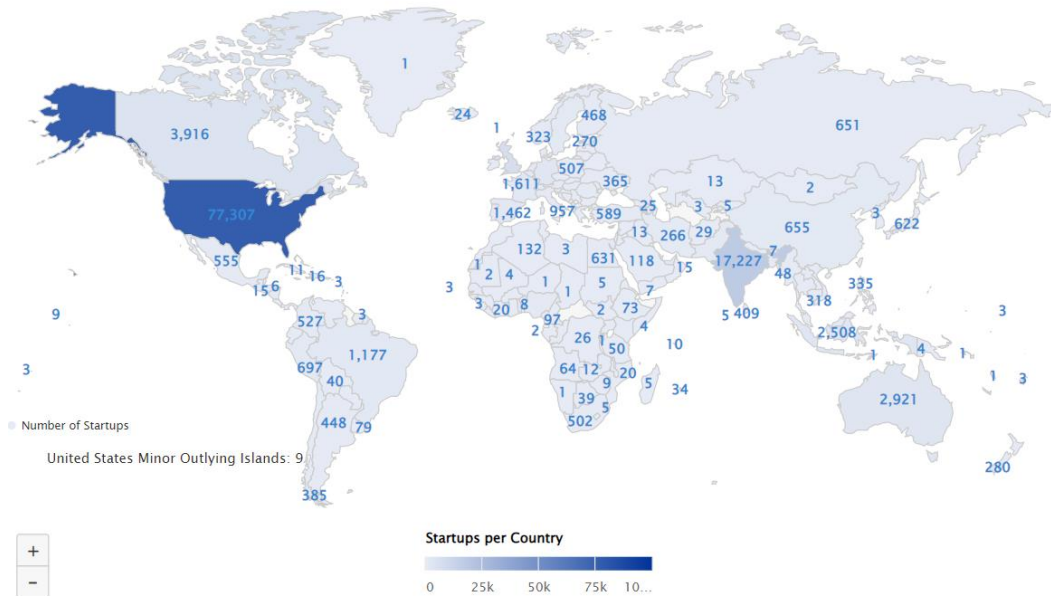


Figure 1. Number of Startups per country, from <https://www.startupranking.com/countries>

Another important consideration is the industry in which Startups operate, as the higher percentage of Startups operate in the technological fields: 7.1% work in the Fintech industry, 6.8% in Life Sciences, 5% in Artificial Intelligence, and 4.7% in Gaming (Artem Minaev, 2022), suggests that modern Startups depend on the Internet and new technologies to develop their business.

Focusing on the first industry, Fintech, which stands for Financial Technology, it has gained relevant importance when in 2018 the PSD2, the update to the Payment Services Directive from European Union, took place: thanks to the new regulation it has been promoted innovation in the financial industries, allowing third parties to access banking data of individuals, at the same time maintaining high the level of protection for the consumers being sure of their expressed permission (COM(2020) 591 final, European Commission, 2020, from eur-lex.europa.eu) This is one of the reasons Startups related to financial technology started being so numerous.

Anyway, starting a business is not the real challenge, but rather surviving and then being profitable. Data are clear: 9 out of 10 Startups fail and the success percentage is 18% for first-time founders (Kotashev Kyril, 2022).

However, when a Start-up is well-settled and survives the first crucial years the profitability could be high. This is the case of Unicorn companies, Startups that are valued at least one billion dollars, the term was coined in 2013 and indicates the rarity of the phenomenon (Statista Research Department, 2023). The most valuable Start-up in the world is ByteDance, a Chinese company that works in the technological sector and that owns Tiktok (Minaev A., 2022); even if the primary is for China, the country with the highest number of Unicorn companies in the United States, as is possible to see in the chart below.

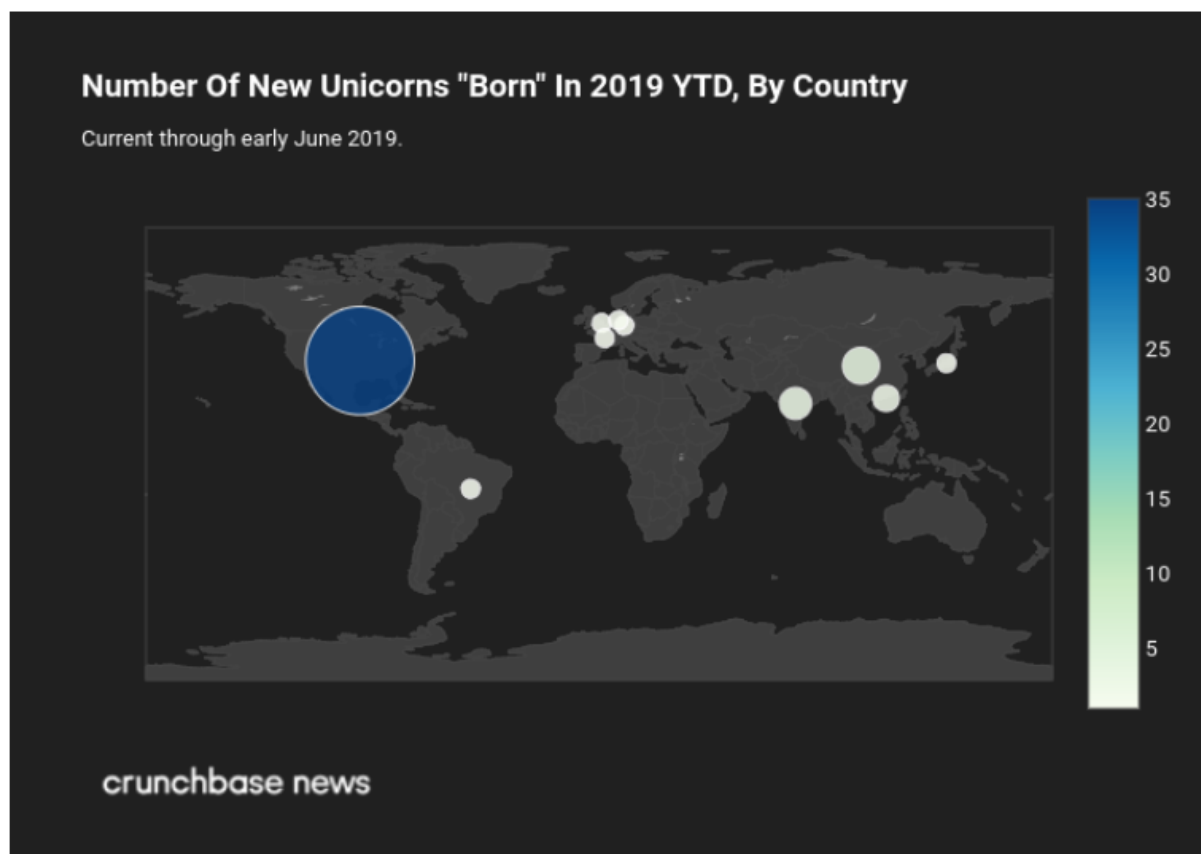


Figure 2. Number of Unicorns born in 2019 by country, from Glasner Joanna, 2019, news.crunchbase.com/venture/unicorn-class-of-2019-richer-more-autonomous-and-more-american/

2.1.2. Types of Startups

Although Startups are all created by an entrepreneur and share the features discussed, it is possible to differentiate them into different types because different are the aims, funding, and strategies they are involved in and interested in.

Steve Blank in the Wall Street Journal in 2013 defines six types of Startups: lifestyle, small business, social, scalable, buyable, and large company Startups. I will briefly introduce the different types of Startups and then provide more details and insights to fully analyze them:

- Lifestyle Startups are Startups founded for work following personal passions, in a modern, flexible, and relaxing environment (Blank Steve, 2013).
- Small businesses, even if the definition could vary by country and industry, are privately owned companies with less annual revenue, and fewer employees, than regular-sized corporations (asq.org, 2023, from <https://asq.org/quality-resources/small-business>).
- Social Startups are run with a social mission, improve livelihoods, and implement a positive, forward-thinking business, putting their purpose at the core of the business (Fresneau Veronica, 2023).
- Scalable Startup business has the aim to become extremely profitable generating huge payoffs, also being publicly traded, attracting investments from a lot of financial investors (Blank S., 2013).
- Buyable Startups are born to be sold to a larger company after their initial period of growth (Shaikh Moin, 2022, from <https://www.peerbits.com/blog/tech-startups-grow-with-mobile-app-2.html>).
- Large companies' Startups are a way in which companies that have reached the end of the life cycle can continue surviving, and growing, through the implementation of an innovative Start-up in their business (Shaikh Moin, 2022).

As regard **lifestyle** Startups, Ash Ali and Hasan Kubba in “The Unfair Advantage” explain that they are usually self-funded and generate little interest for external

investors, in fact, they are related to small local businesses targeting small customer bases, that could be in both online or physical locations, and their aim is not to grow and dominate the market but only to provide the funder a sustainable income, creating a work schedule that offers a degree of freedom to live the desired lifestyle (Whitworth Elizabeth, 2022), “Lifestyle entrepreneurs live the life they love, work for no one but themselves and pursue their personal passion” (Steve Blank, 2013).

However, there are some specific cases of lifestyle Startups that incorporate only freedom in the work schedule and flexibility but aim to grow and become profitable. The website Failory.com, updated on 26 March 2022, provided some examples of lifestyle Start-up that achieve the status of Unicorns: Vox Media, a digital media operator that provides content related with editorial insight, Harry’s, which offers affordable alternatives for razors, creating a platform for its consumers, Juul Labs, that offers advanced vapor products with the mission of helping consumer stop smoking and Lamabang, that offers lifestyle products for modern Chinese mothers (failory.com, 2022, from www.failory.com/Startups/lifestyle-unicorns).

The category of “**small business Startups**” can be summarized with the creation of local jobs, and the aim of running a small business, like grocery stores, electricians or plumbers, their aim is to own a business to fulfill family needs (Blank S., 2013)

For these characteristics they tend to have fewer employees and at the same time less capital.

However, accessibility and management commitment can be stronger and easily implementable, because of more straightforward communications (asq.org, 2023, from asq.org/quality-resources/small-business).

The “**social Startups**” share with the other types the ambition of the entrepreneur, but this ambition is addressed to social reason, usually organized as nonprofit, the aim is not the creation of wealth, but to make the world a better place (Blank S., 2013).

The purposes can be various and related to different social needs: climate change, the pandemic, and wars (Fresneau V., 2023).

Some examples of innovative social Startups could be: Ada, a Start-up related to education technology that provides continuous learning to women with the aim of female empowerment, Helios, a Start-up that combines banking and an effective approach towards ecology, with a mission in limited the global warming, and Open Bionics, that aims to offer more accessible bionic limbs for physical disabilities.

“Scalable Startups” are defined by Steve Blank as the ones in which the founder is interested in creating a business that will become extremely profitable generating huge payoffs, eventually being publicly traded, attracting investments from financial investors, and they could be considered the most interesting to analyze. However, the transition from a nascent Start-up to a profitable one is not so distinct, the founding team, or the founder, needs to establish a solid plan to grow. First of all, getting the business concept right in the beginning is undoubtedly important, but then, through a process of exploration, validation, and refinement, the business concept needs to be adapted to be effectively scalable (Aulet Bill, 2013).

The entrepreneurial innovation process, defined by Joseph C. Picken, is characterized by four stages: Start-up, transition, scaling, and exit, even if the boundaries between two stages are not perfectly distinguished. The initial stage is important, but a crucial role is played by the transition stage, in which the founder needs to lay the foundation to make the enterprise scalable, giving structure and discipline to the enterprise, defining the business concept, the market opportunity, the business model and the strategies to enter the market required for a rapid scaling (Picken Joseph, 2017).

The shift from the transition to the scaling phase is not a simple step, but a whole set of operations that need to be implemented and continued for a period of time. To enter the scaling phase, the Start-up will need more resources and partnerships to grow, with the aim of creating a sustainable market leadership and achieving competitive scale by rapid growth. The internal organization of the Start-up needs to change, becoming more structured, organized, and with a clear decision-making process (Picken J., 2017)

The transition to the scalable phase is not easy: premature scaling could lead to the unsuccess of the whole operation, and only half of establish firms, starting from the year 1994 to the year 2015, survive for more than 5 years (U.S. BUREAU OF LABOR

STATISTICS, 2016), that means that even with brilliant starting idea, without a right organization and strategies, is not easy, as a Start-up, to become profitable, or even survive to the scalable phase.

Joseph Picken defines the steps to take during the transition period in order to become scalable as “the eight hurdles of the transition period”, starting from the set of clear goals and the communication of them with the same clarity, in order to keep the whole organization focused on prioritized the proper objectives, expanding the offers of products and services, also developing or redefining the positioning, creating efficient operational infrastructures and internal process for a smooth decision making process, paying attention to not lose the culture that was at the beginning of the original idea, but being able to expand it to all the members, in order to reflects values and beliefs, managing risks that could, and will, occur, because related with the vulnerability that a newborn enterprise intakes, as inexperienced employees, a too rapid growth, inadequate infrastructures; and being able to manage the initial financial resources in an efficient way, through reliable projections, efficient use of working capital, to attract and to interest investors (Picken J., 2017).

The following type of Start-up will be the “**buyable Startups**”, in which the concept is similar to the scalable ones, even if they avoid traditional funding through investors, and instead, they use crowdfunding or angel funding¹ (Blank S., 2013). The aim is to sell the Start-up to another company, providing the founders and initial investors a huge return, this is the reason the initial funding phase is done considering few funds to accelerate the growth before the selling, differently from scalable Startups in which the transition part is important to become scalable; the acquiring company found favorable to integrate the Startups in its operations and projects because it is usually a large company already settled in the market (VeFund, 2023, from <https://www.vefund.io/en-blog/six-different-types-of-startups-and-how-they-look-for-funding>).

Regarding the last typology, Start-up created **inside large companies**, the main aim of this type of strategy is to find a way to innovate, and so to survive, through the implementation of a Start-up.

¹ The funding process of Startups will be further analyzed in the second chapter.

The life cycle of large companies is finite, even trying to maximize profit and reduce costs will lead to the end of the company, because focusing only on the existing business model is not enough to remain part of the market (Mueller Dennis, 1972). The external threats made by new competitors and their innovation are no longer beatable through a big established organization, also large companies need to deal with new challenges through continuous innovation to survive, and grow (Blank S., 2013); large organizations must start considering developing an internal Startups, also said “corporate entrepreneurship”, to remain relevant in the market.

During the last years, a phenomenon of acceleration of companies disappearing from the S&P 500 index² has been noticed by “Innosight” and their forecast trend leads to the same conclusion: corporate lifespan continues its downward trajectory and every year more and more companies are dropping off the S&P 500 list for a decrease in market value or acquisitions (Viguerie Patrick S., Calder Ned & Hindo Brian, 2021), as it is noticeable in table 2.

Chart 1: Average company lifespan on S&P 500 Index in years (rolling 7-year average)

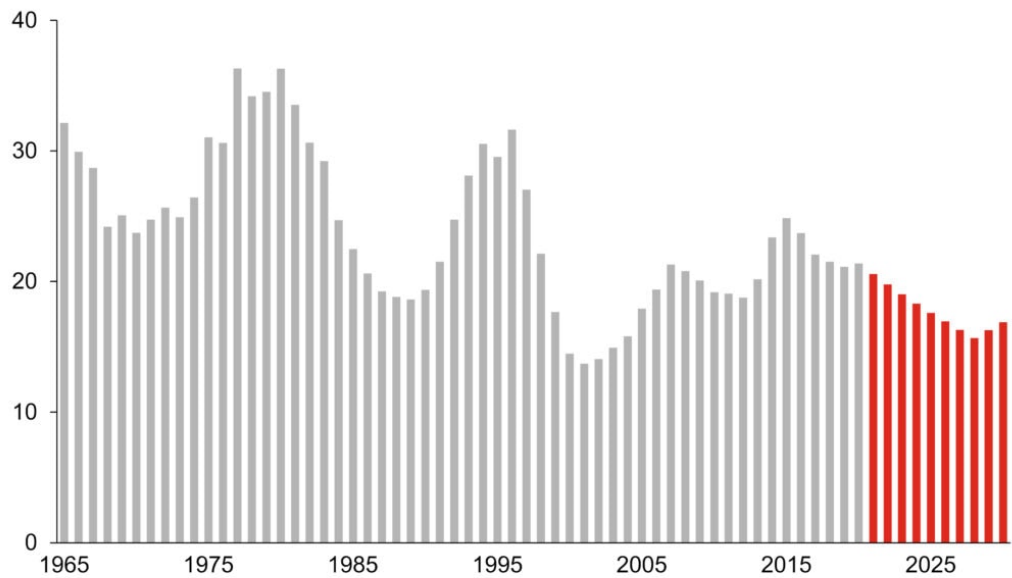


Table 2. Average company lifespan on S&P 500 Index, from (Viguerie et al., 2021, from <https://www.innosight.com/insight/creative-destruction/>)

² S&P 500 index: Is a market-capitalization-weighted index of 500 leading publicly traded companies in the U.S. (Investopedia, 2022).

For a large company becomes essential to find a way to invest in a new business model in order to survive, through the innovation concept, and a way is to develop a new Start-up inside the existing large company.

First of all, with innovation is intended the creation of money optimizing approaches through implementing creative ideas, that, without the right approach, would remain only ideas or also lead to failure (Andrew James P. & Sirkin Harnold L., 2003), and establish companies through transformative innovation can create revolutionary products; one threat for large corporations that want to implement an internal Start-up would be the bureaucracy and its restrictions, but on the other side having the possibility to develop an idea, and so a Start-up, using huge resources of a large company could be the turning point (Ammirati Sean, 2019).

2.2. Drivers for the Success of a Start-up

The relevance in the economy of the Start-up business has been demonstrated through the empirical data section, but, as it has already been explained, the real challenge is to make a Start-up profitable, in this part, I will present the main success drivers for the Start-up business: innovation, market gap, the product or service offered, the business plan and the concept of lean Start-up.

In order to start I will briefly denote the main traits of each of them, then, in the further paragraphs, they will be fully analyzed.

Innovation is defined by Eurostat as a “new or significantly improved product (good or service) introduced to the market, or the introduction within an enterprise of a new or significantly improved process” (Eurostat Statistics Explained, from [https://ec.europa.eu/eurostat/statistics-](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Innovation)

[explained/index.php?title=Glossary:Innovation](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Innovation)) and it can be considered a driver of success because provides competitive advantage respect competitors in a given market (Hassan Ehsan ul, Hameed Zahid, Moin Fatima, Shaheen Maryum, 2014)

Market gap is defined by the Macmillan Dictionary as “an opportunity to produce something that is not yet available but that people would like to have” (MacMillan Dictionary, from <https://www.macmillandictionary.com/dictionary/british/a-gap-in-the-market>), it can be considered as a driver of success because spotting and then exploiting a market gap can generate profits for the business.

The product or services offered are what every Start-up decides to produce, create or provide, they are the core of the business from the beginning.

The business plan is a guide to manage the firm, from the start to the growing phase of the business, it can be considered a driver of success because it helps in the first phases of the run of the business and the creation of value (U.S. Small Business Administration, from <https://www.sba.gov/business-guide/plan-your-business/write-your-business-plan#:~:text=works%20for%20you-,Business%20plans%20help%20you%20run%20your%20business,key%20elements%20of%20your%20business>), it will be analyzed in his further evolution, the “lean Start-up”, a new methodology that provides better result for the initial phases of the Start-up business.

2.2.1 Innovation

Starting with innovation, it can be said that “the Start-up industry will continue to be the driving factor for global innovation and business growth for many years” (Minaev A., 2022), stating the importance of this business system, it is evident the link between Startups and innovation.

Innovation, and its link with entrepreneurship, is occupying a decisive role in the development of the economy.

Starting with a definition, innovation is described in the article “What is innovation?” by McKinsey & Company as “the systematic practice of developing and marketing breakthrough products and services for adoption by customers” (McKinsey & Company, 2022, from <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-innovation#/>), so innovation is related to an ability of the company to think, develop and deliver new products, services, processes or business models (McKinsey & Company, 2022).

Innovation is described by Dr. Jens-Uwe Meyer, managing director of Innolytics, as a driving force in competition and as one of the most important drivers for long-term success, moreover, its importance had a remarkable increase in the last years (Meyer Jens-Uwe, 2014).

Despite the innovation is not easy to understand and can be perceived as a challenge and not a clear path to follow to accomplish the desired success and value increase, companies can focus on some aspects to prioritize the right

elements: the “who”, the customer in need of an innovation or the problem that needs to be solved, the “what”, the solution that is possible to offer, and the “how”, being able to monetize the business model that leads to the solution (McKinsey & Company, 2022).

Especially for large companies with an already established business model, innovation could be complex.

Large companies that want to successfully innovate can try an active approach: starting with the aspiration and the choice to innovate, continuing with a discovery, the sense of innovation itself, and then the implementation through the evolution of the previous business model with the incorporation of the new idea (De Jong Marc, Marston Nathan, Roth Erik, 2015).

Understanding how to implement innovation in a company is vital only companies that innovate are able to survive in the market; even in the most mature ones with the highest competition level, innovators can discover new opportunities to be different from the competitors (WIM Committee, Fu Yingwei, 2019).

At this point the importance of innovation to the creation of value is clear, but now there is the need to link Startups and innovation, the characteristics of this specific type of business lead to consider innovation as the core of the processes to implement, in fact, Startups on their early stages are small, not well organized, they lack structures, tangible, intangible, financial and human resources; all factors that seem to prevent Startups to develop innovation processes as we have discussed them previously (Battistella C., Dangelico R., Nonino F., Pessot E., 2021).

Even if the possibility to develop a new business could lead to high innovational possibilities, Startups need to overcome the problems of being small and of being new (Spender John, Corvello Vincenzo, Grimaldi Michele, Rippa Pierluigi, 2017); an interesting perspective, and a possible solution for this, is given by the practice of the “**Open Innovation**”, that can be described as a “complex network of knowledge flows between firms, that needs to be managed and affects the internal choices of the Start-up company” (Spender et al., 2017, p.5), for the Open Innovation’s idea, Startups need to receive ideas both from the external and the internal sources, to not just rely on the internal knowledge, but sharing information about their problems, to find a solution outside the business,

establishing partnerships and collaborations for the development of the business itself.

Thanks to open innovation the advantages are numerous: firstly, it gives a solution to the innovation problems previously discussed, Startups can access innovative ideas for new products and services, so it will be possible to expand the pool of ideas without the need of using financial resources, and so lowering innovation costs (Livescault Jonathan, 2020).

On the other hand, open innovation could have its threats, opening up to a wider group of people, or the public, in order to access external ideas could cause problems or at least be challenging; the Start-up, and the entrepreneur in first person, need to abandon the idea of ownership and to have the whole process under control, and start relying on other, external people; moreover in order to be well managed Open Innovation required time and effort (Deichmann Dirk, Rozentale Ieva, Barnhoorn Robert, 2017), and in the early stage of a business every choice on how to invest time and efforts are crucial because it means that they are not used for implement other strategies.

So, with the right management, open innovation can give Startups the possibility to obtain the best ideas from the world (Livescault J., 2020), and so implement the right innovative strategy that would be crucial in order to create value.

Another factor strictly linked with the Startups study, that affects the rationale behind the creation of value for the Start-up, is the market gap, or more precisely the exploitation and filling of a market gap, that will be analyzed in the next section.

After having defined how to successfully find an innovative idea, then it is required to enter the market with it, this is as crucial as the previous phase, in fact even with a good new product or a new substitute technology, entering the market too late or too early, could lead to the failure, because in this way Startups are missing the window for successful market entry (Mattson Bruce, 1985).

It can be concluded that the innovative process is a complex one and could be seen as theoretical and not of easy implementation, a good way to start analyzing which could be the right area to innovate, could be “Maslow’s hierarchy of needs” theory (Magnussen Eric, 2014); in its theory, Maslow divided the human needs into five

categories with a defined hierarchical order: lower needs in the pyramid needs to be satisfied prior then the higher ones.



Figure 3. Marlow's Hierarchy of needs, from McLeod Saul, 2023, <https://www.simplypsychology.org/maslow.html>

As can be seen in Figure 3, the needs considered in this theory are: physiological, safety, love and belonging, esteem, and self-actualization needs (McLeod Saul, 2023).

Starting from the ones in the bottom, it appears evident as they are basic needs, and not applicable to this discussion related to business ideas and innovation. Moving to the upper needs of the pyramid, these needs can be classified as self-fulfillment needs, in which the individual seeks for achieving its full potential, through creativity, morality, obtaining personal growth, and trying different experiences (McLeod S., 2023).

So Start-up in order to innovate needs to constantly try to fulfill these needs: building a culture of innovation, not simply defining it, but implementing it day by day, through innovation tools, education, organization, and time (Magnussen E., 2014).

2.2.2 Market Gap

First of all, to define it, a market gap is an area that is not currently served by a business but in which there is customer demand for (British Business Bank, from <https://www.startuploans.co.uk/business-advice/how-to-spot-a-gap-in-the-market-and-act-quickly/>), it could be identified every time customer needs are not met, so to have a good entry in the market with an innovative product it is important to base the strategy in fulfilling latent needs of people.

A market gap is related to something completely new, a new creation, discovery, or technology, but also to something that already exists but that is presented in a new, better way, improving the precedent condition, and also to something that already exists in a market, but could be applied to a new interested market, an untapped market (Expert Panel Forbes Councils Member, 2020).

The entry window is the limited time period in which the new product, or the product in general, has to be launched in the market and it is possible to define the optimal one as the moment in which the market requirements meet the firm competencies, also referred as the “strategic moment”, it is evident that the market is not a static thing, but it is in continuous and systematic evolution in its competitive environment (Mattson B., 1985), so firms need to pay important attention to the movements and to the trends to uncover opportunities; also this is a very firm-specific challenge, in fact, each of them needs to surpass two different hurdles when entering the strategic entry window, the one related with market-driven performance, and the one related with the ability and willingness of the firm to enter the market (Mattson B., 1985).

The first one, **market-driven performance**, is more related to market threats, such as costs or performance standards required, or competitors’ behavior, and this is not specific for the firm, but it is the general market condition for all the companies that wish to enter the market; while the second, the **ability and willingness of the firm** to enter the market, is firm-specific, it involves both the resources that the firm has in that specific time, so in order to enter the market in the exact moment of the strategic windows, but also the willingness and capability to surpass the hurdles and enter the market, and these are strictly personal from firm to firm.

Understanding the importance of a market gap is not difficult but recognizing the strategic window before the competitors to exploit it could be a tricky challenge. An example of a company famous for being able to exploit a market gap is Netflix (Gregory Alyssa, 2022): recognizing that the market was no longer interested in buying movies, it creates a new form of entertainment firstly starting an innovative business, renting DVD movies by mail for a subscription fee, then through a website for DVD rental, and finally introducing the streaming platform (Lechmanová Kamila, Vedeikyte Ieva, 2020) until the most recent content producing.

Another way to efficiently identify possible market gaps to fulfill is by looking at legislation news, in fact, legislation updates can create challenges for firms: they can suddenly force the whole sector to make changes, creating market gaps (Gregory A., 2022).

A value creation opportunity can be created by helping companies launch a product, or service, that could easily give them the possibility to be compliant with the legislation, or offering a product or service directly to customers for the same aim; what matters is to forecast legislation challenges to early identify market gaps (Gregory A., 2022)

One example could be related to the Italian legislation with the Decree of the Recovery Plan on 30 April 2022, published on the "Gazzetta Ufficiale della Repubblica Italiana" in the context of the "Piano Nazionale di Ripresa e Resilienza PNRR", in this occasion the Italian Government decided to make mandatory the acceptance of credit card even for a small amount of money, with this legislation all the firms, even for the smallest ones like restaurant or professionals who work on their own, suddenly needed to buy a POS to be able to accept the credit card payment, in this situation, lot of banks and financial companies have started launching their product, agile POS that could be easily used by everyone, even with initial low commission.

In this way they have offered a solution exploiting a market gap created by legislation; an example could be Nexi, a pay-tech company in Italy that offers digital payment solutions, launched different types of POS for different needs: a mobile POS, a SmartPOS Mini, to adapt to a different type of businesses, from the biggest to the smallest one that will need few transactions a day (Nexigroup.com, from

<https://www.nexigroup.com/en/business/retailers-and-merchants/in-store-payments/>)

2.2.3 Product or service offered

Another driver for the creation of value is the choice of the product or service that the Start-up is offering.

Even if this seems straight forwarding that the product or service offered is important in value creation, the choice between product and service is crucial. The difference between starting a product business and starting a service business is huge.

First of all, it is important to define Start-up costs, they are all the expenses that incur before the business start, so before having a profit, in this early-stage phase is important to not underestimate these costs.

An even more important consideration to do is the difference between cost related to products offering Startups and cost related to services offering Startups, as is possible to see in the charts below the difference is anything but negligible.

As explained by Tim Berry, founder and chairman of Palo Alto Software and Bplans.com, in his book from 2004 "Hurdle: the book on business planning", considering three businesses and their respective launch at the same moment: one business launches a successful service Figure 4, the second a successful product Figure 5, and the third an unsuccessful product Figure 6.

I. Successful Service Example												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sales			\$1,000	\$3,500	\$6,000	\$8,500	\$11,000	\$13,500	\$16,000	\$18,500	\$21,000	\$23,500
Cost of Sales			\$50	\$175	\$300	\$425	\$550	\$675	\$800	\$925	\$1,050	\$1,175
Expenses												
General start-up expenses	\$2,500											
Product releast PR		\$500	\$500									
Running operating expenses	\$1,500	\$1,500	\$1,750	\$2,375	\$3,000	\$3,625	\$4,250	\$4,875	\$5,500	\$6,125	\$6,750	\$7,375
Total Expenses	\$4,000	\$2,000	\$2,250	\$2,375	\$3,000	\$3,625	\$4,250	\$4,875	\$5,500	\$6,125	\$6,750	\$7,375
Accounts Receivable			\$1,000	\$3,500	\$6,000	\$8,500	\$11,000	\$13,500	\$16,000	\$18,500	\$21,000	
Deposits												
from Accounts Receivable				\$1,000	\$3,500	\$6,000	\$8,500	\$11,000	\$13,500	\$16,000	\$18,500	\$21,000
Payments												
Costs of sales	\$0	\$0	\$50	\$175	\$300	\$425	\$550	\$675	\$800	\$925	\$1,050	\$1,175
Expenses	\$4,000	\$2,000	\$2,250	\$2,375	\$3,000	\$3,625	\$4,250	\$4,875	\$5,500	\$6,125	\$6,750	\$7,375
Total Payments	\$4,000	\$2,000	\$2,300	\$2,550	\$3,300	\$4,050	\$4,800	\$5,550	\$6,300	\$7,050	\$7,800	\$8,550
Net Cash	(\$4,000)	(\$2,000)	(\$2,300)	(\$1,550)	\$200	\$1,950	\$3,700	\$5,450	\$7,200	\$8,950	\$10,700	\$12,450
Cumulative Cash	(\$4,000)	(\$6,000)	(\$8,300)	(\$9,850)	(\$9,650)	(\$7,700)	(\$4,000)	\$1,450	\$8,650	\$17,600	\$28,300	\$40,750

Figure 4: Actual data for a successful service company. From “Hurdle: the book on business planning”, Berry Tim, 2004, pg. 4.6

In this first table is possible to see the cumulative cash changes of a successful service launched in January, during the first month expenses are higher than incomes, so until July the cumulative cash is negative, indicating a negative result, then from August the company will start generating cash, arriving in December with a maximum of 40,750 dollars of cumulative cash.

II. Successful Product Example												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sales					\$50,000	\$75,000	\$100,000	\$125,000	\$150,000	\$150,000	\$150,000	\$150,000
Cost of Sales					\$10,000	\$15,000	\$20,000	\$25,000	\$30,000	\$30,000	\$30,000	\$30,000
Expenses												
General start-up expenses	\$4,500											
Product work		\$5,000	\$5,000									
Packaging work			\$5,000	\$5,000								
initial inventory build				\$10,000								
Product release PR			\$5,000	\$5,000	\$5,000							
Running operating expenses	\$5,000	\$5,000	\$5,000	\$10,000	\$10,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Total Expenses	\$9,500	\$10,000	\$20,000	\$30,000	\$15,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Accounts Receivable					\$50,000	\$125,000	\$175,000	\$225,000	\$275,000	\$300,000	\$300,000	\$300,000
Deposits												
from Accounts Receivable							\$50,000	\$75,000	\$100,000	\$125,000	\$150,000	\$150,000
Payments												
Costs of sales	\$0	\$0	\$0	\$0	\$10,000	\$15,000	\$20,000	\$25,000	\$30,000	\$30,000	\$30,000	\$30,000
Expenses	\$9,500	\$10,000	\$20,000	\$30,000	\$15,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Total Payments	\$9,500	\$10,000	\$20,000	\$30,000	\$25,000	\$35,000	\$40,000	\$45,000	\$50,000	\$50,000	\$50,000	\$50,000
Net Cash	(\$9,500)	(\$10,000)	(\$20,000)	(\$30,000)	(\$25,000)	(\$35,000)	\$10,000	\$30,000	\$50,000	\$75,000	\$100,000	\$100,000
Cumulative Cash	(\$9,500)	(\$19,500)	(\$39,500)	(\$69,500)	(\$94,500)	(\$129,500)	(\$119,500)	(\$89,500)	(\$39,500)	\$35,500	\$135,500	\$235,500

Figure 5: actual data for a successful product company. From “Hurdle: the book on business planning”, Berry Tim, 2004, pg. 4.6

In this table, the results of a successful product are presented, during the first months the company is not able to recover from the costs, and so is not able to generate cash; while from the month of October, the sales start to increase more than the expenses, and so the company starts being in profit, as regard the cumulative cash, with a maximum value of 235.500 dollars in the month of December.

III. Failed Product Example												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sales					\$25,000	\$27,500	\$30,000	\$32,500	\$35,000	\$37,500	\$40,000	\$42,500
Cost of Sales					\$5,000	\$5,500	\$6,000	\$6,500	\$7,000	\$7,500	\$8,000	\$8,500
Expenses												
General start-up expenses	\$4,500											
Product work		\$5,000	\$5,000									
Packaging work			\$5,000	\$5,000								
initial inventory build				\$10,000								
Product release PR			\$5,000	\$5,000	\$5,000							
Running operating expenses	\$5,000	\$5,000	\$5,000	\$10,000	\$10,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Total Expenses	\$9,500	\$10,000	\$20,000	\$30,000	\$15,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Accounts Receivable					\$25,000	\$52,500	\$57,500	\$62,500	\$67,500	\$72,500	\$77,500	\$47,500
Deposits												
from Accounts Receivable							\$25,000	\$27,500	\$30,000	\$32,500	\$35,000	\$72,500
Payments												
Costs of sales					\$5,000	\$5,500	\$6,000	\$6,500	\$7,000	\$7,500	\$8,000	\$8,500
Expenses	\$9,500	\$10,000	\$20,000	\$30,000	\$15,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Total Payments	\$9,500	\$10,000	\$20,000	\$30,000	\$20,000	\$25,500	\$26,000	\$26,500	\$27,000	\$27,500	\$28,000	\$28,500
Net Cash	(\$9,500)	(\$10,000)	(\$20,000)	(\$30,000)	(\$20,000)	(\$25,500)	(\$1,000)	\$1,000	\$3,000	\$5,000	\$7,000	\$44,000
Cumulative Cash	(\$9,500)	(\$19,500)	(\$39,500)	(\$69,500)	(\$89,500)	(\$115,000)	(\$116,000)	(\$115,000)	(\$112,000)	(\$107,000)	(\$100,000)	(\$56,000)

Figure 6: actual data for an unsuccessful product company. From “Hurdle: the book on business planning”, Berry Tim, 2004, pg. 4.7

In this third case, the example of a failed product, the cumulative cash will never become positive, meaning that the expenses will never be recovered by the income. It results that the worst month in terms of cumulative cash is July, with -116,000 dollars.

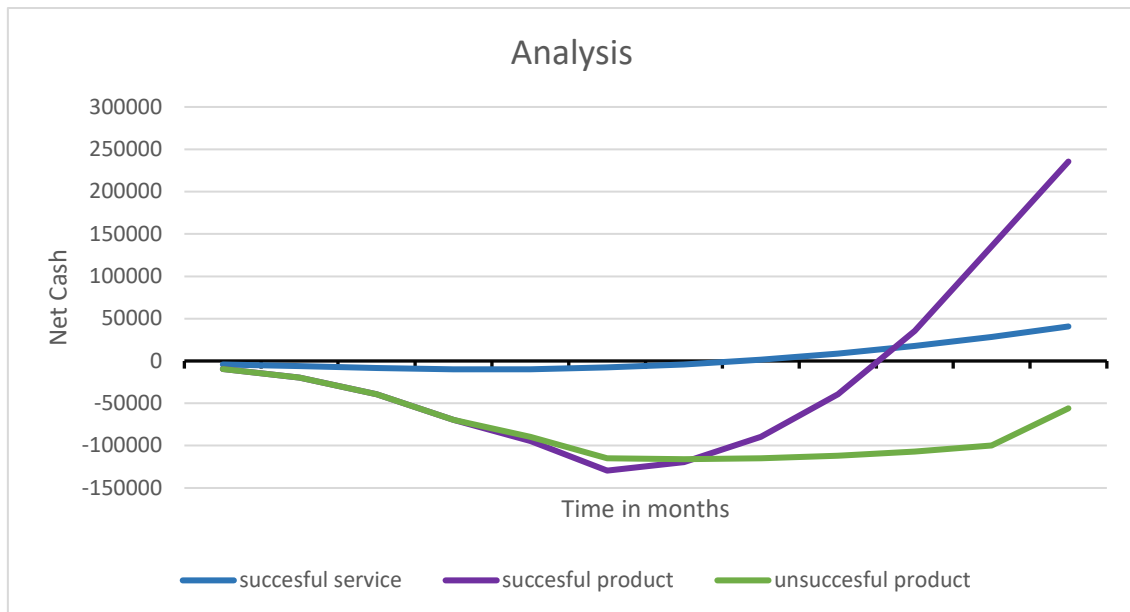


Table 3: Personal interpretation through the creation of the graph using the tool Excel, data from “Hurdle: the book on business planning”, Berry Tim, 2004, pg. 4.6 and 4.7

Analyzing the summary charts given in Table 3, it is evident how in the beginning the situation for both the **successful and unsuccessful product** looks the same, in the case of the successful one after the sixth month, the line that indicates the cumulative balance for the business, starts becoming positive, meaning the presence of cash generation, while for the unsuccessful product, it never reaches the positivity, and so this type of product never create value and so cash; looking at the **service business**, the line is always positive, so the service is creating a positive inflow, but it is evident how above is respect the one of the **successful product**, meaning that the money generated is less, but at the same time is less also the risk related with the business, in fact, the line of the cumulative balance is never negative.

The conclusions that are possible to draw are that the business related to product requires more investment than the one related to service, as it is possible to see during the initial month in which the balance line is negative, and so this makes it harder to start the business product rather than start a service business; but then, even if the initial costs are higher, the upside of the successful product is higher (Berry Tim, 2004), as a confirmation of the risk-return trade-off theory, a milestone topic in Finance that implies a positive relation between risk and return, meaning

that higher is the risk associated with an operation higher is the return expected (Wang Cindy, Chen Yi-Chi, Lo Hsin-Yu, 2021).

Another important conclusion is the fact that launching a product can also lead to unsuccess, as is evident in Figure 6, and as it is represented in Table 2, an unsuccessful product never recovers the initial costs, and this is a risk that companies need to consider.

2.2.4. Business Plan and Lean Start-up

Another driver of success for a Start-up is the business plan, a document that summarizes different typologies of data related to the business.

I will present a strategy that has emerged in the last years, the lean Start-up method, a driver of success: Startups need to act differently from other firms, regular companies, applying an iteration process that gives the possibility to improve products thanks to customers' feedback and collection of data, usually starting with a basic product, the "minimum viable product", and then test, revise and upgrade it (Curry B., Baldrige R., 2022).

Starting with the traditional business model, a correct and viable methodology to follow, according to Timothy Berry in his book "Hurdle: the book on business planning", to build a successful Start-up, effectively able to have disruptive thinking, an ability to adapt and change and the willingness to be different, and so to create value, is starting with a business plan.

A **business plan** is "any plan that works for a business to look ahead, allocate resources, focus on key points, and prepare for problems and opportunities" (Berry T., 2004, p. 2.1).

Referring to the definition given by "The Federation of Small Businesses", an organization based in the United Kingdom whose aim is to support small businesses, in an article of 18 November 2022 in their blog, a business plan is a written document that provides an essential description of the company's business and an overview of the future; in the business plan, the company needs to set the business strategy, the key goals, and analyze how to fulfill the target goals starting from the position in which it is now, providing a description of what makes the business profitable, how to grow in the market, keeping in mind the funding requirements needed for the goals desired (fsb.org.uk, 2022, from

<https://www.fsb.org.uk/resources-page/what-is-a-business-plan.html#:~:text=A%20business%20plan%20is%20an,to%20be%20in%20the%20future.>).

However business plans are important during the whole life of a company, and not only in the initial phase because they give a direction to follow in order to maintain the level of profitability required or to ask for new loans or investments (Berry T., 2004), but they are crucial at the beginning of the creation of a business because they give the rationale that explains if the business is viable, and so it gives the answer to questions “does it makes sense to proceed with this new idea?”, “Is this new business worth pursuing?” (Berry T., 2004).

The business plan could be defined as crucial in the case of a new business because it forces the entrepreneur to think and write down realistic insight into the business, discovering real challenges and obstacles that with an initial general view, without giving the whole business the right attention, would not be discovered (Lattanzio Daniel, 2018).

As it has already been highlight in the presentation of the differences between a service related Start-up and a product related one, and as it is been explained with the presentation of different types of Startups, it is not possible to have a single Start-up business plan viable for all types of Startups: being a specific and personal document strictly related with the business, it is required that it adapts to the needs of different Startups; for some simple Startups, the ones defined as “small business”, the business plan could be simple, focus only on few starter elements that could help and guide, as the mission of the business, a market analysis, a break-even analysis and the keys to success, in order to provide the entrepreneur a critical understanding of its own business (Berry T., 2004); while for some other business also the start phase could be complicated, as it was possible to see in the figure 5, and as it has been analyzed, a product-offering Start-up would incur in higher costs in the beginning of its business, because higher are the requirements and the operations to do in order to start, they will be related with the product development, the office equipment, establish a production site, the packaging and the shipping, and if the entrepreneur does not have enough financial resources to finance all this expenses upfront, he will need a solid business plan to present to banks or investors in order to receive funds, and this type of business plan needs to

be more extensive (Berry T., 2004); in fact as it will be presented in the second chapter of this work, related with Start-up funding, both lending institutions and venture capital investors need realistic proof, as market data and critical financial projection in order to lend or invest money in a project.

In theory, the described strategy works, and the literature of past decades have thought that to start a business, it was only required the creation of a business plan and its presentation to investors or banks to receive funding, but, as it has been explained, the first phase for a Start-up is the most crucial one, is the one in which the majority of them fails.

For this reason, Startups find difficulties in implementing the traditional business plan described, because of the peculiarity of this business, which cannot be considered the same as an established company, the reason is linked with the definition of Start-up that it has been given above: Startups works with a high level of uncertainty (Ries E., 2011); the Startups, for their structure, have to deal with different perspectives of risk, because the uncertainty comes from all the fields in which a business is related to: the market in general, the product, the competitiveness, and the initial funding, that is the most crucial and difficult part because it is the uncertainty itself that makes potential investor hesitate in providing resources (Bortolini R, Nogueira Cortimiglia M, Danilevicz A, et al., 2021).

Analyzed all these characteristics of the Startups that differentiate them from established companies, it will be required also a specific process, different from the traditional one previously described, this new process that has begun to emerge is called the “**lean Start-up**” (Blank Steve, 2013).

This new methodology was introduced in 2011 by Eric Ries, with his work and the creation of the movement of the “Lean Start-up”, in which he proposes a new methodology based on rapid iterations called “business model validation” (Bortolini R, Nogueira Cortimiglia M, Danilevicz A, et al., 2021).

Ries believes that Startups should avoid using traditional methods to start their business, like the business plan one, but implement a process that he calls “validate learning” (Ries E., 2011).

The idea is based on the lean manufacturing revolution that has taken place at Toyota Motors: “Lean thinking is radically altering the way supply chains and

production systems are run” (Ries E., 2011, p. 28), applied to the Start-up business and the entrepreneurship context.

With this new approach Startups are invited to no longer use traditional business plans, but to test hypotheses, asking numerous feedback from the customers, releasing a “minimum viable product” to start receiving feedback to improve the product and the process itself, not only executing a business plan but searching for a business plan (Blank S., 2013).

This is the most crucial fact: established firms focused on creating a rational and viable business plan and then stick to it, Startups, for their uncertainty, need to find a business plan, and thanks to this new process they can focus their all-beginning phase in searching a viable business model (Blank S., 2013).

As Ries describes it “The lean Startups is a new way of looking at the development of innovative new products that emphasize fast iteration and customer insight, a huge vision, and great ambition, all at the same time” (Ries E., 2011, p. 29), to implement it, Startups test their hypothesis directly with customers, in an approach called “customer development” (Blank S., 2013) collecting feedback directly from the most crucial and important part of the business: clients.

“The Lean Start-up method (...) is designed to teach you how to drive a Start-up. Instead of making complex plans that are based on a lot of assumptions, you can make constant adjustments with a steering wheel called the Build-Measure-Learn feedback loop. Through this process of steering, we can learn when and if it’s time to make a sharp turn called a pivot or whether we should persevere along our current path” (Ries E., 2011, p. 32).

The most important characteristic in this context of uncertainty is the speed, the success depends on the speed at which the Start-up is able to make experiments, learn from feedback and then evolve (Bortolini R, Nogueira Cortimiglia M, Danilevicz A, et al., 2021).

A “**minimum viable product**” is the most basic and feasible product that can be created and it is immediately presented outside the company to receive feedback to implement and revise it (Blank S., 2013), in fact, is not only the product in the center of the discussion with customers, but also the whole production process, every small adjustment that comes from customers’ input is tested and

implemented, this process is called iterations, and if the revision is related with a big adjustment is called pivots (Blank S., 2013).

The methodology has been applied by numerous Startups, and even if, as it has been said, the characteristics of this business, the high uncertainty and so risk related to it, cannot lead to sure success, Steve Blank claims that “using lean methods across a portfolio of Startups will result in fewer failures than using traditional methods” (Blank S., 2013, p. 7); this means that the lean Start-up methodology is not related only with the success of a single corporation, but it could also be generalized to a market portfolio of Startups in general, leading to important consequences in the economy in general (Blank S., 2013).

To conclude, is it possible to consider the “lean Start-up” as a methodology that could help Startups, and companies in general, to look for a sustainable business model through the carrying out of an iterative process (Bortolini R, Nogueira Cortimiglia M, Danilevycz A, et al., 2021) strictly linked with customers’ feedback, and so strictly linked with the ones that need to be considered the most during the creation of a Start-up, because they are the one for which the Start-up is created, and the ones that will cause the success or the failure; leading to a less uncertain and more profitable economy.

2.3. The figure of the Entrepreneur in the history

Since the start of the history of humans until modern days, some people have always wanted to change the average living conditions, create or improve a product or a service, to change the way in which things were done since that moment: these people, with their inspirational and out of ordinary spirit, are the entrepreneurs. In the first paragraphs of this work the main characteristics and peculiarities of a Start-up have been analyzed, another crucial factor in the Start-up’s study is the figure of the Entrepreneur, the person who decides to start a new business, the founder (Riani Abdo, 2021).

During the whole history, entrepreneurs have played a crucial role in the development of the economy and in general of the civilization: since 17.000 BCE,

the most motivated people, began to exchange a type of good for another, starting to be merchants, and so starting a tradition that has never stop until nowadays (Allis Ryan, 2018).

What makes the real difference in order to recognize the entrepreneur in history is the specialization, the differentiation of activity, one of many examples could be the one related to the Agricultural Revolution, when human starts to take control over plants and animals, and not only to collect and hunt them, starting the stationary phase with the creation of first villages, in this context, the earliest entrepreneurs in human civilization were born, thanks to the specialization in different professions as cooking, tool-making, clothes-making, shelter-building, and starting offering specialized services(Johnson Hull, 2019) .

The real crucial factor was the differentiation of ability from one person to another, different people were good at different tasks, and this gave rise to specialized workers, as in ancient Greece where professionals offered their work, which could be a service or the production of goods, in exchange for a fee, or, for example, the soldiers of the Spartan army, who were not paid with public expenses, but their whole subsistence depended on themselves (Stewart Edmund, Harris Edward, Lewis David, 2020), could be considered a proof of an ancient entrepreneurial spirit.

Then with trade between different civilizations through trade routes, the invention of money, and the creation of markets, until the start of the industrial age through the industrial revolution and the concept of mass production and economies of scale (Allis R., 2018) the modern economy was born and, in this context, people had the possibility to start giving rise to new, innovative business thanks to the availability of energy production and labor.

Later, in the period post World War II, it is possible to recognize the first demonstrations of the modern idea of entrepreneurship: the main reasons for a huge change in the economy were the increase of global trade and the better means of communication, that gives the possibility to entrepreneurs to expand their customer base (Johnson H., 2019).

Entrepreneurs were able to start selling their products and offering their services to an increasing audience, by accessing cheaper means of production and innovating their business models (Johnson H., 2019).

An interesting insight regarding the history of entrepreneurship is given by Protestantism, some researchers have highlighted the positive effect of the Protestant religion on personal economic welfare and on the choice to become an Entrepreneur (Rietveld Cornelius, van Burg Elco, 2014).

In the Sixteenth century Luther, a German reformer, presented a theological theory regarding the protestant ethic and how it affected economic growth; then Max Weber, a sociologist, in 1930 explained that Western Europe's economic development was positively affected by Protestantism (Rietveld C, van Burg E, 2014).

The reason is that entrepreneurship, which will be further analyzed in the next paragraph, depends on psychological traits, related to determination, the need for achievement, self-confidence, and independence: individual attributes that are influenced by the principles of Protestantism (Nunziata Luca, Rocco Lorenzo, 2014).

The key relevant trait of this doctrine, and what strongly differentiates Protestantism from Catholicism, is the work ethic.

For Catholic theology, Christians that have not received the "call", intended as God's request to live a monastic life focused on prayer and meditation, have to struggle to work, perceiving it as God's punishment for man's original sin (Schaltegger Christoph, Torgler Benno, 2009).

For the protestant doctrine, the perception of work completely changes with Luther, that delete the difference between the "called ones" and the other: work is a service to God, and for this reason is honorable and necessary (Nunziata L., Rocco L., 2014).

This belief strongly affects the number of entrepreneurs in the Protestant church, since they believe that work is meant to satisfy God's request, they feel the positive duty to fulfill this request, adding value to society through their work, and this value perfectly fits the entrepreneurship spirit (Rietveld C, van Burg E, 2014).

Another strict link of protestant doctrine with an entrepreneur's typical trait, self-confidence, is the idea that the relationship with God is personal, and the fulfillment of religious duties is more related to personal goals, through research, investigations, and finding a role in the economic world (Nunziata L., Rocco L., 2014).

Choosing and following a specific religious culture, that elevates the idea of working from a spiritual point of view, has given as a result the individual tendency to become an entrepreneur (Nunziata L., Rocco L., 2014).

In conclusion, since the beginning of history, entrepreneurs have followed the market demand, offering a solution for the real needs of people close to them, the nowadays' entrepreneurial spirit is not so different, the aim is the same as in the past, but with more sophisticated means and with a global perspective: the needs to fulfill, now, are not only the one of close people, but can be the needs of the whole world, and this introduces the reason why Start-up phenomenon is so relevant nowadays.

2.3.1. Literature's evidence regarding the figure of the Entrepreneur

In order to understand and study the Start-up business there is the need to investigate both the funder, as an individual with his own characteristics and scope, and the early-stage process of finding the resources that are necessary to implement his idea (Birley S., 1987).

Last century's theories and studies about the entrepreneur were focused on motivation and background. To start it is useful to define what an entrepreneur was considered in the literature of that period: the features observed were his position respect the surrounding economic system and respect his own organization, the economic task identification, his financial remuneration, and his perspective about the market dynamics (Gómez Liyis, 2007).

It was shown that motivation was essential to create a new business and that was affected by the background of the entrepreneur, the organization for which he had previously been working, and environmental external factors (Cooper A., 1981).

In the late eighties, in an economic recession period where studies were focused on the birth of new firms (Gomez L., 2007), some initial works regarding background influence proved that the average entrepreneur was a first-children with a family firm background, in his thirties, considered a period in which a person may take higher financial risks combined with the fact that he already has developed a business experience, with higher education than the population in general, even if the education was not considered as a crucial factor (Birley S., 1987).

However, according to Veciana's studies in 1988, the two factors that sow the seeds of new business creation are related to difficult childhood: the family scarcity of means and the death of the household head (Gomez L., 2007); as if the creation of a new corporation, a new business idea, was a personal and economic ransom.

More recent studies focus the attention more deeply on the psychological interpretation of the journey that leads a person to become an entrepreneur.

The model of the business Start-up process for an entrepreneur may be analyzed following three milestones: aspiring, preparing, and entering; starting from the intention to pursue, to the commitment to continue an entrepreneurial career, in a going concern concept, through the attempt of establish the actual Start-up of a business (Rotefoss Beate & Kolvereid Lars, 2005).

To have a deep understanding of the business Start-up process Rotefoss and Kolvereid have developed a breakthrough study that combines for the first time three different approaches: the individual, intended as human resources, the environmental, as the availability of resources, and the activities performed by the entrepreneur to implement the new business. As regard human resources, this study confirms the previous theory about the importance of a high-level education in the business Start-up process, moreover, the study focuses on experience as well as education, confirming that entrepreneurs that have prior job history related to self-employment gain an experience and unique skills that encourage them to subsequent attempts of starting a new Start-up process (Cheng Mariah Mantsun, 1997) and having precedent entrepreneurial experience influences in a positive way the propensity to create new firms (Hayter Christopher, 2013).

Considering environmental resources, only at the beginning of this century the literature has started to study their influence and their relations with the outcome of business Start-up: "Urban areas tend to attract younger, better-educated adults, thereby increasing the local pool of potential entrepreneurs" (Rotefoss B. & Kolvereid L., 2007, p. 114), this shows how urbanization and geographical characteristics may affect the willingness to start a new business, but considering the study of Rotefoss and Kolvereid, the effect of this variables respect to the others described is weaker. In some precedent studies a positive correlation was found with unemployment: it was statistically proved the positive influence of unemployment growth in new firm formation (Audretsch & Fritsch, 1994).

However, Rotefoss and Kolvereid show that the correlation is positive only for the desire of starting a new business: the unemployment rate is positively correlated with an increase of the desire to become self-employed, but unemployment reduces the proportion of entrepreneurs that are actually able to establish a new business.

In conclusion, it is evident how some factors can positively affect the formation of new businesses, and that the most crucial factor is the human one.

2.4. Chapter's Conclusion

In this chapter it has highlighted the importance in the modern economy of the phenomenon of Startups, starting with a literature analysis of what is considered a Start-up, its main characteristics, and its peculiarities.

It has been explained how a Start-up can set up its business to become profitable, presenting variables of success and which are the most typical types of Startups in the economy.

Then it has been analyzed the role of the Entrepreneur, firstly with a historical background of his evolution, and then with some literature studies that emphasize his traits.

Thanks to this introductory and general chapter it is possible to continue the analysis with an examination of the different methodologies of funding for Startups and with an analysis of capital structure decisions, with the aim of understanding if a funding choice is preferable to the others in the long run.

3. Chapter 2: Startups funding

3.1. Start-up funding theory

In the first chapter different attributes of Startup businesses have been disclosed, now I will analyze one of the most important topics, funding.

This chapter will develop an analysis regarding different sources of funds for Startups, I will start with some definitions of financing methods, describing them and their characteristics, with a focus on the two main funding categories, equity and debt funding, explaining the most important differences, which factors influence them, and their advantages and disadvantages.

Then I will analyze the funding needs in different stages of a Start-up's life, underlying which solutions are best for the peculiarity of the business.

3.1.1. Start-up's funding definitions and methods

Start-up's funding is intended as the money that the business needs to launch its activity, the sources of capital are various, and the utilization of the money could cover different purposes, but the general aim is to make sure that the Start-up goes from an idea to the implementation of the actual business (The Startups Team, 2022, from <https://www.startups.com/library/expert-advice/what-is-startup-funding>).

It is also possible to define Start-up's funding as all the capital needed to start and then grow the business, so the stages involved are both the initial one when the Start-up is starting its business, and also a subsequent one, the one in which the business is growing, and the Start-up needs to raise funds to cover costs to develop and improve its business.

Startup funding can be summarized into different categories, which are common and widely used: equity financing, debt financing, crowdfunding, and government grants (Sullivan Kaylin, 2022).

It is important to define the peculiarity of each form of financing to analyze them. First of all, to do a complete analysis, it would be useful to clarify which are the needs that the Start-up has to fulfill with the funding, these needs will depend on the stage of development of the business.

The final and general aim is to start making profits, transforming the original business idea into a practical, working activity.

During the initial period, called the early stage, the business has just started, and the Start-up will need funds for specific things such as product development, initial market research, hiring the first team members, buying software tools for the basic running of the business, eventually find an office space and develop a strategy to enter the market. After this initial period, during the growth stage, the company has already started running its business, but it will need funds to grow and acquire more resources to generate more profit, such as using capital to improve the existing methodologies, develop new strategies to acquire new customers and expanding the business in the sector or internationally (Sullivan K., 2022).

The ways of funding a Start-up are different from one to another, looking at some data over 300 billion dollars are raised every year in the United States for Start-up capital, confirming the importance of the matter, and of them, 185.5 billion dollars comes from personal savings of the entrepreneur, 60 billion dollars comes from friends and family, 22 billion dollars from venture capitalists, 20 billion dollars from angel investors, 14 billion dollars from banks and 5.1 billion dollars from crowdfunding (The Startups Team, 2022).

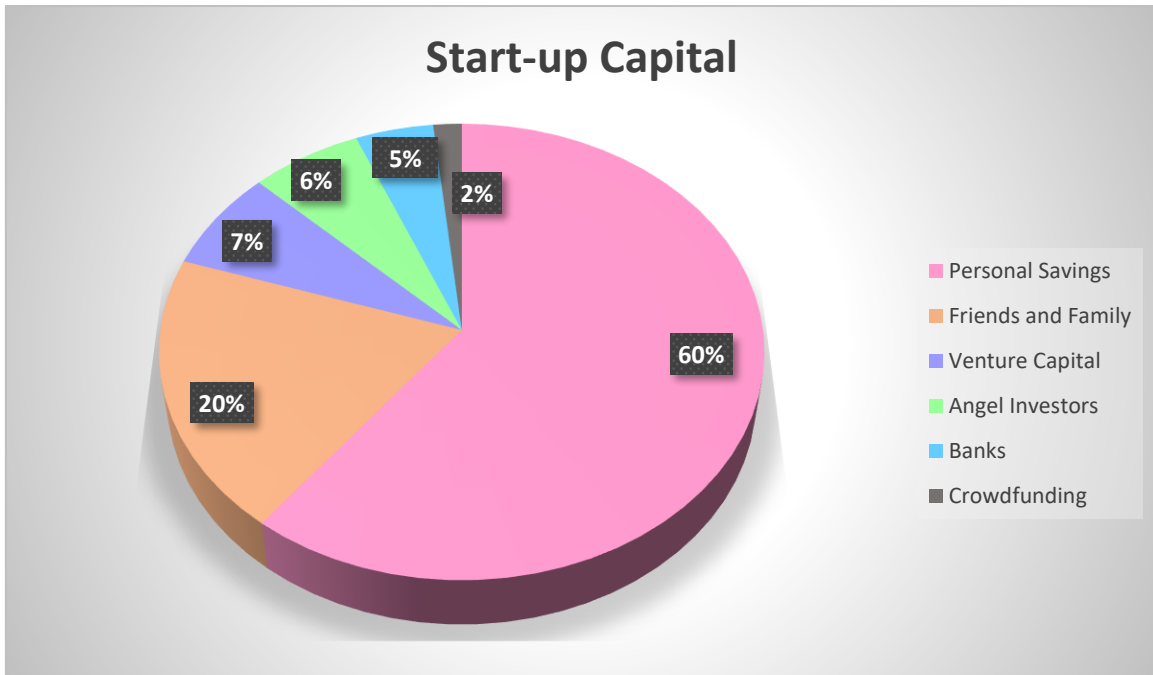


Table 4. Personal interpretation of data from (The Startups Team, 2022, from <https://www.startups.com/library/expert-advice/what-is-startup-funding>).

In this chapter, an analysis of the different methods will be carried out.

The most common method is to first fund the Start-up with **personal savings**, if the entrepreneur has the possibility, the choice of self-fund, also said bootstrap, is a successful one (DeMarco Jacqueline, 2023).

Using personal savings is the largest source of funding for a Start-up.

It is surely the most accessible source because the entrepreneur doesn't need to rely on anyone else, moreover, this is related to psychological reasons, in fact, to convince external people of the profitability of the business idea, the entrepreneur needs to show that he believes in his idea, and his business, investing his personal savings in the company (The Startups Team, 2022).

The downside of this strategy is the possible risk to lose all the savings in the case in which the business does not have the desired success (DeMarco J., 2023), and this need to be taken into account by the entrepreneur when he analyses this strategy.

Technically speaking, when the company is created the founders buy from the company, in a percentage previously agreed, the so-called "founders' stock". Since is the beginning of the entrepreneurial business, the company does not have any intrinsic value, so the stocks are issued as common stocks at par value, this means

that they do not have special rights or preferences, and the value is a nominal value (Stevens, 2012).

However, there could be cases in which founders' personal savings are not enough, because the costs to start a business are huge and related to different areas; in this situation, friends and family of the entrepreneur are consulted, and they are asked for help during the initial funding phase.

Theoretically, it may seem very simple, but every transaction needs to be correctly bookkept to be legal, that is why familiars and friends that decide to invest in the company are legally characterized as "everyday investors" (Sullivan K., 2022).

The reasons for legally characterizing friends and family as investors are related to the fact that an entrepreneur can convince everyone to invest in its activity, especially his loved ones, but the Government is aware of the riskiness of such investment for a non-financially informed individual and need to act to protect them.

In 2018, the Financial Conduct Authority, FCA, which regulate financial services related to firms and financial markets in the United Kingdom (Stresing Michael, 2018) introduced some restriction on Startups investment, indeed Start-up is considered part of the category of "non-readily realizable" securities, characterized by the fact that once an investor chooses them, in this case, once he bought shares of a Start-up, he cannot sell or trade that shares in a secondary market, and so he will have to wait to realize a profit until the Start-up will be listed on regulated markets or acquired by another established company (Stresing M., 2018).

So to solve this risky situation FCA has set some limits on the level of investment in Start-up for not advised investors; in this category fall family and friends referred to as "everyday investors" or "restricted investor", and they are characterized by an agreement that states that they would not invest more than 10% of their net assets in Start-up shares (Stresing M., 2018).

Even if friends and family could be considered as a good start for the funding needs of a Start-up their capital is limited by Government decisions; furthermore, it often happens that the Entrepreneur wants to avoid mixing work and personal relations because it could create some potential personal complications (The Startups team, 2022), this is why it is common for Startups to select professional investors to receive funds for their business.

3.2. Professional investors

In order to not have complications related to friends and family, or simply for physiological needs related to the necessity of more funds, is common that Startups fund their business through professional investors.

In the following sections, I will first explain the two main categories to which professional investors belong: equity and debt.

Then I will analyze the main features of each of the main providers of funding for a Start-up: Angel Investors, Grant funding, Crowdfunding, Venture Capital and Debt Capital; highlighting their advantages, and disadvantages, and which features impact them and their investment choice.

3.2.1. Equity Financing and Debt Financing

The higher quantity of capital for business needs is raised through equity financing or debt financing, or a combination of them (Maverick J. B., 2023).

In **equity financing** the entrepreneur gives away part of the ownership of the company, known as equity, in order to receive capital to fund the business, in order to proceed with equity funding the entrepreneur offers shares to investors, the shares are priced starting from the company valuation, and then sold at a specific price per share, issuing and then releasing share certificates to investors that have paid, as a proof of their ownership (Sullivan K, 2023).

The principal advantage of equity financing is providing capital that can be used to grow the business without the obligation to return it after a period of time, enabling the Start-up to receive funds without adding financial commitments (Maverick J. B., 2023).

The disadvantage of equity capital is the dilution of ownership's power that follows the investment, having new partners as stakeholders can lead to a more complicated decision-making process for what regards company's strategies to pursue.

As regard the other funding method, in **debt financing** Startups found themselves asking a financial institution for a loan, getting upfront the money needed to start

the business, and stipulating an agreement to pay back the loan to the financial institution, with an agreed time and interest rate (Sullivan K., 2023).

Startups that have already established their initial business or, even better, that have already some income as a demonstration of the viability of their business, will receive a loan more easily (The Startups Team, 2022) since the Bank will be interested in the demonstration of the ability of the company to generate enough profits to be able to respect the term of repayment of the loan.

Another advantage of using a debt financing method with respect to an equity one is that the Start-up maintains full ownership, without the need of giving it away as shares (DeMarco J., 2023).

Some disadvantages that could be taken into consideration regard both economic and strategic reasons.

Taking a loan means receiving the money upfront, but comes with a cost, the interest rates that need to be repaid to the bank. This financial consideration needs to be done before deciding to opt for this kind of financing; moreover, stated the uncertainty related with Start-up business, it could be an error to take for granted that the business will be able to generate enough profits to repay the loan within the agreed time (Sullivan K., 2023).

After having disclosed the main differences between these two financing categories and their pros and cons, now I will present more in detail the types of financing available for a Start-up, highlighting their features, and specifying the type of financing to which they belong: equity, debt, or other.

3.2.2. Angel Investors

I will start the analysis of investors with Angel Investors.

Angel Investors are private investors interested in startups (Sullivan K., 2023), their principal characteristic is that they are wealthy people, who wants to invest their money in new businesses.

Angel Investors fall into the category of equity financing, they are one of the most important sources of equity funds at the beginning of the business, Angel Investors have some peculiar benefits as the fact that they can decide on their own to invest, without having to follow a complex decision-making process decided by a

corporation or implied partnership, for these reasons for the initial funding phase they could be what the entrepreneur needs (The Startups Team, 2022).

Working with Angel investors could be an advantage because of the ease to meet them at conventions or through websites, and for their flexibility: they are more available to negotiate the terms or the number of equity shares in which they are interested in (Lavinsky Dave, 2023).

To start the collaboration and invest in a Start-up Angel Investors will first do a due diligence analysis.

Through due diligence, Angel Investors want to ensure the goodness of the investment, talking to customers, analyzing bank account statements, and conducting some analysis on the internal process (Sullivan K., 2023), to be sure of their decision to invest in a specific Start-up.

An advantage of funding a business with Angel Investors rather than using personal capital, or money from family and friends, is that Angel Investors provide guidance and could be mentors to help the company grow, providing knowledge from previous activities (Lavinsky D., 2023).

The disadvantages are related to the type of funding, that is equity funding: choosing Angel Investment will cause the entrepreneur to give away some equity, losing some ownership, which is crucial in the first phases of the business (Lavinsky D., 2023).

3.2.3. Grant funding

Another way to receive funds that do not belong to the category of equity financing and debt financing is through grant funding.

This method differs from country to country because it is strictly related to national regulations.

In its general traits, with this methodology, Startups receive money from the Government or from an organization (Popli Chitraansh, 2023).

It is possible to apply for this possibility by respecting some requirements clearly stated (The Startups Team, 2022), these requirements can be strict and can impose restrictions on the area in which the money received could be used.

However, grant funding could be a competitive way to receive capital, it does not require giving away equity, as in the case of equity financing, and does not imply the duty to give back the money as in debt financing (Sullivan K., 2023).

Receiving grant funding is difficult and requires a lot of effort, often it is required to make some changes in the Start-up to adhere to the criteria of the grant (Popli C., 2023).

I will present some grants from different countries to analyze how they are structured and how they differ in terms of funds and requirements.

3.2.3.1 Biotechnology Ignition Grant in India

The Biotechnology Industry Research Assistance Council (BIRAC) of India launched in 2020 the Biotechnology Ignition Grant (BIG), a plan to invest in Startups in the biotechnology sector (BIRAC, 2020).

The support is given to Biotechnology Startups with an innovative business idea, able to be translated into commercial technologies or products. Indian Government provides a grant of approximately 75.000 dollars in local currency for a defined period of 18 months in which the Start-up need to evolve from the idea to the completed project, thanks to governmental help in terms of mentoring, support and, obviously, funds. To apply for the grant, mandatory requirements need to be fulfilled, such as having the Start-up registered under the Indian Companies Act, 1956/2013, not earlier than five years from the closing date of the program, being an Indian Start-up, with at least 51% of the ownership of Indian citizens, accept to pay the 5% of net sales obtained thanks to the grant funding as royalties, and provide some documentary evidence that verifies the technological level of the company (BIRAC, 2020).

3.2.3.2. Small Business Innovation Research in the USA

The United States Small Business Administration (SBA) offers the Small Business Innovation Research (SBIR) program to offer funds to support American Startups related to technological innovation. The focus of the program is funding “small, independent US businesses”, for this purpose strict restrictions are applied in terms of type of firm, ownership, and size. The Start-up must be organized as a

“for-profit”, it needs to be for the majority of its equity - more than 50% - controlled by US citizens or US small business firms, and cannot have more than 500 employees (U.S. Small Business Administration, 2013).

The proposed business needs to be perceived as commercially feasible in order to be chosen for the program. After being selected, Startups will receive the funding in different installments, a first grant of 150.000 dollars in the first 6 months, then if the results of the first period are considered worthy, the company receive another grant of 1.000.000 dollars in 2 years (Popli C., 2023).

3.2.3.3. Amber Grant in the USA

Amber Grant by WomensNet was created in 1998, to help Startups and entrepreneurial ventures created by women. WomensNet is an online organization that offers business grants to women-owned companies, they settle a grant of 10.000 dollars every month to an eligible entrepreneur, and at the end of the year they select one of the previous winners to receive an additional amount of 25.000 dollars.

The application is easy to be implemented, it has an application fee of 15 dollars and can be sent through their website. Being a women-owned company is the only requirement, past winners' businesses regard a multitude of several businesses as diesel engine repair, spices and seasoning mixes, a creamery, and a grocery store for people with dietary restrictions (<https://ambergrantsforwomen.com/>, n.d.).

3.2.3.4. Focus on European funding opportunities

In Europe, numerous funding opportunities are available for small businesses. Thanks to the “Single Market Programme” 4.2 billion euro were allocated to strengthen the European market, with a focus also on boosting the competitiveness of small businesses (commission.europa.eu, from [https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/single-market-programme/overview_en#:~:text=The%20Single%20Market%20Programme%20\(SMP,governance%20of%20the%20single%20market.\)](https://commission.europa.eu/funding-tenders/find-funding/eu-funding-programmes/single-market-programme/overview_en#:~:text=The%20Single%20Market%20Programme%20(SMP,governance%20of%20the%20single%20market.))).

Another program is the “Connecting Europe Facilities”, which finances businesses related to transportation, energy, and climate-related matters (cinea.cc.europa.eu, from https://cinea.ec.europa.eu/programmes/connecting-europe-facility_en). For the climate change topic, the European Union has created “Horizon Europe”, a program that funds research and small businesses related to sustainability and climate change with a budget of 95.5 billion euros (ec.europa.eu, from https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en).

3.2.4. Crowdfunding

Another method of funding is Crowdfunding, in which the company convinces a large group of people to invest a small amount of money in the business, typically through a campaign mostly held on online platforms (DeMarco J., 2023)

The crowdfunding method can be applied in different forms: peer-to-peer, equity crowdfunding, rewards-based crowdfunding, donation-based crowdfunding, and profit-sharing or revenue-sharing.

Since there are many types of crowdfunding, the Start-up needs to select the one that adheres the most to its business.

I will first present the different types of crowdfunding and then analyze the pros and cons of this strategy.

Peer-to-peer lending, in this type of crowdfunding individuals give the money to the Start-up in the form of lending, as the name suggests, expecting to be repaid with interests (European Commission, from https://single-market-economy.ec.europa.eu/access-finance/guide-crowdfunding/what-crowdfunding/crowdfunding-explained_en).

In **Equity crowdfunding** as a return for their money investors receive stakes, becoming part-owners of the firm. In **rewards-based crowdfunding** goods or services are given as a return for the money invested, the reward is non-financial and it is usually related to the business of the Start-up, in fact, this type of funding can be beneficial for companies that produce tangible products (Kappel Mike, 2022).

In **donation-based crowdfunding**, no reward is expected by individuals that donate a small amount of funds. Usually, in this type of crowdfunding, individuals

want to fund a specific cause or idea, for example for nonprofits, charities, and disaster relief efforts (Kappel M., 2022), so is not common for a Start-up to use it as a funding method.

In **profit or revenue sharing**, individuals are rewarded with future profits or revenues of the firm (European Commission, from https://single-market-economy.ec.europa.eu/access-finance/guide-crowdfunding/what-crowdfunding/crowdfunding-explained_en).

The pros of funding your firm through crowdfunding are that you engage customers' attention towards your products, enhancing sales and reputation, in fact crowdfunding by its public nature gives the firm the possibility to receive numerous investors that will increase the business credibility, creating a good foundation for further rounds of financing (Baquiche Noelle, 2019).

These pros are compensated by the difficulties of implementing a crowdfunding strategy and by some disadvantages that this plan may bring.

Since crowdfunding is fully based on convincing a large number of people to invest in your business, the activity needs to be already settled and started, to have proof of the viability of the business, so crowdfunding is not perfectly adequate for initial funding phases (Baquiche N., 2019).

Moreover, crowdfunding needs to be analyzed in terms of cost, effort, and time. To reach a large number of people that could be interested in investing in the company there is an important preparation of marketing contents and advertisement, and this commitment, in terms of money and time, is taken away from the company's core growth and will be fully dedicated to the crowdfunding activity, this is a strategic choice that needs to be considered (Baquiche N., 2019). Another disadvantage to take into account is the possible consequence of a failed crowdfunding campaign, which could have a negative impact on the company's reputation (Baquiche N., 2019).

3.2.5. Venture Capital

Another option to receive funds is Venture Capital, that is, as for Angel Investors, an equity-based strategy.

The main characteristic of this strategy is that usually Venture Capital's funds are invested in high-risk Startups that have the potential for exponential growth (The

Startups Team, 2018, from www.startups.com/library/expert-advice/what-is-venture-capital).

For its characteristics, Venture Capital is preferable for types of businesses that are at the beginning of their economic life but already have an idea and a plan to scale and become a big and profitable businesses.

As has been evidenced before, the main source of capital, after personal savings and friends, is given by Venture Capitalists, that are classified are the most important investors for a Start-up.

They operate selecting and supporting Startups that are oriented to grow with resources of different types: money, also referred to as financial capital, management skills, also said human capital, and social capital, by providing access to the network in which the Venture Capital is part, providing information and resources (Alexy Oliver, Block Joern, Sandner Philipp, Ter Wal Anne, 2012).

It has been evidenced a positive effect between the social capital of Venture Capitalists and the quantity of money given to a Start-up in the funding round (Alexy O., Block J., Sandner P., Ter W. A., 2012).

Some aspects of the social network of a Venture Capital, such as structural and relational aspects, will positively influence the investment decisions, enhancing the willingness to invest more capital.

3.2.5.1. Social Capital of Venture Capitalists

First of all, there is the need to explain what is intended by the social network of Venture capital, the social network is built through Venture Capital syndication. Venture Capital syndication starts when a Venture capitalist invests in a new venture, creating a link, a relation.

So, when more Venture Capitalists syndicate their investment, a group of connections starts with the investment object at the center (Alexy O., Block J., Sandner P., Ter Wal A., 2011).

The two main aspects of the social network are the structural and the relational ones, the structural describes the intensity and quantity of connections in a network and the position of the Venture Capital in the network itself; while relational aspects describe the direct connections between the participants (Alexy O., Block J., Sandner P., Ter Wal A., 2011), focus on both of them is important to

understand the degree of the syndication and the position in the syndication, this will differentiate how much information can the Venture capitalists access and exploit.

The main reason for this phenomenon is related to information, a wider social network, given by a higher number of connections, provides wider access to information, related to the firm-specific characteristics, and exploiting this kind of information results in having knowledge about the current investment characteristics and the future opportunities of the firm (Alexy O., Block J., Sandner P., Ter Wal A., 2011).

So, it makes the investment decision easier and the Venture Capitalists will feel more secure in investing more money.

In fact, in the initial phases, having access to further information gives the investor better knowledge of the firm (Alexy O., Block J., Sandner P., Ter Wal A., 2011).

Moreover, it has been proved that the Start-up can benefit from the social capital of its investors also in the post-investment phase, thanks to the established connections, Startups can receive even more support and advice, as management skills, and expertise. Said so, social capital has a measurable effect on the funding decision of Venture capitalists, by enhancing the amounts of financial capital offered to Startups (Alexy O., Block J., Sandner P., Ter Wal A., 2011).

Venture Capital investment is a modern approach to business, in fact, Venture Capitalists do not simply provide capital to a firm that is already established, and that has a clear path for future profitability, but they need to bet in an early-stage firm that has not much more than an idea.

To do these types of investments and succeed there is the need for an experimental mindset, a very low-risk aversion, and the knowledge of the strong possibility of failure (Nanda Ramana, Rhodes-Kropf Matthew, 2013).

Taking into consideration the central role of failure in the Venture Capital investment model, an important financial paradigm states that a high level of success goes hand-in-hand with a high level of risk, risk in this case given by the uncertainty of the business model of Startups (Nanda R., Rhodes-Kropf M., 2013).

The ability of a Venture capitalist stays in the recognition of a profitable business idea when all the other investors fear to invest in it.

Vinod Khosla, an important Indian Venture capitalist, quoted, citing a speech from Michael Jordan: “Our willingness to fail gives us the ability and opportunity to succeed where others may fear to tread”.

3.2.5.2. Advantages and Disadvantages of selecting Venture Capital

The advantages of choosing Venture Capital, if the Start-up has the possibility, are several: firstly, as it has been said, Venture Capital belongs to the category of equity financing, so this means that if the whole project fails, the Start-up will not need to pay the money back.

Moreover, one of the main advantages is that Venture Capitalists not only provide funds, but business and institutional knowledge, and relations with other companies, investors, and professionals (The Startups Team, 2019), providing resources that go beyond mere financing but give a practical possibility for the Start-up to exploit them for subsequent growth.

Surely, these advantages come with some cons, first of all, for the nature of the financing type, as it was with Angel Investors, to receive capital, Startups need to give away some equity, and so part of the ownership, issuing additional shares in order to offer them to investors in exchange for their capital, and this led to a decrease in the ownership of startups’ founders and existing early shareholders, this phenomenon is called Equity dilution (Rizwan, 2023).

The key to balancing the needs of funding with equity dilution is to raise only the capital needed.

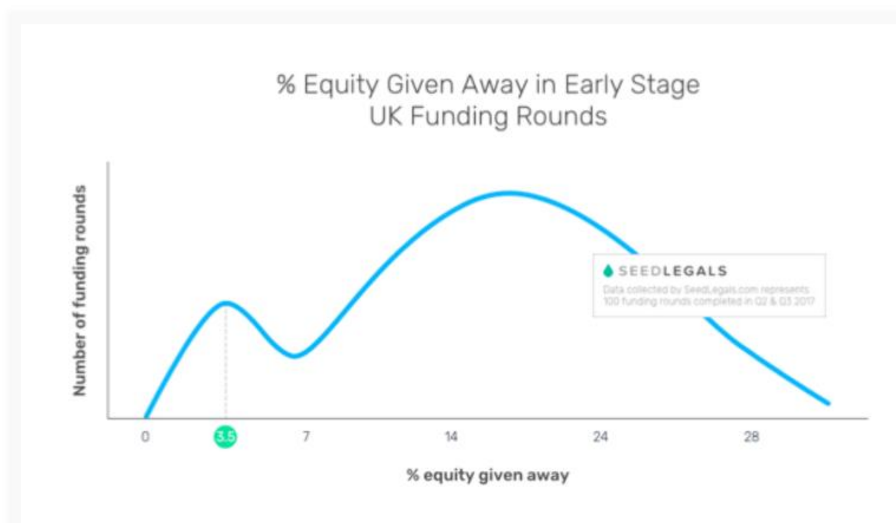


Figure 7. Percentage of Equity given away in Early Stage UK funding rounds, from Seedlegals’s post, written by Anthony Rose, Jun 9, 2019, from <https://seedlegals.com/resources/8-steps-to-making-an-angel-investment/> (Rose A., 2019)

In the graph above it is possible to graphically look at the percentage of equity given away in different stages of funding in the UK in 2019, it is evident how the percentage of equity rises as the number of founding rounds increases, as it will be explained in the next section.

From the perspective of dilution appears clear that the best solution is to maintain a low level of outside capital.

In fact, in the beginning, Start-up valuation is not easy to implement (Rizwan K., 2023), and the contractual power of the Start-up is low with respect to the one of Venture Capitalists, resulting in a position of disadvantage for the firm.

The initial investors will receive shares in a stage in which the company has the least value of its whole life, and so the funds raised in the early stage will be the most expensive ones for the Start-up (Hower, <https://www.svb.com/startup-insights/startup-equity/startup-equity-dilution>), get more funds that the needed ones will only take to losses, both in terms of value and dilution.

The key takeaway from the dilution problem, and so a solution to overcome it, is linked with forecasting ability; it is important to dedicate time to analyzing and trying to forecast the real needs of the company, in order to avoid both getting too little or too many funds.

Another feature that needs to be considered in terms of advantages and disadvantages is the fact that Venture capitalists require a return on their investment, this return is usually given by an exit.

At a certain time of the life of the Start-up, investors close the deal with the company, with an exit that is usually pursued through an acquisition or an initial public offering (The startups team, 2019).

The exit phase of investors from a firm usually happens when the firm's business is going really well, and revenues are increasing, so a viable option for investors as Venture Capitalists is to implement an initial public offering.

In the initial public offering (IPO) the shares of the company are offered to the public.

In order to start, the company will need to find a bank that is willing to underwrite the sale of shares of the company to the public (Stevens A.J., 2012).

Implementing an initial public offering is costly, a fee of 10% is usually paid to the underwriter commission for legal and accounting costs. Moreover, this type of strategy does not provide immediate liquidity, since usually there is an imposition of six months of lock-up, in which all the shareholders after the initial public offering cannot sell their stock. Another possibility to exit is through acquisition, which means selling the company to another bigger firm, usually, the acquisition is paid in cash or with shares of the acquiring company, giving to the managers and investors immediate liquidity (Stevens A. J., 2012).

Venture Capital financing is common and has a lot of advantages, however, for its nature, it requires an exit from the company at a certain time, and this will not be a viable option for entrepreneurs that wish to run their Start-up by themselves in the long run, the fact that the ownership will be given away at a certain future time needs to be taken into account in the evaluations.

Evaluating which form of financing is the most suitable for a Start-up is important for the consequent profitability.

3.2.5.3. Categories of Venture Capitalists

The category of Venture Capital shares some common characteristics as the ones discussed above, but it is possible to classify them with respect to the origin of their funds.

It can be useful to consider three categories of Venture Capitalists: Government Venture Capitalists, in which the public sector provides the funds that they use, Independent Venture Capitalists, where funds come from a group of wealthy individuals, and Corporate Venture Capitalists, where there is a corporation that manages the fund (Berger Marius, Hottenrott Hanna, 2021).

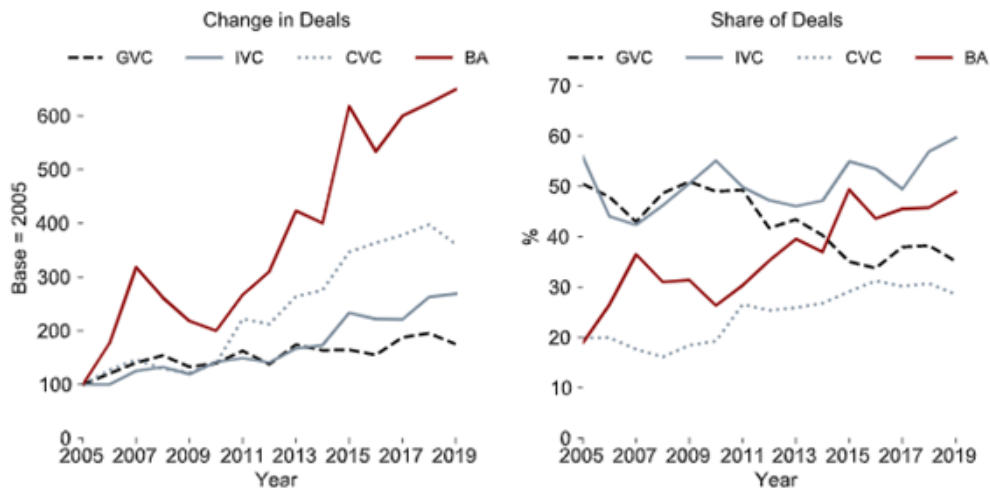


Figure 8. Graphs of the change in deals and share of deals for different types of Venture Capitalists and Business Angel, from Berger Marius, Hottenrott Hanna, 2021, page 5 (Berger & Hottenrott, 2021)

As it is possible to see in the two graphs above, which compare the different types of Venture Capitalists also with Business Angels, the change in deals, taking as base 2005, appears in general with a positive trend, with Business Angel's curve that the one that has grown the most until 2019, followed by Corporate Venture Capital, Independent Venture Capital, and Government Venture Capital.

While the second graph takes into consideration the share in percentage of deals from 2005 to 2019.

The first graph shows the predominancy of **Business Angels** deals, but when the analysis is focused on the share of deals it results evident how Venture Capital is more relevant, in fact, **Independent Venture Capital** has the highest percentage of deals from 2005 until 2019, it can also be noted a higher share in the past for the **Government venture capital**, that has declined through the years, while Business Angel's percentage of deals has having a positive trend in augment in the last years;

at the bottom, there are **Corporate venture capitals**, that maintain a constant and low percentage of share in deals.

The reasons for these trends are explicable with a deeper analysis of the different types of Venture Capitalists.

Independent Venture Capital are funds managed by General Partners that raise capital from third parties and invest that capital to follow a predetermined path; its principal objective is to maximize returns satisfying stakeholders, such as investors, called Limited Partners, the profit is realized by achieving an exit from their investment at the highest possible value, through IPO or M&A transaction (ACV Corporate Venture Capital, from acv-vc.medium.com, 2020), some examples of Independent Venture Capital are Battery, Blume, Vertex.

Corporate Venture Capital is a fund managed by a corporation with the aim of investing a pre-defined amount of capital to generate value, in terms of financial value and strategic benefits for the corporation itself, so the aim is not only linked with returns, but it is more a strategic one: the Corporate Venture Capital is a way for corporations to ensure relevance in the market respect competitors and pursuing innovations in the business (ACV, 2020, from <https://acv-vc.medium.com/independent-venture-capital-vs-corporate-venture-capital-a93fca5a3c29>), some example of Corporate Venture Capital are Google Ventures, Samsung Ventures, Mitsui Global Investment.

The main differences, from the point of view of a Start-up, in receiving funds from an Independent Venture Capitalist or a Corporate Venture Capitalist, are related to the phase in which the Start-up is, usually an Independent Venture Capitalist will invest before and assist more the Start-up in the process of raising capital, adding value as in the team-building and governance, while a Corporate Venture Capitalist will add values that differ from the capital funding, as partnership, networks, and general knowledge (ACV, 2020).

As regard **Government Venture Capital**, the Government through funding programs gives funds to early-stage companies, in this way, it is possible to implement an action of support to entrepreneurial firms and Start-up (Lerner Josh, Bernstein Shai, Dev Abhishek, Bai Jessica, 2021).

Some difficulties for public entities in joining the financing of new ventures are related to the problematic information asymmetry and uncertainty of this area,

making a decision in these conditions is difficult for the complex bureaucratic rules (Lerner J., Bernstein S., Dev A., Bai J., 2021), this is why Government Venture Capital is the lowest source of capital for startups.

Venture Capitalists are characterized by some elements that have an impact on their activities and financing choices.

In order to analyze in which cases and for which amount choosing equity-based funding is the best choice some aspects related to Venture capital are considered and studied.

3.2.5.4. Signals on access to Venture Capital Financing

After having developed the analysis regarding the importance of Venture Capital financing, it is interesting to analyze the impact of different characteristics of the Start-up that affects the receiving of Venture Capital financing.

Access to finance is influenced by different factors, that facilitate or prevent access; one of the main factors influencing access to finance is human capital, considered as the level of education, skills, abilities, and work experiences (Nigam Nirjhar, Benetti Cristiane, Johan Sofia, 2020).

It is important to recognize how signals related to human capital work in mitigating information asymmetries and enhancing the possibility to access Venture Capital.

The most important relations of access to finance and human capital are the ones related to previous personal studies, experiences, and social factors.

One of the signals could be for the entrepreneur to hold a degree from an elite institute (Nigam N., Benetti C., Johan S., 2020).

In a study by Engel & Keilbach in 2007 in Germany, it has been shown that an entrepreneur, or a Start-up founder, that have studied in a prestigious university has access to a high-quality network of alumni and to important connections, helping him in the obtainment of the financing from Venture Capitalists (Nigam N., Benetti C., Johan S., 2020).

Another key factor taken into consideration by investors is **digital network** signaling, meaning the number of social network followers on the most common sites such as Twitter or LinkedIn. In fact, the propensity of investors is enhanced by the social capital of a firm, this is because social capital is an evident proof of the

already built digital relations with customers and of the successful brand image (Nigam N., Benetti C., Johan S., 2020), creating a positive effect enhancing the possibility to receive capital from investors.

Another factor that traditionally is a signal in the access to funds is the **previous entrepreneurial experience**, as it has been evidenced in the first chapter, previous entrepreneurial experience positively affects how venture capitalists perceive the firm and their likelihood to invest in it, this is caused by the insights from previous working experiences that improve the business ability of the entrepreneur in understanding the industry (Nigam N., Benetti C., Johan S., 2020). Another characteristic of the firm that impacts its ability to receive funds is given by the presence of **public subsidies**.

Different research has demonstrated that public Start-up subsidies have a positive effect on obtaining funds by lenders and investors, they facilitate and enhance the success of raising external capital (Berger M., Hottenrott H., 2021).

The reason behind this positive effect is related to the information worthiness that public subsidies carry, in fact, public Start-up subsidies provide verifiable information and objectives regarding the business, as quality certification, and so as a quality attribute that guarantees a differentiation from the competitors (Berger M., Hottenrott H., 2021).

Moreover, receiving public subsidies is a strong signal for a Start-up, it suggests that the value of the business has been recognized and thanks to the amount of money received the Start-up can already start establishing its business, as in seed financing (Berger M., Hottenrott H., 2021).

The value of this information is differently perceived by different investors as Business Angels or Venture Capitalists, divided into Government Venture Capitalists, Independent Venture Capitalists, and Corporate Venture Capitalists (Berger M., Hottenrott H., 2021).

For the different characteristics of these investors the perceived value changes, in fact, it has been demonstrated that Business Angel decides to invest in a Start-up by producing some heuristic assessment and that they are less likely interested in acquiring information through due diligence (Van Osnabrugge Mark, 2000).

Investment decisions of Business Angels, as well as Government Venture Capitalists, are based on finding a fit between a Start-up mission and contribution

to society, and not merely by an economic profit, this is why Business Angels and Government Venture Capitalists mostly appreciated the signals of public subsidies (Berger M., Hottenrott H., 2021).

As regards Independent Venture Capitalists, they are most interested in investment projects and need to be careful about the fulfillment of due diligence obligations (Berger M., Hottenrott H., 2021), since their main goal is to maximize profit they will not be positively affected by social contribution, and having already assess during the due diligence the most important questions, the information value of public subsidies will be less important respect the previous categories; in any case they will be positively influenced by the cash inflow of money, that will enhance Start-up attractiveness. Corporate Venture Capitalists need to pursue different kinds of goals related to the strategic aims of the corporation, for this reason, the informative value that public subsidies may take is reduced (Berger M., Hottenrott H., 2021).

In any case, it is important to keep in mind the positive correlation between public subsidies and Venture capital funding, because of the importance that Governments all over the world are starting to give to entrepreneurial ventures, in fact, in the last decade, the financing programs from national Governments around the world has reached 156 billion dollars (Lerner J., Bernstein S., Dev A., Bai J., 2021), and this could improve Start-up welfare but also the general economic system.

3.2.6. Debt Financing

As it has been already mentioned, there are several ways for a Start-up to finance its business, and they are primarily divided into equity and debt methods, the equity ones have already been analyzed.

A Start-up can also decide to finance its business with debt or with a mix of debt and equity.

In this section, the main features of debt financing will be analyzed.

Debt financing can be considered a great option for Startups that have evidence of profitability, and commonly the providers of debt finance are banks or financial

institutions, referred to as “lenders” (ArK Kapital, 2022, from arkkapital.com/basics/startup-business-loans).

Debt financing for Startups can be implemented in several ways: through bank loans, government loans, or with other innovative instruments (ArK Kapital, 2022).

A **Bank loan** for Startups works as a traditional loan, in which the firm borrows money that will be repaid with interest in a predetermined amount of time (Hekkert Carl, from zeni.ai/blog/debt-financing-for-startups).

Government loans, such as Microloans, are most suitable for early-stage Startups.

In the United States Microloans are offered by the so-called Small Business Administration (SBA), and its plans for small business financing, with a program that provides capital up to 50.000\$ in order to help small businesses to succeed (sba.gov, <https://www.sba.gov/funding-programs/loans/microloans>).

Microloans in the United States are provided by SBA and are managed by Microlenders, nonprofit organizations with experience in the financial field that works as intermediaries to provide funds to Startups (sba.gov, sba.gov/funding-programs/loans/microloans).

One of the most considerable of the many advantages of debt financing in general, despite the previous classification made, is the lack of ties between the Start-up and the lender: as it has been seen, with equity funding startups need to offer some shares in exchange for capital, losing control and ownership, with debt financing startups only receive a credit, this imply that the Start-up will not suffer of ownership dilution (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

Moreover, differently from equity financing in which the investor that obtains equity stakes will be part of the decision-making process, with debt financing, there is no need to include the lender in internal business decisions (ArK Kapital, 2022), so Startups can maintain the same level of control as before the financing and decide autonomously where to allocate funds.

Some other advantages are related to the flexibility of this choice, in fact, the time in which the debt needs to be repaid is clearly stated in the contract at the beginning of the relationship, a relationship that will naturally finish after that date.

Moreover, there are no pre-determined rounds in which the start-up can access capital as in equity funding, debt can be acquired at every moment at any stage (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

Such liberty and advantages come with a price, as it has been said in the definition, the credit received needs to be given back with interests; moreover, obtaining debt financing is more difficult than an equity one.

Starting with this last point, the main disadvantage of debt is the difficulty in obtaining it, Banks want that their position is a safe one, and to give capital they will need proof of financial viability (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

In order to be favorable to give a loan, banks require some loan covenants.

Loan covenants are agreements made at the beginning of the relationship between the lender and the borrower, and they expressly state the requirements and behavior that the debtor must follow (Peterdy Kyle, 2022).

Some examples could be as detailed financial reports or calculations, that the Start-up will need to show to the bank to maintain its status as a debtor (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

Usually, for the internal structure of a Start-up strictly linked with uncertainty, it is really difficult to comply with all the Bank's requirements, and this can cause a deterioration of the relationship, with a consequent rise of the interest rate or some other corrective actions, as in extremis the request to early payback the loan (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

A way to avoid this problem is to rely on financial experts and creates a report to meet all the requirements, obviously, this comes at a cost that needs to be taken into account.

Another drawback is linked with the lending structure itself, with the fact that the debt needs to be payback (Hekkert C., from zeni.ai/blog/debt-financing-for-startups), and this implies that the Start-up has become valuable enough in order to have earned enough money to repay the debt and interests.

But as it has been said in the previous chapter, the survival rate of Startups is really low, and so the possibilities to create a business able to repay the Bank are few.

Even if it is challenging it does not mean that it is impossible, the most important thing is a good previous organization and knowledge of what having a debt capital involves.

Some basic requirements that a Start-up can start preparing to consider this type of funding are related to financial statements, formal proofs of the ability to repay in the future, through the forecast, business plan, profit and loss statement, and a balance sheet that evidence both intangible and hard assets (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

The most important factor for a Bank is the ability to pay back the capital given, so the documents need to show this ability, demonstrating both the ability to create further value through revenue stream and also the presence of assets that can be used as part of the repayment.

The crucial thing is to demonstrate to the financial lenders the ability to repay (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

One of the most considered measures by Banks when a loan is asked is, for example, the debt-to-equity ratio, with this measure Banks can determine the riskiness level of the loan, a higher ratio indicates higher vulnerability, and so higher default probability (ArK Kapital, 2022).

The issue of the price of the debt needs to be taken into account during the initial analysis of the decision between using equity finance, debt finance, or a mix of them.

It will depend on several factors related to the business itself, such as the history, the credit profile, the type of lender, and other variables considered by a Bank, in average an annual interest rate for Startups can range between 3% and 10% of the total amount of capital given (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

A big impact on the price is made by the typology of loans that the bank is offering, in fact, debt financing as a bank loan can be offered through a **secured loan** or **unsecured loan**: the secured ones are loans backed by collateral, as properties or equipment, and so safer from the lender's point of view, while unsecured loans do not have any collateral, and so for their higher unsureness can be more costly, and so have a higher interest rate (ArK Kapital, 2022).

Some typologies of debt most commonly used by Startups are short and long-term debt, monthly recurring revenue, and revenue-based financing.

Short-term debt is intended as debt with a short repayment period, of up to one year, while in **long-term debt** the repayment period is longer, and so more suitable to finance complex and long projects.

Monthly Recurring Revenue is mostly indicated for SaaS, software as a service, and companies that work with a subscription model or with a recurring revenue stream, with this type of business model the loan will be based on the company's revenue, on average the lenders will finance from 3 up to 5 times the Start-up's monthly recurring revenue (Hekkert C., from zeni.ai/blog/debt-financing-for-startups).

A similar type is **Revenue-based financing**, a flexible form in which the monthly payments are related to the monthly revenues, following the performance trends. (Hekkert C., from zeni.ai/blog/debt-financing-for-startups)

When an analysis is related to such a complex and rapid-change topic as the financing of Startups is not possible to only consider features without taking into consideration the fact that they are related to each other.

Debt and Equity financing in fact cannot be considered as two different possibilities to choose from; Startups usually choose a combination of equity capital and debt (ArK Kapital, 2022).

An approach of combination of the two methods can assure the Start-up with the benefits of both methods, reducing and mitigating the disadvantages of both, obtaining, as a result, a maximization of funds with the minimization of the dilution (ArK Kapital, 2022).

An implementation of this theory is given by **Venture debt**.

Venture debt is a different type of financing, and as the name suggests is provided by Venture Capitalists, but differently from the Venture Capital finance analyzed before, in this typology, Venture Capitalists do not acquire equity in exchange for capital (ArK Kapital, 2022) preventing equity dilution.

Usually, it is used as a complementary method to equity financing, the providers are both Banks and Non-bank lenders (Corporate Finance Institute CFI, Peterdy Kyle, 2023).

Venture debt differs from traditional loans because it is more easily obtainable and managed because it required less or no collateral.

Moreover, it is indicated for companies that have already demonstrated their abilities and values through Venture capital rounds but that do not have enough operations to be eligible for a traditional loan (Corporate Finance Institute, Peterdy K., 2023).

The term of venture debt is usually between the short and medium term, commonly from 1 to 3 years; even if the amount changes for different cases, an average value of venture debt is related to the last round of equity financing, approximately up to 30% of it. Venture Debt can have positive advantages also for Venture Capitalists, in fact, one of its features is related to liquidation preference, a better position in the case of liquidation enhance the likelihood of being paid (Corporate Finance Institute, Peterdy K., 2023).

Another example of the relation between Debt and Equity in Start-up financing is related to Banks' warranties: the lender, both in the case of traditional debt or venture debt, when providing capital can also require some warrants on the Start-up's equity, as the right to purchase stock at a predetermined price and time (Hekkert C., from zeni.ai/blog/debt-financing-for-startups); the warrants are used as a risk compensation, and in a future date they can be converted at a predetermined rate in shares of the company.

3.3. Financing rounds

Some methods of funding available for a Start-up have been analyzed, in their characteristics, advantages, and disadvantages.

Now to complete the analysis there is the need to examine the financing needs in terms of stages of life of the Start-up.

An important aspect to be considered during the analysis of a Start-up's financing are the rounds in which the new born company requires funds - funding round.

The rounds are characterized by different levels and times for raising capital, usually, they are four, even if sometimes Startups proceed further, the most common levels of funding rounds are pre-seed funding, seed funding, and then

different series of funding: series A, series B, series C, and also sometimes start-up proceed with round D and round E (Ziuznys Andrius, 2022).

Progressively the money raised increases from one stage to another, but to continue with a subsequent funding phase the Start-up needs to be able to survive and grow, generating enough value to attract investors for a new round.

Nowadays this has become even more difficult, it is proved that less than 10% of companies that raise a seed round are able to raise a series A funding (Dukes, 2023).

3.3.1. Seed Round

Starting with the **pre-seed funding** round, usually this round is not considered an official funding round because the investors of this stage are usually the ones described at the beginning of the previous chapter, so the entrepreneur himself with his savings and personal capital, friends, family, or other supporters (Ziuznys A., 2022).

For this round, there is no need to have an implemented idea and a working business, but only to convince people close to you to invest in your idea.

The only investors that could be interested in pre-seed funding are Angel Investors, because of their characteristics already described: the aim to invest funds into early-stage Startups in exchange for equity (Lavinsky Dave, 2023).

The first stage of the official funding process is **seed funding**, as in the previous phase, it is common that the founder, his family, and friends continue to invest in the company, but if previously the Start-up needed only to demonstrate that its idea was able to fulfill a market need with early-stage basic product development, in the seed round it needs to prove the product-market fit, having an already established value proposition (SVSG, from <https://svsg.co/pre-seed-vs-seed-fundraising/#:~:text=What%20Exactly%20is%20the%20Difference,of%20proving%20product%2Dmarket%20fit>).

During the seed funding phase, Start-up's founder starts demonstrating its value directly through market results, however, a large contribution to the success of a seed funding phase is given by the ability to network and sell the business idea to the potential investors (Dukes J., 2023).

The amount of money during this phase is widely variable because related to start-up characteristics, potential, and the ability of the entrepreneur to convince investors.

Focus the analysis on three different geographical areas, in 2018, in the United States, the average valuation of a seed deal was 7.7 million dollars, in Europe was 3.6 million dollars, showing a more conservative and adverse to risk behavior, while in Asia the average was 4.5 million dollars (McCann Stephen, 2020). It is interesting to consider the trend of seed funding in the last few years.

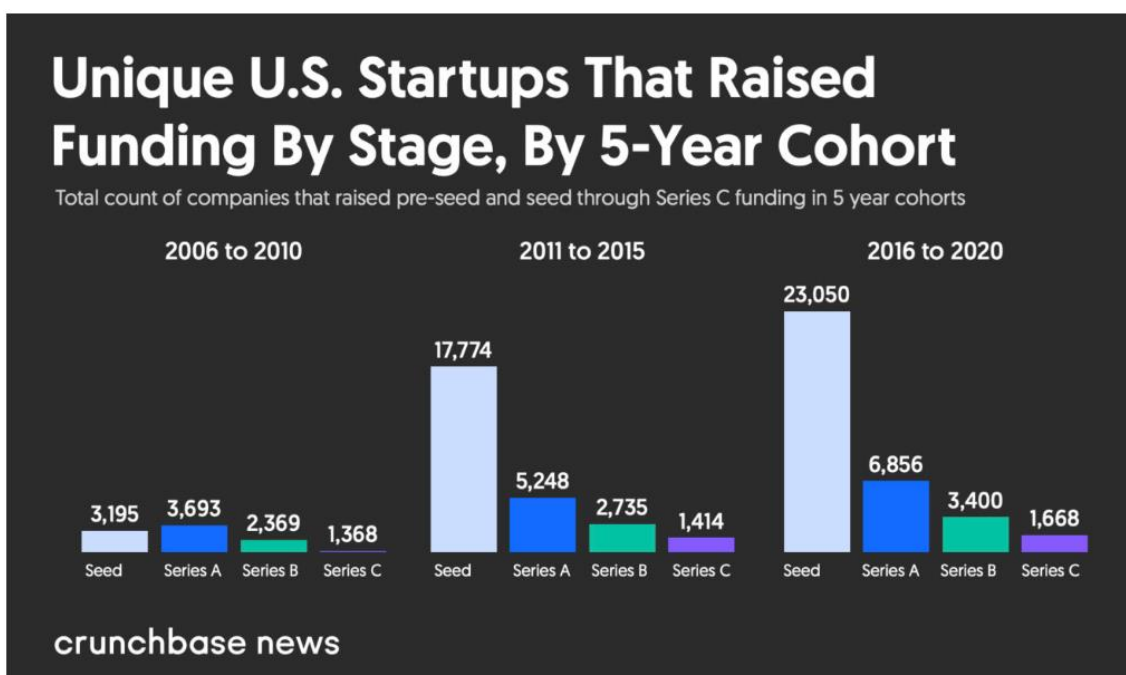


Figure 9. Change in Venture Ecosystem, From Teare Gene, 2021, from <https://news.crunchbase.com/venture/seed-funding-startups-top-vc-firms-a16z-nea-khosla/> (Teare Gene, 2021)

As it is possible to analyze from the graph above, the number of U.S. Startups that receive seed funding has dramatically risen from 3195 in the period between 2006 and 2010 to more than 23.000 in the period between 2016 to 2020 (Teare Gene, 2021).

The main feature of a seed funding round is the quantity of money received, more with respect to the quantity received during the pre-seed phase, an amount that starts to become an important sum for a Start-up that has just started its business; through this new income, the funder can improve its product development and

marketing, creating even more proof of the viability of the company and demonstrate that the Start-up is becoming an established entity (Lavinsky D., 2023).

The passage from the seed phase towards the subsequent stage of funding is difficult.

It is not to be taken for granted that a Start-up, profitable at the beginning, will be able to receive further rounds of funding.

3.3.2. From the post-seed to Series A

An interesting insight is provided by the so-called "**post-seed gap**", a timeframe after having received the initial seed funding and before receiving the subsequent and most important funding stage, Series A (Loeb Steven, 2014).

A too large gap between these two periods could cause the sinking of the profitability.

This can be considered one of the most important causes of Start-up death, with a worsening in recent years: from 2007 to 2015 the rate of Startups able to obtain Series A funding after seed funding dropped from 35% to 7,4% (Trader Andrew, 2018).

The competition for obtaining funding has risen in the last years, due to the larger number of startups, in fact "with a growing number of startups in many different sectors, raising a top series A has become a growing challenge" (Flint, 2019).

In the graph below it is possible to see the number of Venture Capital investment deals in the United States, for the last 17 years.

The growth is very huge in such a short period of time, it is possible to notice that from 2006 to 2020 the trend is positive with an almost constant growth.

The most significant difference is notable in the most recent years, passing from around 13.000 deals in 2019 and 2020 to around 18.000 deals in 2021.

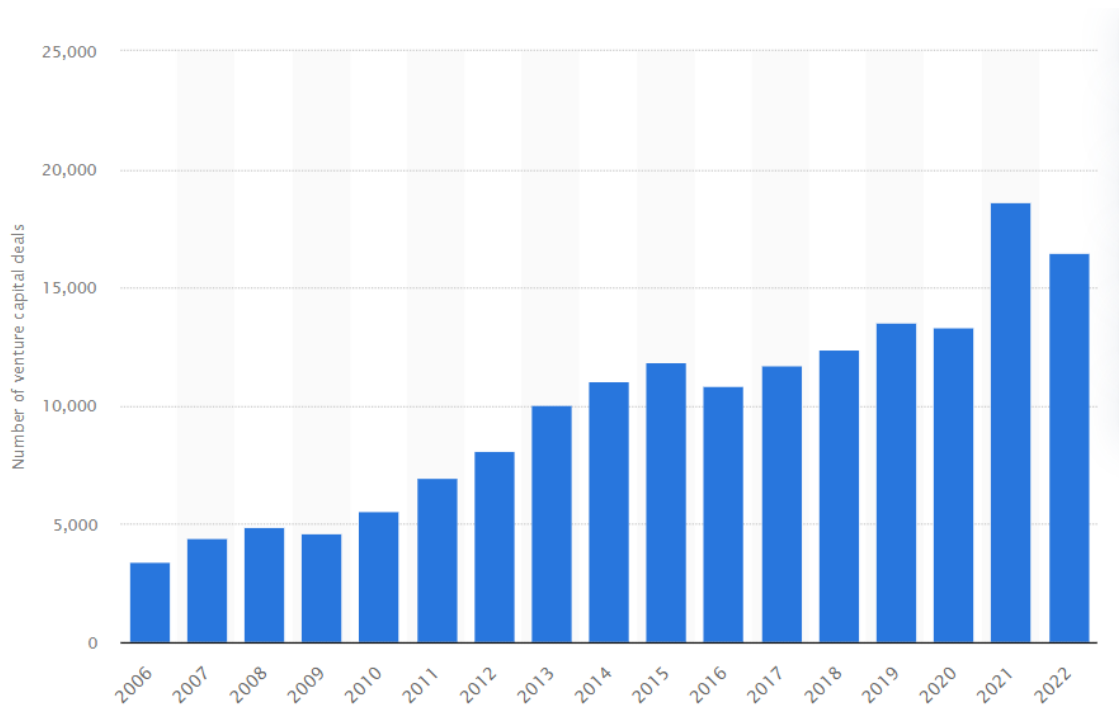


Table 5. Number of Venture Capital Investment Deals in U.S. 2006-2022, by Statista Research Department, April 6, 2023, from Statista.com (Statista Research Department, 2023)

The transformation over the last ten years of the Series A financing environment is huge (Flint Pete, 2019), the rounds had become bigger in terms of money received and so more complex to deal with.

The expansion of capital in each round has taken higher expectations and so higher requirements for Startups that desire to join them (Flint P., 2019).

Investors are interested only in the most potentially profitable business, that is able to demonstrate strong growth and the potential to keep the growth continuing (Iskold Alex, 2020).

As it has been said, to obtain **series A funding**, companies need to be able to demonstrate their value, demonstrating the presence of a product-market fit (Flint P., 2019) and a Minimum Viable Product (Dukes J., 2023) a Minimum Viable Product, as it has been analyzed in the first chapter, is the most basic version of the product offered by the firm, it shows only the essential features, and it is useful to have an early validation of the idea (Spiridonova Kristina, 2023)

A Series A funding phase provides investors, as Venture Capitalists, the first series of preferred stock, in exchange for their capital (Dukes J., 2023), preferred stocks are stocks that contain superior rights with respect to common stocks, as for

example higher dividends or a preferable position in the event of liquidation (Ganti Akhilesh, 2023).

That is why the key goal is to make investors believe in the company's value so that they will be interested in the equity capital of the company.

Success is strictly linked with the demonstration of the real possibility of growth, Startups must keep focusing on implementing long-term objectives, while at the same time reaching short-term milestones (Flint P., 2019).

The demonstration of the ability to grow is not related only to the product or service offered, but is influenced by the Start-up ecosystem, the ecosystem can be described as the network of individuals and organizations, such as investors, service providers, universities, research institutions, government agencies and stakeholders that help the development of the Start-up (Dukes J., 2023).

Being interconnected with different types of stakeholders gives the Start-up the possibility to have the resources needed to grow.

In fact, Start-up in these initial phases does not need only capital, but mentorship, advices, and market opportunities to discover and implement.

The ecosystem is not only the external one, the internal organization and culture is the key factor to attract funding, the talents working in the Start-up needs to be supportive, available, and believe in the idea.

Even if the characteristics of every corporation can vary, as it has been already said, the difficulties of obtaining funding have risen for the higher and more intense competition of the players.

It can be useful for a Start-up to consider some **milestones** that are needed in order to be considered by Venture Capitalists for a Series A round.

These milestones can be a clear and observable product-market fit, an average of 5 million annual reoccurring revenue, and a demonstrable year-over-year growth for 3 consequents years (Trader A., 2018), while data from 2016 required and suggest reaching one million annual revenue (Ockenfels Mathias, 2016), giving as an exemplification of how this business change really fast, and how the dynamics of Start-up funding rapidly evolve.

From the point of view of Mathias Ockenfels, from Medium.com, in a guide that cites the best practices to prepare for a Series A fundraising, the prerequisites to obtain funds in this phase are not only related to the ability to grow faster, but

mostly to the ability to grow in a consistent, and so predictable, way: it is important to demonstrate to investors a clear ability to maintain the level of monthly net revenues in a persistence trend, with a stable, or even better increasing, percentage every month (Ockenfels M., 2016).

Another important proof to show to investors is the demonstration of product-market fit, through customers' behaviors analysis with cohort analysis or retention graphs, showing data that demonstrate how the market is adopting the product or service offered; even if some feedback from customers, testimonials, and press may be useful, show clear analytical evidence is important not only as a demonstration for investors but also to show that the Start-up is data-driven (Flint P., 2019).

Another point in which investors are interested in is the "latent demand", the customers' demand that is not been conquered yet because of lacking funds, but that will be satisfied after the financing round; this is an important proof for investors as they will feel sure about their bet (Flint P., 2019).

An important prerequisite that is crucial in this phase, more than in the previous ones for the amount of money that will be received, is preparing a financial plan on a monthly basis that will forecast future needs, this will help investors understand which are the needs and the expected incomes during the future phases (Ockenfels M., 2016).

In addition, another metric considered by investors is the ability of the Start-up to build a valuable team, attracting and hiring excellent talents that will take critical benefits in the company, forming a diversified talent pool (Flint P., 2019).

An efficient way that could help the company to focus on the metrics that need to be reached to hit Series A milestones are the OKRs - objectives, and key results. They are tools that make it possible to align the priorities, recognize the teams and persons accountable, and find out what are the main important achievements and how to reach them (Trader A., 2018).

Some practical metrics that can be measured, to be useful as OKRs, to check if a milestone has been reached, include user acquisition, growth, retention, lifetime value, revenue, and expenses (Trader A., 2018).

Some interesting OKRs examples related to the tech business in 2021 are given by the following data: to reach the milestones of a Series A round a Start-up is expected to have an Annual recurring Revenue of 500.000 dollars, a Compound

Monthly Growth Rate, measured as month-over-month growth, of 15%, a Net Revenue Retention of more than 100%, considering that the best one reaches 120%, a gross margin, given by subtracting the costs of goods sold to revenues, of at least 75% (Sacks David, Ruby Ethan, 2021).

Another important topic is the network. The network is crucial, in order to successfully raise Series A funding, Startups need to embrace early arrangements with influential investors, exploiting meetings and creating connections with them before starting the Series A funding (Dukes J., 2023); the relationship with Venture Capitalists needs to be started months earlier, to maximize the chance to get the funds, letting the investors know the founder and the business (Flint P., 2019). One problem for a Start-up's founder is the time that he needs to dedicate to the funding activity, in order to not waste time and reach the desired amount of funding, some strategies could be implemented, but as a general rule, the most important things is to have everything organized and be ready to all the different phases.

After having prepared all the materials that will be interesting for investors, such as financial models, both historical and forecasting, and having clear in mind which are the right partners for your business, taking into account their interest and the competition, it is useful to identify different **categories of investors**, concerning the perception of their importance (Iskold A., 2020).

The categories are related to the suitability of investors with the business, the so-called "dream investors" are the best partners for different reasons, experience in the same business, network ability, and advising (Iskold A., 2020), moreover, they are the one that best adheres to what the Start-up is offering.

An investor can be classified in this category if he maximizes and balances different requests as the price that he agrees to pay, the quality in terms of knowledge and mentoring, and the time that is needed to obtain a commitment and close the transaction (Ockenfels M., 2016).

Then the "second choice" investors are characterized by a good fit with the business even if they are not the best; as a last chance, there is also a need to take into account some "Backup investors", so that, in case of not receiving the funds from the preferable ones, there will be another chance of being financing (Isold A., 2020), or they could be useful to fill-up a round (Ockenfels Mathias, 2016).

Receiving a Series A funding round is all about convincing, being persuasive, and demonstrating the important features in the best way possible.

This is why it is important that the narrative of the Start-up mission is clear and persuasive, investors need to believe that, not only the idea is profitable, but also that the timing is respected, showing that this moment is the most exact moment to implement that type of business, to address a solution (Flint P., 2019).

It is common that during meetings with investors to access Series A, founders show a presentation specifically created to provide some overview of the business, this presentation is called Pitch Deck.

The choices regarding Pitch Deck are crucial, the design needs to be attractive and it needs to have enough quantity of analytical data (Flint P., 2019); it is important that the content of the slides fully represent the vision of the company, giving at the same time the right importance to the design, that needs to appear professional, and that can be outsourced to a professional designer (Ockenfels M., 2016).

Being compliant with all the requests of Venture Capitalists will help the company obtain series A funding.

After having received these funds during the seed and A-phase, the Start-up has become able to generate profits and is continuing its business as a well-established company, the needs in this phase can be also addressed to investors.

In fact, companies can use Venture capital to reach the funding needs to scale their business, reaching new levels of development, requiring a third round, the Series B funding (Ziuznys A., 2022).

3.3.3. Additional funding rounds

The **Series B** Funding attracts numerous investors, interested in the later stages of the Start-up and the “Series B” class of preferred stock (Dukes J., 2023).

As for Series A, the requirements for the Series B round are strict, but since the Start-up is no longer in the initial phase, it will need to demonstrate crucial development of its business.

The mean series B funding for the United States in 2022 was 48 million dollars, with a median of 35 million dollars (Dukes J., 2023), while in Europe the average Series B round was between 10 million dollars and 25 million dollars (Ohr, Thomas, 2023).

Companies after having received this type of financing can pursue different objectives: continuing the development of new products, conquering new markets, or acquiring some competitors, for these need a further round of funds, the **Series C round** of funding would be useful (Ziuznys A., 2022).

The most typical need is the preparation for an initial public offering or the participation in an acquisition; as it has been seen for the data regarding series B funding, the subsequent the phase the most difficult is to attract investors, in a series C round they will be looking for companies that can demonstrate traction even more (Dukes J., 2023).

The type of investors in this stage is different from the previous: in this case, Private Equity investors and Investment Banks as well are interested in investing in already established and successful companies, they aim to obtain a secure return from the investment, rather than bet on a Start-up in its early stage (Ziuznys A., 2022).

To conclude, for many startups acquire multiple rounds of financial resources, going beyond the initial seed funding, has become a crucial part of the business (Hor Shoon Chan, Chang Artemis, de Oliveira Rui, Davidsson Per, 2021), even if the success rate is low and the difficulties are various, Startups can implement different strategies to pursue their objectives.

3.4. Chapter's Conclusion

In this chapter the funding methods available for a Start-up have been analyzed, studying their characteristics.

The main focus has been on the differences between Equity and Debt methods, their advantages and disadvantages, and how some signals impact them.

In conclusion, it is not possible to define which of them is the best method to fund a Start-up, both because of the peculiarities that every Start-up has, and also because the best choice is to select the methods that better adhere to the future plan of the Start-up, considering also the possibility to implement a strategy with a mix of the methods.

Then, I have concluded the chapter analyzing the needs of the Start-up in different stages of life, presenting the main features of different funding rounds.

The main aim of the chapter was to study the funding methods available for a Start-up, in the next chapter I will focus my analysis on the consequences of the funding choices made.

4. Chapter 3: Capital Structure Decisions and Profitability. Qualifyze GmbH Case Study

After having examined in the previous chapter how a Start-up can fund itself, it is interesting to examine how this decision will impact future profitability.

This chapter aims to analyze how different initial choices regarding the funding method selected may affect the profitability of a Start-up.

Firstly, I will present some theories regarding capital structure decisions and the impact of such choices.

Then I will provide some data regarding profitable firms born as Startups and I will briefly analyze their financials.

Finally, I will present a Start-up case study, to implement an analysis regarding business model choices, profitability and funding.

4.1. Capital structure decisions

Many academic studies have been focused on the topic of Corporate Finance and financial theories, ending up with numerous theories regarding the capital structure of a company.

In this chapter the most important theories regarding capital structure decisions will be briefly analyzed to be able, then, to examine if the same theories could be applied to Startups, and if yes under which circumstances.

4.1.1. Traditional Theories of Corporate Finance

I will first present some traditional theories regarding corporate finance, in order to be able, then, to focus the analysis on the applicability of these theories in the Startups business.

Starting with a definition, capital structure is intended as the combination of equity and debt used by a corporation to finance its business (Coleman Susan, Robb Alicia, 2012).

As it has already been explained in the previous chapter, debt is intended as the quantity of capital that the firm has borrowed by third parties that need to be repaid, while equity is the result of the investment of shareholders, both of the owner and of external investors.

Equity can be considered a permanent source of capital in the firm (Coleman S., Robb A., 2012) since it does not need to be returned.

The most important and recognized theory regarding Capital Structure is the one related to the work of **Modigliani and Miller** in 1958.

In their work, Modigliani and Miller stated that the company capital's cost is independent of capital structure (Modigliani Franco, Miller Merton H., 1958), and so that capital structure decision does not impact the market value of the company, under certain circumstances (Jaros Jaroslav, Bartosova Viera, 2015).

Modigliani and Miller's theory assume that the capital market is considered perfect, with information easily and freely available to all investors, the funding methods available are only bonds and stocks, transaction costs and cost of financial distress are not considered, the interest rate is risk-free and debt is not risky, all investors behave with rationality, moreover the possibility and the condition to obtain credit are the same for all the investors (Jaros J., Bartosova V., 2015).

Years later some other alternative theories regarding capital structure decisions have been developed, to overcome the strict assumption of the theory of Modigliani and Miller and to take into consideration some aspects not considered yet.

One of those aspects is **information asymmetry**.

Asymmetric information refers to a transaction in which one party has less information, in terms of value or quantity, with respect to the other party (Ruan Keyun, 2019).

Asymmetric Information can be analyzed in two different aspects: adverse selection and moral hazard.

Adverse selection happens when one party has a set of more complete information than the other party, the latter is said to be in a disadvantaged position since the information is power in a transaction (CFI Institute, 2020b)

A **Moral Hazard** happens in a situation in which an individual has the possibility to take advantage of another party, transferring to him all the risks. In this scenario it appears possible that a party will take advantage of the other one, the source is the different level of information that each party has, specifically regarding risk level (CFI Institute, 2020).

One of those theories that take into account information asymmetry is the “**pecking order theory**”, developed by Myers and Majluf in 1984.

In the pecking order theory, it is recognized that people that are external to the firm have less information than insiders.

For this unfavorable situation, that causes informational asymmetry, people that are external to the firm, the outsider, will tend to underprice the share of the firm at the moment to invest in it, to compensate for the lack of information (Coleman S., Robb A. M., 2012).

This theory can be considered of high importance since in such a complex economy full of new firms that, as we have seen in the first chapter, is continuously in expansion, having information means having power, power that is directly translated to the price in which shares are evaluated.

The availability of information is expressed in practice by the publication of annual reports by the firms.

Another capital structure theory that is interesting to consider is the one developed in 1998 by Berger and Udell, the “**Life cycle**” theory of financing, according to this theory the financial sources for a firm change in the different stages of growth (Coleman S., Robb A. M., 2012).

The theory is based on the same concepts as the previous one, small firms are characterized by uncertainty about their information, and this is the main cause of difficulties in obtaining external finance.

The theory suggests that in the seed and developmental stages, informational asymmetries are widely present, and this causes the firm to not obtain fair capital from external providers at the beginning; however, as the firm grows and moves to the next phases, the opacity of information gradually decreases, and the firm is able to access to external finance more easily (Coleman S., Robb A. M., 2012).

After having presented the theories regarding capital structure, the question that I want to answer in this chapter is related to the application of these theories in the Startups business.

4.1.2. Applicability of Corporate Finance Theories to Startups

In this section, I want to analyze if theories regarding Corporate Finance can be applied to the Startups world.

In the past, when not enough studies and research have been already conducted, Startups financing was seen as a completely separate field from corporate finance (Denis David J., 2004).

However, even if Startups strongly differ from an established company for which corporate finance theory is developed, Startups are characterized by the same problematic issues that need to be taken into account when analyzing established firms: agency problems and information asymmetry (Dr. Achibane Mustapha., Tlaty J., 2018).

The only difference between traditional corporate finance applied to established companies and corporate finance applied to Startups is that the latter need to take into account the higher magnitude of the two issues just cited.

In the Start-up environment, there will be a need for corrective actions and solutions different from the ones required in mature companies (Dr. Achibane M., Tlaty J., 2018).

Starting with **Modigliani and Miller's** theory, in the previous section have been analyzed some conditions that need to be present for the theory to be valid.

The circumstances in which the theorem of Modigliani and Miller's works are the drawbacks in the application of it to Startups, since the assumptions on which the

theory is based are applicable even to established firms with difficulties and not completely, surely they are not suitable for a newly founded firm.

To decide on the capital structure, a Start-up will need to analyze all the crucial factors that influence the firm, and not simply rely on just one criterion (Jaros J., Bartosova V., 2015).

The most crucial problems that exclude the application of Modigliani and Miller's theory to Startups are the assumption related to information and availability of sources: in the theory, all the subjects, and so both investors and the firm's manager, have access to the same information; moreover, the firm has full access to all the debt and equity alternatives, with no transaction costs.

In reality, Startups, for the already described features related to uncertainty, behave differently from established firms and need to be considered in a different and specific way about funding methods.

As regard the availability of resources, for Startups it is difficult or even impossible to issue stocks and bonds, because, for such small firm, the costs are prohibitive (Coleman S., Robb A., 2012), and they better rely on different sources of capital, as Venture Capital, Bank loans, personal savings, private investors, as it has been analyzed in the previous chapter.

As regard the other issue, the informational one, for Startups is common to work in an informational asymmetry environment.

In the relevant terms for this work, Information asymmetry is intended as the situation in which the Start-up manager has better and wider information than external investors, creating a difficult environment for potential investors (Jia, 2015).

In the Start-up setup this imbalance cause difficulties in completing the transaction, since investors suffer from a lack of information.

For these reasons, the problems of asymmetric information and of availability of resources, the traditional theory is not applicable to Startups.

Moreover, in Start-up's financing environment another issue to be considered is the agency theory.

The agency problem can be described as a misalignment between the agent and the principal, specifically in the case in which the agent, that works in behalf of the

principal, has a conflict of interest and is not aligned with the principal's will (Girdley Michael, from <https://girdley.com/the-agency-problem-and-Startups/>). The problem related to agency theory occurs when the two parties, principal and agent, that are cooperating, do not share the same goals.

This misalignment causes some costs, described as agency costs, given by the necessity to bring into line the behavior of the agent that is not aligned with the principal's interests (Landstrom Hans, 1993).

In the Start-up's case, agency costs differ from the life stage in which the company is, in fact, it appears that agency costs are higher before the investment rather than after the investment (Dr. Achibane M, Tlaty J., 2018).

The reason is that in the pre-investment period, since the aims of the two parties, the Start-up and the investor, can differ, this may lead to higher agency costs.

The main objective of the investor is to complete an analysis of the ability and profitability of the start-up, while the Start-up is focused on obtaining funds to become successful (Dr. Achibane M, Tlaty J., 2018).

While in post-investment time, since the investor has made his decision, this means that he is sure about the business in which he is investing reducing the misalignment that causes agency costs.

The information asymmetries and the agency theory are more present in Startups than in established firms, this is why a better approach to the study of corporate finance of Startups is given by the already mentioned theories of Pecking Order and Life Cycle.

Applying the **Pecking order theory** to Startups allows to take into account their characteristics of uncertainty related to information availability, in fact, differently from established firms, Startups, as small firms, do not need to submit their financial report to any controlling commission, moreover, their financial statements are not publicly available, which cause the previously cited information asymmetry between parties, so external investors are not able to evaluate the real financial condition of the firms (Coleman S., Robb A. M., 2012).

A conclusion of applying the pecking order theory in the capital structure decision of a Start-up, is that managers will prefer to select as capital internal equity, use debt or use retained earnings, if any, before deciding to go with external capital in the form of issuing shares (Coleman S., Robb A. M., 2012).

Retained earnings are the profit that the firm keeps to make the business grow, so the profit minus the dividends that need to be distributed to shareholders.

A higher amount of retained earnings symbolize strength in the financial ability of the firm (Sarath, 2021).

Startups that follow this theory will prefer to use internal equity as a preferable source, followed then by short-term debt, long-term debt, and only finally external equity. External equity in fact will be the costliest one, the lack of information and the uncertain situation in which external investors found themselves will take them to not be able to clearly state the risk level of the firm, ending up assuming an higher level of risk, and so demanding a higher cost for the equity capital, making external equity more costly (Coleman S., Robb A. M., 2012).

Another reason, as it has already been said in the previous chapter, to support such theory is related to the problem of dilution, in fact considering as preferable the use of debt, or the possibility to use earnings generated by the company, will not cause power dilution as in the case in which equity is being offered to outsiders, and so control can be retained (Coleman S., Robb A. M., 2012).

The other theory presented in the previous chapter was the **Life Cycle theory**, as for the Pecking Order theory, also this one finds a good application for Startups' characteristics.

According to the Life cycle theory, Startups will initially fund themselves using savings or personal capital from the founders, friends, and family or relying on debt to not suffer dilution (Coleman S., Robb A. M., 2012), to then use different kinds of financing when becoming more developed, and so perceived as less risky.

4.2. Consequences of Capital Structure Decisions

After having described which theories of capital structure best apply to Startups, in this section I will analyze some studies that highlight the outcomes of applying certain capital structure decisions.

I will analyze some literature studies that have measured the impact of different capital structure decisions on the profitability of the firm. First, I will start with an analysis of the choice between using internal or external capital, and how this choice affects the firm result.

Then I will show some pieces of evidence regarding how capital structure decision influences the level of information asymmetry.

Ending with a focus on the outcomes of using Debt or Equity as financing methods.

4.2.1. Literature study on the choice between internal and external capital

I will start my analysis regarding the choice of internal or external capital, considering the case of Startups that have based their business on technology, because, as it has been possible to analyze in the first chapter, they are the most common type of Startups nowadays.

A technology-based Start-up will have to face different challenges in order to raise capital.

Having as the core of its business new technologies discoveries that will change rapidly, the information available for external investors are few because the Start-up will need to protect its innovative idea.

However, to develop its business the Start-up will need to grow rapidly, when the market demand for their service starts to rise, the firm needs to enter a phase of growth, and to be able to respond to the increasing demand will need more and more capital, and this will make external capital fundamental and inevitable (Coleman S., Robb A. M., 2012).

It could be interesting to analyze if technology-based Startups follow the theory suggested and will initially start using debt and internal capital, to then pass to external capital when they have developed their business, so when they are in the next stage of the life cycle.

A theory examined by Coleman and Robb in a study of 2012, seeks to determine if technology-based firms will follow the path of capital structure theories analyzed before.

They end up concluding that the information opacity that characterized this type of Start-up will surely lead to a theoretical preference for internal debt since external investors will have difficulties in doing an accurate analysis of the effective grade of risk of the company, and this conclusion is consistent with both the previous theories (Coleman S., Robb A. M., 2012).

At the same time, being a promising company that will guarantee profit to investors could be attractive for external capital providers, such as Venture

Capitalists or Angel investors that have been fully analyzed in the previous chapter.

These investors are attracted by the high potential that technology-based firms have, moreover, the expertise that they can take in the Start-up will help even more the growth and profitability (Coleman S., Robb A. M., 2012).

In conclusion, the research demonstrates how in general Startups follow the theories of pecking order and life cycle, because of the information asymmetry problem (Coleman S., Robb A. M., 2012).

The more information asymmetry is present in the Start-up business, the more in the initial phases the firm will significantly use internal capital compared to relying on external debt and equity.

The focus of Venture Capitalists, the most common providers of equity capital, is oriented only on growth-oriented firms with demonstrable ability to innovate and change (Huyghebaert Nancy, 2003).

However, the most important difference in the outcome of the capital strategy decision chosen is made by the ability of the firm, especially in technology-based firm with a competitive advantage given by intellectual property, to demonstrate fast growth and innovation; with these two characteristics Startups will be able to attract a larger amount of external debt, creating even more potential for high growth thanks to a larger pool of investors, and so acquiring more competitive advantage (Coleman S., Robb A. M., 2012).

So until now, academic researches concluded that for Startups it is better to choose external capital only if some characteristics are present, such as the fact that they are technology-based, innovative, and have fast growth.

In practice, for the choice of internal versus external financing that has been presented, some restrictions regarding the availability of internal capital need to be kept in mind, making the choice of selecting external capital an imposed one.

4.2.2. Literature study on how the capital structure choices impact information asymmetry

After having analyzed some theories regarding the theoretical choice of using external or internal debt, it is interesting to follow on with an analysis regarding how the choice of capital structure influences the level of asymmetric information. Since it is evident how Startups are characterized by this problem, also in the choice of capital structure this issue needs to be taken into account.

Using Venture Capitalists as capital providers, and so selecting equity-based funding, will give some important advantages to the Start-up in terms of dealing with information asymmetry with respect to traditional bank financing.

Venture Capitalists, as specialized companies, have expertise that can help the Start-up facing the problem, while banks, providing traditional capital, for their internal organization cannot fully assess the characteristic of really innovative projects, and so are limited in financing them (Dr. Achibane M., Tlaty J., 2018).

The severity of information asymmetry is strongly reduced thanks to the expertise of venture capitalists, implemented by the fact that they are used to working with innovative Startups, and thanks to their capacity-building, they act as helpers in developing the innovation (Dr. Achibane M., Tlaty J., 2018).

In a study by Ye Jia in 2015, some pieces of evidence have shown this aspect of preference for venture capital financing with respect to debt financing.

Specifically, in the case of high-tech industries it has been shown that equity holders as venture capitalists are more prone to fund Startups, with respect to banks, the reason is that Venture capitalists find some advantages in financing high-tech Startups, that banks do not find.

In the model analyzed by Jia, the business taken into consideration is the high-tech one, a relevant choice because, as it has been explained in the first chapter of this work, high-tech Startups are the highest in number and the most profitable.

The interesting point is that Venture Capitalists, thanks to their expertise, can monitor some common problems of high-tech investment.

Commonly High-tech Startups suffer from a high amount of Research and Development costs to be implemented before the production or the effective start of the business, these high costs lead to high uncertainty related to the investment

since it has been shown that the probability of success is very low; moreover, a higher level of information asymmetry exists between the Start-up and the investor (Jia Ye, 2015).

These features give large space to the action of venture capitalists with respect to banks, in fact, Venture Capitalists obtain an advantage in financing high-tech firms, thanks to the characteristics of their equity relationship with the Start-up, they can reallocate control rights that are based on performance (Jia Ye, 2015).

As it has been explained, when a firm decides to opt for equity financing, it needs to take into account the dilution of ownership's power, in this case, Venture Capitalist obtain control rights in the form of partial ownership, given as voting rights, cash-flow rights and the ability to allocate these rights based on the firm performances (Jia Ye, 2015).

These characteristics, together with the previous expertise that they can bring to the company, make the investment for Venture capitalists more interesting, with respect to the bank's point of view; concluding that for the asymmetric information's aim, it appears preferable to choose equity respect debt.

4.2.3. Literature study on the consequences of choosing debt capital

Firstly, a study that is interesting to consider regards the relationship between debt financing and Startups outcome.

Rebel Cole and Tatyana Sokolyk in 2017 conducted a study related to Debt financing to Startups.

The most interesting result was obtained by distinguishing between debt obtained as personal debt so in the name of the Start-up's founder, and business debt, obtained by the Start-up as a firm.

The results of the study highlight that Startups founded with business debt are more likely to survive and become profitable than Startups founded with only equity, considering profitability as the ability to achieve higher revenues (Cole Rebel, Sokolyk T., 2018).

However, this result holds only for business-debt financed Startups, while personal debt does not have this positive effect, indeed leading to lower and worst Start-up results. The reason for these findings is related to the characteristics of the Start-

up, in fact, a firm able to obtain business debt has some characteristics that lead it to success. Startups funded with business bank credit will have better performances, than Startups funded with personal debt, meaning that the typology of debt matter more than the quantity (Cole R., Sokolik T., 2017).

When obtaining debt for the company, this signals quality and means that lenders perceived the Start-up as profitable and that they have assured the value of the Start-up, monitoring, and evaluating it, as it has been explained in the previous chapter regarding the analysis that banks do before deciding to invest in a company. While, when giving debt to an individual, the value of the Start-up is not taken into consideration, because the importance is given only to the individual borrower, evaluating only his personal creditworthiness (Cole R., Sokolik T., 2017).

So, this study evidences the importance of distinguishing between business debt and personal debt when analyzing the funding choices of a firm, concluding that when a start-up is able to receive business bank credit, this implies that the firm has been evaluated in its creditworthiness and performances, and that will be monitored by the lending institutions (Cole R., Sokolik T., 2017).

These acknowledgments act as a positive signal for all external shareholders and enhance the perception of the Start-up, resulting in higher performance.

4.2.4. Drawbacks of choosing equity capital

In Section 4.2.2. the analysis was concluded with a predominance of the equity method with respect to the debt one, in this section, I will complete the analysis showing some drawbacks of choosing Equity.

The first important drawback is related to the characteristics of the relationship between the Start-up and the venture capital, being equity-based financing, the venture capitalists take part in the control process through direct monitoring and implementing an active governance role, but the most important characteristic is the nature of the relationship, a relationship that is destiny to an end, for the characteristics of the investment period, that is a limited one. The closed-end feature of many venture capital funds leads to the necessity to close the financial relationship with the firm at a certain given time, a time that could be not perfectly matched with the necessity of the firm, in this case, some inefficiencies can arise from the timing of the exit (Bascha Andreas, Walz Uwe, 2001).

Typically, the exit is performed through Initial Public Offering, also said IPO. An Initial Public Offering, as it was explained in the previous chapter, happens when a firm decides to go public, offering shares on a public stock exchange, enabling the general public to participate in the company through the acquisition of their shares (Kerner Sean Michael, from techartarget.com/initial-public-offering). The role of Venture Capitalists, in theory, should be to enhance the maximum firm value, thanks to their expertise and competencies, arriving at the time of Initial Public Offering with a reduction in the possible underpricing, thanks to their effect of reduction of information asymmetry (Dell'Acqua Alberto, Guardasole Antonio, Bonini Stefano, 2013).

However, two aspects usually happen, making the consequences of funding with Venture capital not always the most profitable choice for the firm.

For the Grandstanding theory and the Spinning hypothesis, the initial public offering of a firm that has been firstly financed by Venture Capitalists, under certain circumstances, results in underpricing (Dell'Acqua A., Guardasole A., Bonini S., 2013).

The **Grandstanding theory** has been studied by Paul Gompers, in an article published in the Journal of Financial Economics in 1996, in his work he evidenced that young firms backed with Venture Capital funding receive an underpriced initial public offering respect to established ones (Gompers Paul A., 1996).

The reasons are related to the life stages in which the start-up is, when Venture capital funds decide to exit from the deal by taking the firm public at a young stage, the risk perceived by the market regarding the characteristics of the uncertainty of the Start-up is high, leading to an underpricing (Dell'Acqua A., Guardasole A., Bonini S., 2013).

The grandstanding theory supports the idea of the opportunistic behavior of Venture capitalists.

Startups need support from the investors, to become bigger and pass to the subsequent phase of their life, becoming also less risky and more established, however, venture capitalists prefer to have an immediate exit to obtain cash and then search for other opportunities, obtaining a positive reputation by past performances (Dell'Acqua A., Guardasole A., Bonini S., 2013).

While the **Spinning hypothesis**, by Tim Loughran and Jay Ritter, published in 2004 as an article in the “Financial Management” Journal, takes into consideration also the relationship with the bank that sponsors the initial public offering.

According to this theory, the underpricing during the initial public offering of a Start-up could be caused by an agreement between Venture Capitalists and banks, investors may find it convenient to sell shares at a lower price, increasing their reputation in the market, showing to possible new clients their ability to generate returns and obtaining capitals, while receiving support from the bank for future opportunities (Dell’Acqua A., Guardasole A., Bonini S., 2013).

Another interesting drawback is given by another theory, the possibility that Venture capitalists steal the original idea from the Start-up.

As it has been explained, the major advantage of selecting Venture Capital is their openness to invest in risky firms, with a high level of uncertainty, in which other traditional investors are not interested.

To ensure the profitability of a Start-up, they conduct analyses that make them sure about the good exit of their investment.

However, during these analyses, they discover all the insights related to the Start-up business and the innovative idea.

Several studies have been conducted regarding this topic, it has resulted that since Venture Capitalists need to ensure the validity of the idea to evaluate the risk of the company, because of their expertise in the field in which the company operates, they may threaten the Start-up stealing the business idea (Dr. Achibane M., Tlaty J., 2018).

One study related to this **hypothesis of expropriation** was made by Thomas Hellmann and Manju Puri in 2002, in a study regarding the relationship between Venture Capital investment and the strategy of development of Startups, the research was based on a data set of 170 Startups from the Silicon Valley.

In the study, Hellmann and Puri firstly evidence that the role of Venture Capitalists in financing the firm is not related only to providing capital, but Venture Capitalists have an active role in the organization set up of the Start-up (Hellmann Thomas, Puri Manju, 2002).

The study confirms the theory of expropriation of Startups backed with Venture Capital funds, finding proof that they are more likely to have the original funders

replaced by another external CEO, confirming the controlling role performed by Venture Capital (Hellmann T., Manju P., 2002).

Another confirmation of the expropriation theory came from Masako Ueda: in his study, he finds evidence of the possibility that the Venture capitalists, after having become fully informed about the project, will undertake it without the founders (Masako Ueda, 2004).

The trade-off between letting the investors evaluate the project and giving too much information that will cause the threat of stealing the idea is interesting and difficult to deal with (Masako U., 2004).

Understanding the correct level of disclosure is the core way for Startups to be both protected and attractive.

If in the previous theory, the risk was the one related to the replacement of the founder with an external CEO, in this study by Masako another threat is considered. When the Start-up discloses all the information of its project, the investor can expropriate the idea, transferring it to another firm in which he is already investing, that, for similarity of the market in which operates or for knowledge of the matter, can exploit it by itself (Masako U., 2004).

Protection against this kind of threat is given by intellectual property rights.

4.2.5. Use of intellectual property rights as protection

In such an innovative environment, intellectual property rights are the only preventive action that can preserve the firm from the problem analyzed.

Intellectual property rights are not useful only in the situation described above, but they can be useful against the steal from all possible counterparts.

Intellectual property rights come in various forms, such as patents, trademarks, copyrights, and trade secret, they can be applied to any innovative idea and offers protections from all reproduction nonauthorized (Rona Sara, from svb.com/protecting-intellectual-property-Startups).

The protection of intellectual property rights is guaranteed against all competitors, and they not only have the function of ensuring protection against possible steals, but it has been shown that they also encourage investors and enhance the probability of obtaining Venture capital funds.

Some data regarding patents are the following.

In a study from Habibo Zhou, Philipp Sandner, Simon Martinelli, and Joern H. Block, it has been proved that patents are a signal of a Start-up's ability and profitability, and so have a positive effect on venture capital funding, in fact, Startups that receive, or only apply to patent's request, receive higher venture capital's funding than Startups that does not have any application for patents (Zhou et al., 2016). However, patents are a cost that maybe not all Startups can face, especially in the initial phases.

For this reason, I will present some suggestions to protect the business idea while presenting it during the meeting with investors.

Initially, it is important to maintain the idea private, and only present it during the first meetings with investors, then it is important to select with attention investors to whom one should present the idea, remembering to disclose information only when there is the need to, and always state the confidentiality level of the whole conversation. Regarding this last matter, it is also possible to create a non-disclosure agreement (Nibusinessinfo.co.uk, from <https://www.nibusinessinfo.co.uk/content/5-ways-protect-your-idea-during-business-pitch>).

Even if it could seem unlikely to have the business idea stolen, stories regarding this matter are numerous.

4.2.6. Real-life stories of ideas being stolen

The probably most famous case is the one related to Winklevoss Twins and Mark Zuckerberg, the brothers wanted to create a social network related to their University, but lacking technical expertise they hired Mark to develop it, however, Zuckerberg use the brothers' idea to develop Facebook, even with a legal battle the brothers does not gain justice, losing the case settling for 160 million of dollars (Schools Dave, 2016).

Another story, also linked to Mark Zuckerberg but some years later, is related to Snapchat and Instagram, which is owned by Facebook and so by Zuckerberg. Snapchat was one of the main competitors for Instagram, and the latter was starting to lose users due to the "Snapchat stories" feature, perceived as innovative and attractive (Schools D., 2016).

In 2013 Mark Zuckerberg tried to solve the problem by buying Snapchat for 3 billion dollars, but managers refuse the offer.

From that moment Mark starts copying and using Snapchat features on his Instagram and Facebook, increasing his users and his potential (Murphy Mike, 2017).

After a few months of the development of the feature on Mark's social networks, the number of users was huge: more than 400 million people were using Instagram daily, with 250 million of them using the story feature, while Snapchat could count "only" on 173 million users in its entirety (Murphy M., 2017).

Snap Inc, the parent company of Snapchat, has stopped its growth and its stocks went down in price, losing value, becoming no more a valid competitor for Instagram and Facebook.

4.3. Financial Results of firms born as Startups

Theories and empirical studies regarding the outcome in the profitability of Startups have been presented, starting from their funding decisions and examining some drawbacks of the choices.

Now, I will present some examples of profitable companies that have started their business as Startups, and I will analyze their results, by highlighting which forms of funding they have used to find a correlation between reality and the theory described and analyzed.

The aim is to see how the chain of choices has impacted profitability.

The following data regards publicly available information on Airbnb, Meta, and Uber, now established and famous companies that have started their business as Startups.

4.3.1 Airbnb Case

Starting with Airbnb, the story of the founding of this famous and profitable firm is really interesting.

Brian Chesky and Joe Gebbia were two roommates that during an important conference in San Francisco in 2007 saw a lack of accommodations and hotel

rooms, perceiving this as an opportunity, they decide to rent their apartment to Conference participants, making the room available in a website created by them and called [airbedandbreakfast.com](https://www.airbedandbreakfast.com), since they offer was an airbed and breakfast (7startup, 2022, from <https://www.7startup.vc/post/startup-success-story-airbnb-a-world-built-on-connection-and-belonging/>).

Moving to the funding stage, the founders start promoting their business at conferences and conventions, but without luck.

The first turning point happened in 2008, with their first funding round.

It is interesting how it has been totally different from all the funding rounds presented in this work.

In 2008 America was busy with a really important campaign for the election of the President, the two candidates were Barack Obama and John McCain.

The founder of Airbnb start selling cereals themed as the election, ending with 30.000 dollars for the selling of the boxes of cereals with the faces of the two possible new presidents (Ackerman Keks, 2019).

After this rare pre-seed funding, they started obtaining attention from venture Capitalists, joined an accelerator, Y combinator, from which they obtain 20.000 dollars, and finally receive in 2009 a seed investment of 600.000 dollars from Sequoia Capital (Ackerman K., 2019).

In 2010 they raised 7.2 million dollars in a Series A round from Sequoia Capital and Greylock Partners (Shontell, 2010).

As it has been explained in the first chapter, a profitable business idea is an innovative idea that exploits a market gap, and in the case of Airbnb, these features are recognizable.

Moreover, the two founders were able to find a solution at the right place and time. As regard the funding, as it has been specified in the previous chapter, the funding phase or a start-up is difficult to be pursued, the uncertainty is higher and failure is probable.

With the Airbnb case, I have highlighted some characteristics of the funding process already described in the second chapter, the founders started with their savings, and with a creative approach, through the sales of cereals, they were able to get noticed, and with patience, receive funds (7Startup, 2022).

It shows that even the most innovative and successful idea needs to be implemented to become a business, otherwise, it remains only an idea. Now I will present the financials, balance sheet and income statement, of the firm, then I will analyze them through some financial ratios. Since firm valuation is a complex topic full of features, for the purposes of this work I will focus on the ratios regarding capital structure.

Balance Sheet

All numbers in thousands

Breakdown	12/30/2022	12/30/2021	12/30/2020	12/30/2019
∨ Total Assets	16,038,000	13,708,474	10,491,499	8,310,119
∨ Current Assets	14,861,000	12,386,380	8,916,386	6,561,443
> Cash, Cash Equivalents & S...	9,622,000	8,322,476	6,391,257	3,074,273
∨ Receivables	4,783,000	3,715,471	2,181,329	3,145,457
Other Receivables	4,783,000	3,715,471	2,181,329	3,145,457
Prepaid Assets	-	333,669	309,954	341,598
Restricted Cash	-	14,764	33,846	115
Other Current Assets	456,000	333,669	309,954	341,598
∨ Total non-current assets	1,177,000	1,322,094	1,575,113	1,748,676
∨ Net PPE	259,000	428,621	654,262	686,867
> Gross PPE	259,000	428,621	654,262	865,602
Accumulated Depreciation	-312,000	-379,194	-267,851	-178,735
∨ Goodwill And Other Intang...	684,000	704,910	731,687	755,000
Goodwill	650,000	652,602	655,801	652,088
Other Intangible Assets	34,000	52,308	75,886	102,912
Other Non Current Assets	234,000	188,563	189,164	306,809
∨ Total Liabilities Net Minority Int...	10,478,000	8,932,761	7,589,716	9,117,804
∨ Current Liabilities	7,978,000	6,359,282	5,139,779	5,233,764
∨ Payables And Accrued Exp...	6,737,000	5,392,075	4,675,298	3,598,564
> Payables	4,920,000	3,833,832	2,261,227	3,504,336
Current Accrued Expenses	1,817,000	1,558,243	2,414,071	94,228
Current Provisions	-	-	188,309	262,454

Figure 10. Balance Sheet of Airbnb Inc., from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/ABNB/balance-sheet?p=ABNB> (Yahoo Finance, Airbnb Inc.)

Pension & Other Post Retirem...	380,000	415,626	380,164	253,305
▼ Current Debt And Capital ...	59,000	63,479	56,586	38,022
▼ Current Debt	-	-	26,755	-
Other Current Borrowings	-	-	26,755	-
Current Capital Lease Oblig--	59,000	63,479	56,586	38,022
> Current Deferred Liabilities	1,182,000	182,796	188,309	262,454
Other Current Liabilities	672,000	903,728	407,895	1,081,419
▼ Total Non Current Liabilities ...	2,500,000	2,573,479	2,449,937	3,884,040
▼ Long Term Debt And Capit--	2,282,000	2,355,020	2,246,467	381,374
Long Term Debt	1,987,000	1,982,537	1,815,562	-
Long Term Capital Lease O...	295,000	372,483	430,905	381,374
Preferred Securities Outside ...	-	-	0	3,231,502
Other Non Current Liabilities	218,000	218,459	203,470	271,164
▼ Total Equity Gross Minority Inte--	5,560,000	4,775,713	2,901,783	-807,685
▼ Stockholders' Equity	5,560,000	4,775,713	2,901,783	-807,685
▼ Capital Stock	0	63	60	26
Common Stock	0	63	60	26
Additional Paid in Capital	11,557,000	11,140,284	8,904,791	617,690
Retained Earnings	-5,965,000	-6,357,741	-6,005,707	-1,420,991
▼ Gains Losses Not Affecting--	-32,000	-6,893	2,639	-4,410
Other Equity Adjustments	-32,000	-6,893	2,639	-4,410
Total Capitalization	7,547,000	6,758,250	4,717,345	-807,685
Common Stock Equity	5,560,000	4,775,713	2,901,783	-807,685
Capital Lease Obligations	354,000	435,962	487,491	419,396
Net Tangible Assets	4,876,000	4,070,803	2,170,096	-1,562,685
Working Capital	6,883,000	6,027,098	3,776,607	1,327,679
Invested Capital	7,547,000	6,758,250	4,717,345	-807,685
Tangible Book Value	4,876,000	4,070,803	2,170,096	-1,562,685
Total Debt	2,341,000	2,418,499	2,303,053	419,396
Share Issued	640,000	642,724	608,397	587,199
Ordinary Shares Number	631,000	633,524	599,197	587,199
Treasury Shares Number	9,000	9,200	9,200	-

Figure 11. Balance Sheet of Airbnb Inc., from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/ABNB/balance-sheet?p=ABNB>

Income Statement <small>All numbers in thousands</small>					
Breakdown	TTM	12/30/2022	12/30/2021	12/30/2020	12/30/2019
> Total Revenue	8,399,000	8,399,000	5,991,760	3,378,199	4,805,239
Cost of Revenue	1,499,000	1,499,000	1,155,833	876,042	1,196,313
Gross Profit	6,900,000	6,900,000	4,835,927	2,502,157	3,608,926
> Operating Expense	5,009,000	5,009,000	4,293,761	5,940,949	4,110,469
Operating Income	1,891,000	1,891,000	542,166	-3,438,792	-501,543
> Net Non Operating Interest Inc...	162,000	162,000	-424,865	-144,571	75,934
> Other Income Expense	-64,000	-64,000	-417,508	-1,098,575	13,906
Pretax Income	1,989,000	1,989,000	-300,207	-4,681,938	-411,703
Tax Provision	96,000	96,000	51,827	-97,222	262,636
> Net Income Common Stockhold...	1,893,000	1,893,000	-352,034	-4,584,716	-674,339
Diluted NI Available to Com Stock...	1,893,000	1,893,000	-352,034	-4,584,716	-674,339
Basic EPS	-	2.97	-0.57	-16.12	-1.27
Diluted EPS	-	2.79	-0.57	-16.12	-1.27
Basic Average Shares	-	637,000	616,000	284,363	530,945

Figure 12. Income statement of Airbnb Inc., from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/ABNB/financials?p=ABNB> (Yahoo Finance)

Diluted Average Shares	-	680,000	616,000	284,363	530,945
Total Operating Income as Reported	1,802,000	1,802,000	429,317	-3,590,147	-501,543
Total Expenses	6,508,000	6,508,000	5,449,594	6,816,991	5,306,782
Net Income from Continuing & Dis...	1,893,000	1,893,000	-352,034	-4,584,716	-674,339
Normalized Income	1,977,728	1,977,704	-269,654	-4,436,504	-674,339
Interest Income	186,000	186,000	12,734	27,117	85,902
Interest Expense	24,000	24,000	437,599	171,688	9,968
Net Interest Income	162,000	162,000	-424,865	-144,571	75,934
EBIT	2,013,000	2,013,000	137,392	-4,510,250	-401,735
EBITDA	2,094,000	-	-	-	-
Reconciled Cost of Revenue	1,499,000	1,499,000	1,155,833	876,042	1,196,313
Reconciled Depreciation	81,000	81,000	138,319	125,876	114,162
Net Income from Continuing Oper...	1,893,000	1,893,000	-352,034	-4,584,716	-674,339
Total Unusual Items Excluding Goo...	-89,000	-89,000	-112,849	-151,355	0
Total Unusual Items	-89,000	-89,000	-112,849	-151,355	0
Normalized EBITDA	2,183,000	2,183,000	388,560	-4,233,019	-287,573
Tax Rate for Calcs	0	0	0	0	0
Tax Effect of Unusual Items	-4,272	-4,296	-30,469	-3,143	0

Figure 13. Income statement of Airbnb Inc., from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/ABNB/financials?p=ABNB>

From the Financials data of Airbnb is possible to implement an analysis.

Annual Data		2022-12-31	2021-12-31	2020-12-31	2019-12-31	2018-12-31	2017-12-31
Current Ratio		1.8627	1.9478	1.7348	1.2537	1.5724	-
Long-term Debt / Capital		0.2633	0.2934	0.3849	-	-	-
Debt/Equity Ratio		0.3574	0.4153	0.6257	-	-	-
Gross Margin		82.1526	80.7076	74.0675	75.104	76.3408	74.7166
Operating Margin		21.4549	7.1595	-106.2759	-10.4374	0.5133	-3.1761
EBIT Margin		21.4549	7.1595	-106.2759	-10.4374	0.5133	-3.1761
EBITDA Margin		22.4193	9.4626	-102.5459	-8.0616	2.7696	-0.1183
Pre-Tax Profit Margin		23.6814	-5.0067	-138.6027	-8.5678	1.2879	-2.307
Net Profit Margin		22.5384	-5.8745	-135.7312	-14.0334	-0.4617	-2.7343
Asset Turnover		0.5237	0.4371	0.322	0.5782	0.5522	-
Inventory Turnover Ratio		-	-	-	-	-	-
Receivable Turnover		1.756	1.6129	1.5486	1.5277	1.5844	-
Days Sales In Receivables		207.8575	226.2976	235.6972	238.925	230.3758	-
ROE - Return On Equity		34.0468	-7.3717	-158.0063	83.4904	3.2592	-
Return On Tangible Equity		38.8228	-8.6486	-211.281	43.1526	2.0169	-
ROA - Return On Assets		11.8032	-2.5678	-43.7021	-8.1147	-0.2549	-
ROI - Return On Investment		25.0828	-5.2086	-97.1945	83.4903	3.2592	-
Book Value Per Share		8.8114	-	4.8428	-3.0616	-2.0044	-
Operating Cash Flow Per Share		1.2892	6.3605	-3.4604	-1.4686	1.3382	0.9852
Free Cash Flow Per Share		1.2931	6.4502	-3.1092	-1.5966	1.3777	0.5922

Figure 14. Key Financial ratios for Airbnb Inc., from <https://www.macrotrends.net/stocks/charts/ABNB/airbnb/financial-ratios> (Macrotrends.net, Airbnb)

Starting from the financials of the company it is possible to develop a ratio analysis.

The **current ratio** is useful to determine business liquidity, it is an important indicator both in the case of grant credit or loans and also for investors and is defined by the ratio of current assets over current liabilities (AccountingTools, 2023, from <https://www.accountingtools.com/articles/current-ratio-analysis>), in practice it measures how many time a firm can cover its current liabilities. The trend for Airbnb is almost stable, signaling a constant ability to repay liabilities.

The **long-term debt-to-capitalization ratio** defined the financial leverage and the source of funding of the firm, it is given by long-term debt over the sum of long-term debt, common stock, and preferred stock (Tomasetti Brooke, 2023).

The ratio is expected to be lower than 1 but greater than 0, with the ratio that measures how much a company is in long-term debt.

For Airbnb the ratio is low, and this is a positive signal since a higher ratio could be a symptom of bad business and a sign of a higher risk of bankruptcy (Tomasetti B., 2023).

Another important ratio for this matter is the **debt-to-equity ratio**, it shows the capital composition of a company, in terms of debt and equity, it also represents the company's ability to obtain new debt, a higher ratio means that the company is more leveraged (BDC, from [bdc.ca/en/articles-tools/entrepreneur-toolkit/templates-business-guides/glossary/debt-to-equity-ratio](https://www.bdc.ca/en/articles-tools/entrepreneur-toolkit/templates-business-guides/glossary/debt-to-equity-ratio)).

To do some analysis it needs to be compared with other companies in the same industry, but a general rule of thumb can be to consider it as acceptable when debt is twice the equity (Babalola Y, Abiola F.R., 2013).

In the Airbnb case, it is evident how it is decreasing, from 0.63 in 2020 to 0.36 in 2022, indicating a different strategy by the company and that the firm is becoming less risky, abandoning debt.

The ratio symbolizes the financial risk of a firm, a higher ratio implies higher perceived risk, since higher leverage, with leverage that is the quantity of debt with respect to equity, increases the expenses due to debt costs (Carlson Rosemary, 2022).

The **Return on Equity ratio (ROE)** is particularly important for investors since it represents the return that the business is generating per every dollar of their investment, it is given by net income over shareholders' equity, and represents how the company's value is growing (McClure, 2023).

The trend of the ROE for Airbnb is really interesting, since in 2019 it was 83%, in 2020 was -158%, in 2021 was -7%, and in 2022 was 34%, signaling a good positive trend.

In 2020 and 2021 the ratio was really low, probably for the effect of the Pandemic, since the lockdowns have imposed people all over the world to stay at home and not travel.

In the last two years, the company was able to completely recover and conclude 2022 with an excellent improvement of the ratio, 34%, since the ROE for the industry is on average 18% (Simply Wall St, 2023).

4.3.2. Meta Platforms Case

In the previous section some stolen ideas have been presented, one of them was the Facebook one.

Mark Zuckerberg launched “The Facebook” in 2004, and the initial part of the creation, or stealing of the idea has already been explained.

However also in this case some common traits of the Startups theory explain in this work are recognizable, Mark exploits a need, a market gap, with his innovative idea of a virtual space in which people could connect (about.meta.com/company-info/).

In 2021 he launches his biggest news, a new company brand named Meta, a platform that brings together all the apps and technologies already acquired by Facebook through the years, in a unique brand (about.fb.com/news/2021/10/facebook-company-is-now-meta/, 2021).

“Meta builds technologies that help people connect, find communities, and grow businesses. When Facebook launched in 2004, it changed the way people connect. Apps like Messenger, Instagram, and WhatsApp further empowered billions around the world. Now, Meta is moving beyond 2D screens toward immersive experiences like augmented and virtual reality to help build the next evolution in social technology” (about.fb.com/news/2021/10/facebook-company-is-now-meta/, 2021).

The funding history of Facebook, now Meta, is interesting for this work because it follows the traditional journey already explained in the previous chapter.

Facebook starts its funding with Angels Investors in 2004, receiving 500.000 dollars from Peter Thiel, for 10.2% of the company stakes (Pixr8, from pixr8.com/story/funding-facebook-from-harvard-dorm-room-to-500-bn-company/).

Then, one year later the series A round, collecting 12.700.000 dollars from Accel Partners, continuing then in 2006 with round B from several Venture Capitalists, and then series C funding, with as investors important companies such as Microsoft, which received 1.6% of preferred stakes, and an important billionaire from Hong-Kong, that invests 120 million (Pixr8.com, from pixr8.com/story/funding-facebook-from-harvard-dorm-room-to-500-bn-company/).

Another interesting insight is given by debt financing, as it has been explained in the theory part, usually, firms mix debt and equity financing.

In fact, in 2008 Facebook Inc. raised 100.000.000 dollars in the form of debt financing, specifically in lease facilities, from TriplePoint Capital (Crunchbase.com, from crunchbase.com/funding_round/facebook-debt-financing--4e8faa5e).

TriplePoint Capital is a company that offers leases and loans to finance firms and backs Startups that are founded by venture capitalists (Auchard Eric, 2008).

The reason why Facebook chose this type of funding is a confirmation of what has been said in theory: they choose to use debt financing to not further dilute the power of existing shareholders, but at the same time to be able to acquire new financial capital to funds new computers and data center (Auchard E., 2008) and to enter in a more mature phase, as Facebook CFO Gideon Yu said (Auchard E., 2008).

The equity funding rounds have continued from 2008, with a series D of 200 million dollars (Crunchbase.com, from crunchbase.com/funding_round/facebook-debt-financing--4e8faa5e).

In 2010 they announced their funding through the secondary market, raising 120 million dollars, with as lead investor Elevation Partners, a private equity firm that invests in technology, media, and entertainment business (Startupranking.com, from <https://www.Start-upranking.com/Start-up/facebook/funding-rounds>).

I will now present the financial data of Meta Inc. to analyze them through financial ratios and to implement an analysis of the profitability of the firm.

Balance Sheet All numbers in thousands

Breakdown	12/30/2022	12/30/2021	12/30/2020	12/30/2019
∨ Total Assets	185,727,000	165,987,000	159,316,000	133,376,000
∨ Current Assets	59,549,000	66,666,000	75,670,000	66,225,000
∨ Cash, Cash Equivalents & S...	40,738,000	47,998,000	61,954,000	54,855,000
∨ Cash And Cash Equivale...	14,681,000	16,601,000	17,576,000	19,079,000
Cash	6,176,000	7,308,000	6,488,000	4,735,000
Cash Equivalents	8,505,000	9,293,000	11,088,000	14,344,000
Other Short Term Investme...	26,057,000	31,397,000	44,378,000	35,776,000
∨ Receivables	13,466,000	14,039,000	11,335,000	9,518,000
∨ Accounts receivable	13,466,000	14,039,000	11,335,000	9,518,000
Gross Accounts Receiva...	-	-	11,449,000	9,724,000
Allowance For Doubtful ...	-	-	-114,000	-206,000
Prepaid Assets	-	4,629,000	2,381,000	1,852,000
Other Current Assets	5,345,000	-	-	-
∨ Total non-current assets	126,178,000	99,321,000	83,646,000	67,151,000
∨ Net PPE	92,191,000	69,964,000	54,981,000	44,783,000
∨ Gross PPE	92,191,000	69,964,000	54,981,000	44,783,000
Properties	0	0	0	0
Land And Improvements	1,874,000	1,688,000	1,326,000	1,097,000
Buildings And Improvem...	27,720,000	22,531,000	17,360,000	11,226,000
Machinery Furniture Equ...	-	25,584,000	2,458,000	1,813,000
Other Properties	92,191,000	69,964,000	54,981,000	44,783,000
Construction in Progress	25,052,000	14,687,000	11,288,000	10,099,000
Leases	6,522,000	5,795,000	4,321,000	3,112,000

Figure 15: Meta Platform Inc, balance sheet from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/META/balance-sheet?p=META> (Yahoo Finance, Meta Platform, Balance Sheet)

Accumulated Depreciation	-24,975,000	-20,080,000	-15,418,000	-10,663,000
‣ Goodwill And Other Intang...	21,203,000	19,831,000	19,673,000	19,609,000
‣ Investments And Advances	6,201,000	6,775,000	6,234,000	-
Long Term Equity Investme...	-	6,775,000	6,234,000	-
‣ Investment in Financial ...	6,201,000	6,775,000	6,234,000	-
Other Non Current Assets	6,583,000	2,751,000	2,758,000	2,759,000
‣ Total Liabilities Net Minority Int...	60,014,000	41,108,000	31,026,000	32,322,000
‣ Current Liabilities	27,026,000	21,135,000	14,981,000	15,053,000
‣ Payables And Accrued Exp...	25,659,000	19,447,000	13,576,000	13,984,000
‣ Payables	6,107,000	5,135,000	2,424,000	2,249,000
Accounts Payable	4,990,000	4,083,000	1,331,000	1,363,000
Total Tax Payable	2,339,000	1,256,000	2,038,000	624,000
Due to Related Parties C...	1,117,000	1,052,000	1,093,000	886,000
Other Payable	-	1,052,000	1,093,000	886,000
Current Accrued Expenses	19,552,000	14,312,000	11,152,000	11,735,000
Pension & Other Post Retirem...	4,591,000	3,152,000	2,609,000	1,704,000
‣ Current Debt And Capital ...	1,367,000	1,127,000	1,023,000	800,000
‣ Current Debt	-	-	-	277,000
Current Notes Payable	-	-	-	624,000
Line of Credit	-	-	-	277,000
Current Capital Lease Oblig...	1,367,000	1,127,000	1,023,000	800,000
‣ Current Deferred Liabilities	-	561,000	382,000	269,000
Other Current Liabilities	4,906,000	5,258,000	3,469,000	2,498,000
‣ Total Non Current Liabilities ...	32,988,000	19,973,000	16,045,000	17,269,000
‣ Long Term Debt And Capit...	25,224,000	12,746,000	9,631,000	9,524,000

Figure 16: Meta Platfom Inc, balance sheet from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/META/balance-sheet?p=META>

Long Term Debt	9,923,000	-	-	-
Long Term Capital Lease O...	15,301,000	12,746,000	9,631,000	9,524,000
▼ Non Current Deferred Liab...	-	-	-	1,039,000
Non Current Deferred Taxe...	-	-	-	1,039,000
Tradeand Other Payables No...	6,645,000	5,938,000	5,025,000	5,651,000
Other Non Current Liabilities	7,764,000	7,227,000	6,414,000	7,745,000
▼ Total Equity Gross Minority Inte...	125,713,000	124,879,000	128,290,000	101,054,000
▼ Stockholders' Equity	125,713,000	124,879,000	128,290,000	101,054,000
▼ Capital Stock	64,444,000	55,811,000	50,018,000	45,851,000
Common Stock	64,444,000	55,811,000	50,018,000	45,851,000
Additional Paid in Capital	64,444,000	55,811,000	50,018,000	45,851,000
Retained Earnings	64,799,000	69,761,000	77,345,000	55,692,000
Gains Losses Not Affecting Re...	-3,530,000	-693,000	927,000	-489,000
Total Capitalization	135,636,000	124,879,000	128,290,000	101,054,000
Common Stock Equity	125,713,000	124,879,000	128,290,000	101,054,000
Capital Lease Obligations	16,668,000	13,873,000	10,654,000	10,324,000
Net Tangible Assets	104,510,000	105,048,000	108,617,000	81,445,000
Working Capital	32,523,000	45,531,000	60,689,000	51,172,000
Invested Capital	135,636,000	124,879,000	128,290,000	101,054,000
Tangible Book Value	104,510,000	105,048,000	108,617,000	81,445,000
Total Debt	26,591,000	13,873,000	10,654,000	10,324,000
Share Issued	2,614,000	2,741,000	2,849,000	2,852,000
Ordinary Shares Number	2,614,000	2,741,000	2,849,000	2,852,000

Figure 17: Meta Platfom Inc, balance sheet from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/META/balance-sheet?p=META>

Income Statement

All numbers in thousands

Breakdown	TTM	12/30/2022	12/30/2021	12/30/2020	12/30/2019
▼ Total Revenue	116,609,000	116,609,000	117,929,000	85,965,000	70,697,000
Operating Revenue	115,801,000	115,801,000	117,208,000	84,169,000	69,655,000
Cost of Revenue	25,249,000	25,249,000	22,649,000	16,692,000	12,770,000
Gross Profit	91,360,000	91,360,000	95,280,000	69,273,000	57,927,000
▼ Operating Expense	62,416,000	62,416,000	48,527,000	36,602,000	33,941,000
> Selling General and Administr...	27,078,000	27,078,000	23,872,000	18,155,000	20,341,000
Research & Development	35,338,000	35,338,000	24,655,000	18,447,000	13,600,000
Operating Income	28,944,000	28,944,000	46,753,000	32,671,000	23,986,000
▼ Net Non Operating Interest Inc...	276,000	-125,000	531,000	509,000	826,000
Interest Income Non Operating	276,000	276,000	531,000	509,000	924,000
Interest Expense Non Operating	-	-	-	-	20,000
Total Other Finance Cost	-276,000	125,000	-531,000	-509,000	-826,000
▼ Other Income Expense	-401,000	-401,000	70,000	-163,000	-78,000
Gain on Sale of Security	-81,000	-81,000	-140,000	-129,000	-105,000
Other Non Operating Income Ex...	-320,000	-320,000	210,000	-34,000	27,000
Pretax Income	28,819,000	28,819,000	47,284,000	33,180,000	24,812,000
Tax Provision	5,619,000	5,619,000	7,914,000	4,034,000	6,327,000
▼ Net Income Common Stockhold...	23,200,000	23,200,000	39,370,000	29,146,000	18,485,000
▼ Net Income	23,200,000	23,200,000	39,370,000	29,146,000	18,485,000
> Net Income Including Non...	23,200,000	23,200,000	39,370,000	29,146,000	18,485,000
Otherunder Preferred Stock Divi...	-	-	-	0	0
Average Dilution Earnings	-	-	-	-	0
Diluted NI Available to Com Stock...	23,200,000	23,200,000	39,370,000	29,146,000	18,485,000

Figure 18: Meta Platfom Inc, Income Statement from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/META/financials?p=META> (Yahoo Finance, Meta Platform, Income Statement)

Basic EPS	-	8.63	13.99	10.22	6.48
Diluted EPS	-	8.59	13.77	10.09	6.43
Basic Average Shares	-	2,687,000	2,815,000	2,851,000	2,854,000
Diluted Average Shares	-	2,702,000	2,859,000	2,888,000	2,876,000
Total Operating Income as Reported	28,944,000	28,944,000	46,753,000	32,671,000	23,986,000
Total Expenses	87,665,000	87,665,000	71,176,000	53,294,000	46,711,000
Net Income from Continuing & Dis...	23,200,000	23,200,000	39,370,000	29,146,000	18,485,000
Normalized Income	23,265,205	23,200,000	39,370,000	29,146,000	18,485,000
Interest Income	276,000	276,000	531,000	509,000	924,000
Interest Expense	-	-	-	-	20,000
Net Interest Income	276,000	-125,000	531,000	509,000	826,000
EBIT	28,944,000	28,944,000	46,753,000	32,671,000	23,986,000
EBITDA	37,630,000	-	-	-	-
Reconciled Cost of Revenue	25,249,000	25,249,000	22,649,000	16,692,000	12,770,000
Reconciled Depreciation	8,686,000	8,686,000	7,967,000	6,862,000	5,741,000
Net Income from Continuing Oper...	23,200,000	23,200,000	39,370,000	29,146,000	18,485,000
Total Unusual Items Excluding Goo...	-81,000	-81,000	-140,000	-129,000	-105,000
Total Unusual Items	-81,000	-81,000	-140,000	-129,000	-105,000
Normalized EBITDA	37,711,000	37,630,000	54,720,000	39,533,000	29,727,000
Tax Rate for Calcs	0	0	0	0	0
Tax Effect of Unusual Items	-15,795	0	0	0	0

Figure 19: Meta Platform Inc, Income Statement from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/META/financials?p=META>

From the Balance Sheet and Income Statement of Meta Platform is possible to conduct a ratio analysis.

Annual Data	2022-12-31	2021-12-31	2020-12-31	2019-12-31	2018-12-31	2017-12-31	2016-12-31	2015-12-31
Current Ratio	2.2034	3.1543	5.0511	4.3995	7.194	12.9157	11.9656	11.2478
Long-term Debt / Capital	0.0732	-	-	-	-	-	-	0.0024
Debt/Equity Ratio	0.0789	-	-	-	-	-	-	0.0026
Gross Margin	78.3473	80.7944	80.5828	81.937	83.2462	86.584	86.2906	84.0083
Operating Margin	24.8214	39.645	38.005	33.9279	44.6166	49.6962	44.9635	34.7222
EBIT Margin	24.8214	39.645	38.005	33.9279	44.6166	49.6962	44.9635	34.7222
EBITDA Margin	32.2702	46.4008	45.9873	42.0485	52.3443	57.1372	53.4373	45.5712
Pre-Tax Profit Margin	24.7142	40.0953	38.5971	35.0963	45.4189	50.658	45.2927	34.5493
Net Profit Margin	19.8956	33.3845	33.9045	26.1468	39.5985	39.1607	36.8623	20.4652
Asset Turnover	0.6279	0.7105	0.5396	0.5301	0.5737	0.481	0.4255	0.3629
Inventory Turnover Ratio	-	-	-	-	-	-	-	-
Receivable Turnover	8.6595	8.4001	7.584	7.4277	7.3597	6.9707	6.9216	7.0059
Days Sales In Receivables	42.1502	43.4519	48.1274	49.1403	49.5945	52.3622	52.7334	52.0992
ROE - Return On Equity	18.4547	31.5265	22.7188	18.2922	26.2841	21.4319	17.2602	8.3405
Return On Tangible Equity	22.1988	37.4781	26.8337	22.6963	34.2652	29.3758	26.5122	16.0725
ROA - Return On Assets	12.4915	23.7187	18.2945	13.8593	22.7177	18.8515	15.7279	7.4645
ROI - Return On Investment	17.1046	31.5265	22.7188	18.2922	26.2841	21.4319	17.2602	8.3204
Book Value Per Share	48.0922	45.5597	45.0298	35.4327	29.4769	25.584	20.4682	15.6027
Operating Cash Flow Per Share	-1.4953	6.7593	0.79	2.6047	1.8297	2.6852	1.8898	0.8672
Free Cash Flow Per Share	-6.5429	5.4989	0.8073	2.1174	-0.6563	1.9428	1.2387	0.6702

Figure 20: Meta Platform Inc., key financial ratios, from <https://www.macrotrends.net/stocks/charts/META/meta-platforms/financial-ratios> (Macrotrends.net, Meta Platform inc.)

It is interesting to notice that even if Facebook has been initially founded also with debt, debt utilization is different from the one analyzed in the Airbnb case.

Starting with the **current ratio**, it is possible to notice how it was high in the past, almost 12 in 2016 and 2017, a so high value can indicate an inefficient utilization of the firm's funds (Babalola Y. A., Abiola F.R.).

The ratio then decreases to 2.2 in 2022, even if the result is higher than 1, corresponding to a good ability of the company to repay its current debt, the negative trend that has been recognized can depend on the worst ability of the company to use its short term assets to liquidate its short term liabilities (Folger, 2023), so in the last 6 years the company is gradually losing its repayment ability.

For the ratio regarding **long-term debt-to-capitalization** and **debt-to-equity** ratio, there is only one result, in 2022, as it is possible to notice on the Balance Sheet of the firm, the voice of long-term debt appears only in that year.

Moreover, the values are close to 0, signaling little use of debt.

The trend of the **ROE** is quite stable, the average value between 2016 and 2022 is 22.28%, with a positive value of 31% in 2021, considering that the average ROE for the Software industry of Systems and Applications is 13.63% (Damodaran Aswath, 2023).

4.3.3. Uber Case

Another famous Start-up born thanks to a disruptive idea that needed to fill a market-gap is Uber.

The idea came up to Travis Kalanick and Garret Camp, two entrepreneurs at a conference in Paris, during a winter night in 2008, when they needed a cab, but they were not able to get it, from that negative situation they end up with a revolutionary idea, the creation of a platform, an app for the smartphone, to order to get a car ride (Blystone Dan, 2023).

After some years of the development of their idea, they start testing it in New York (Blystone D., 2023).

This could be considered as proof of what has been described in theory as a minimum viable product, the founders start to test their idea using only 3 cars, to then expand their business.

Only in 2010 they start receiving funding, their seed round was led by First Round Capital, raising 1.3 million dollars, one year later they had their Series A round obtaining 11 million dollars from Benchmark, and from that moment they started the expansion all over the main cities of the world (Blystone D., 2023).

They continued the funding as it has been seen in theory, with a Series B round of 37 million dollars by Menlo Ventures, Goldman Sachs, and Jeff Bezos (Blystone D., 2023).

However, the journey of a Start-up is not an easy one, and even in cases in which all seem to proceed straight forward some bad things could happen.

In 2017 Uber reported some important losses, mostly caused by Chinese Business, with an important decrease in the company valuation, due to this situation a big group of investors acquire Uber's stock at a really low price, moreover, some bad news impact the business, such as a self-driving vehicle that causes a fatal crash and a political decision to pause the new licenses for Uber riders (Blystone D., 2023).

It is evident how news and situations external to the business directly affect it, in 2019 Uber made an initial public offering that will remain famous in history because of the biggest loss in the history of the United States initial public offering, with a loss in value of 60 billion dollars (Blystone D., 2023).

Other Payable	-	-	103,000	162,000
▼ Current Accrued Expens...	6,232,000	6,537,000	5,112,000	4,050,000
Interest Payable	-	-	106,000	93,000
Current Provisions	1,692,000	1,442,000	1,243,000	1,121,000
Pension & Other Post Retirem...	587,000	-	325,000	403,000
▼ Current Debt And Capital ...	201,000	185,000	175,000	196,000
▼ Current Debt	-	-	348,000	-
Other Current Borrowings	-	-	348,000	-
Current Capital Lease Oblig...	201,000	185,000	175,000	196,000
▼ Current Deferred Liabilities	-	-	-	76,000
Current Deferred Revenue	-	-	-	76,000
Other Current Liabilities	6,232,000	2,787,000	100,000	222,000
▼ Total Non Current Liabilities ...	14,752,000	14,401,000	12,633,000	10,939,000
Long Term Provisions	3,028,000	2,546,000	2,223,000	2,297,000
▼ Long Term Debt And Capit...	10,938,000	10,920,000	9,104,000	7,230,000
Long Term Debt	9,265,000	9,276,000	7,560,000	5,707,000
Long Term Capital Lease O...	1,673,000	1,644,000	1,544,000	1,523,000
▼ Non Current Deferred Liab...	27,000	365,000	818,000	1,027,000
Non Current Deferred Taxe...	27,000	365,000	818,000	1,027,000
Tradeand Other Payables No...	-	-	95,000	70,000
Preferred Securities Outside ...	-	204,000	787,000	0
Other Non Current Liabilities	786,000	935,000	1,306,000	1,412,000
▼ Total Equity Gross Minority Inte...	8,504,000	15,349,000	13,754,000	15,183,000
▼ Stockholders' Equity	7,340,000	14,458,000	12,266,000	14,190,000
› Capital Stock	0	0	0	0
Additional Paid in Capital	40,550,000	38,608,000	35,931,000	30,739,000
Retained Earnings	-32,767,000	-23,626,000	-23,130,000	-16,362,000
› Gains Losses Not Affecting...	-443,000	-524,000	-535,000	-187,000
Minority Interest	1,164,000	891,000	1,488,000	993,000
Total Capitalization	16,605,000	23,734,000	19,826,000	19,897,000
Common Stock Equity	7,340,000	14,458,000	12,266,000	14,190,000
Capital Lease Obligations	1,874,000	1,829,000	1,719,000	1,719,000
Net Tangible Assets	-2,797,000	3,626,000	4,593,000	13,952,000

Figure 22. Balance Sheet of Uber from 2019 to 2022, from yahoo finance, <https://finance.yahoo.com/quote/UBER/balance-sheet?p=UBER>

Working Capital	396,000	-205,000	3,017,000	8,286,000
Invested Capital	16,605,000	23,734,000	19,826,000	19,897,000
Tangible Book Value	-2,797,000	3,626,000	4,593,000	13,952,000
Total Debt	11,139,000	11,105,000	9,279,000	7,426,000
Net Debt	5,057,000	4,981,000	1,913,000	-
Share Issued	2,005,486	1,949,316	1,716,681	1,716,681
Ordinary Shares Number	2,005,486	1,949,316	1,716,681	1,716,681

Figure 23. Balance Sheet of Uber from 2019 to 2022, from yahoo finance, <https://finance.yahoo.com/quote/UBER/balance-sheet?p=UBER>

Income Statement All numbers in thousands

Breakdown	TTM	12/30/2022	12/30/2021	12/30/2020	12/30/2019
∨ Total Revenue	31,877,000	31,877,000	17,455,000	11,139,000	14,147,000
Operating Revenue	31,877,000	31,877,000	17,455,000	11,139,000	14,147,000
Cost of Revenue	19,659,000	19,659,000	9,351,000	5,154,000	7,208,000
Gross Profit	12,218,000	12,218,000	8,104,000	5,985,000	6,939,000
∨ Operating Expense	14,050,000	14,050,000	11,938,000	10,848,000	15,535,000
∨ Selling General and Administr...	7,892,000	7,892,000	7,105,000	6,249,000	7,925,000
> General & Administrative E...	3,136,000	3,136,000	2,316,000	2,666,000	3,299,000
Selling & Marketing Expense	4,756,000	4,756,000	4,789,000	3,583,000	4,626,000
Research & Development	2,798,000	2,798,000	2,054,000	2,205,000	4,836,000
> Depreciation Amortization D...	947,000	947,000	902,000	575,000	472,000
Other Operating Expenses	2,413,000	2,413,000	1,877,000	1,819,000	2,302,000
Operating Income	-1,832,000	-1,832,000	-3,834,000	-4,863,000	-8,596,000
> Net Non Operating Interest Inc...	-426,000	-426,000	-446,000	-403,000	-325,000
∨ Other Income Expense	-7,168,000	-7,168,000	3,255,000	-1,680,000	488,000
Gain on Sale of Security	-7,001,000	-7,001,000	1,488,000	-253,000	20,000
> Special Income Charges	-168,000	-168,000	1,684,000	-1,486,000	444,000
Other Non Operating Income Ex...	1,000	1,000	83,000	59,000	24,000
Pretax Income	-9,426,000	-9,426,000	-1,025,000	-6,946,000	-8,433,000
Tax Provision	-181,000	-181,000	-492,000	-192,000	45,000
Earnings from Equity Interest Net ...	107,000	107,000	-37,000	-34,000	-34,000
∨ Net Income Common Stockhold...	-9,141,000	-9,141,000	-496,000	-6,768,000	-8,506,000
> Net Income	-9,141,000	-9,141,000	-496,000	-6,768,000	-8,506,000
Otherunder Preferred Stock Divi...	-	-	-	0	0
Average Dilution Earnings	-41,000	-41,000	-44,000	0	0
Diluted NI Available to Com Stockh...	-9,182,000	-9,141,000	-496,000	-6,768,000	-8,506,000
Basic EPS	-	-4.64	-0.26	-3.86	-6.81
Diluted EPS	-	-4.65	-0.29	-3.86	-6.81
Basic Average Shares	-	1,972,131	1,892,546	1,752,960	1,248,353
Diluted Average Shares	-	1,974,928	1,895,519	1,752,960	1,248,353
Total Operating Income as Reported	-1,832,000	-1,832,000	-3,834,000	-4,863,000	-8,596,000
Total Expenses	33,709,000	33,709,000	21,289,000	16,002,000	22,743,000
Net Income from Continuing & Dis...	-9,141,000	-9,141,000	-496,000	-6,768,000	-8,506,000

Figure 24. Income Statement of Uber from 2019 to 2022, from yahoo finance, <https://finance.yahoo.com/quote/UBER/financials?p=UBER> (Yahoo Finance, Uber Technologies, Income Statement)

Normalized Income	-2,108,211	-2,109,661	-2,811,560	-5,077,069	-8,844,720
Interest Income	139,000	139,000	37,000	55,000	234,000
Interest Expense	565,000	565,000	483,000	458,000	559,000
Net Interest Income	-426,000	-426,000	-446,000	-403,000	-325,000
EBIT	-8,861,000	-8,861,000	-542,000	-6,488,000	-7,874,000
EBITDA	-7,914,000	-	-	-	-
Reconciled Cost of Revenue	19,659,000	19,659,000	9,351,000	5,154,000	7,208,000
Reconciled Depreciation	947,000	947,000	902,000	575,000	472,000
Net Income from Continuing Oper...	-9,141,000	-9,141,000	-496,000	-6,768,000	-8,506,000
Total Unusual Items Excluding Goo...	-7,169,000	-7,169,000	3,172,000	-1,739,000	464,000
Total Unusual Items	-7,169,000	-7,169,000	3,172,000	-1,739,000	464,000
Normalized EBITDA	-745,000	-745,000	-2,812,000	-4,174,000	-7,866,000
Tax Rate for Calcs	0	0	0	0	0
Tax Effect of Unusual Items	-136,211	-137,661	856,440	-48,069	125,280

Figure 25. Uber Income statement, from 2019 to 2022, from Yahoo Finance, <https://finance.yahoo.com/quote/UBER/financials?p=UBER>

Annual Data		2022-12-31	2021-12-31	2020-12-31	2019-12-31	2018-12-31	2017-12-31	2016-12-31
Current Ratio	Link	1.0447	0.9773	1.4395	2.4694	2.0329	1.7772	-
Long-term Debt / Capital	Link	0.5343	0.3798	0.3683	0.2773	-13.312	-0.5533	-
Debt/Equity Ratio	Link	1.1475	0.6125	0.583	0.3837	-0.9301	-0.3562	-
Gross Margin	Link	38.3286	46.428	53.7301	53.3769	54.1263	47.5542	42.0546
Operating Margin	Link	-5.7471	-21.9651	-43.6574	-66.1231	-29.0712	-51.4372	-78.6216
EBIT Margin	Link	-5.7471	-21.9651	-43.6574	-66.1231	-29.0712	-51.4372	-78.6216
EBITDA Margin	Link	-2.6885	-16.1329	-34.8685	-62.4923	-24.988	-45.0076	-69.5969
Pre-Tax Profit Margin	Link	-29.5699	-5.8722	-62.3575	-64.8692	12.5755	-57.6778	-83.6931
Net Profit Margin	Link	-28.6759	-2.8416	-60.7595	-65.4308	9.5562	-50.8447	-9.6229
Asset Turnover	Link	0.9928	0.4502	0.335	0.4093	0.4349	0.5142	-
Inventory Turnover Ratio		-	-	-	-	-	-	-
Receivable Turnover	Link	11.4707	7.1566	10.3812	10.7084	11.3526	10.7334	-
Days Sales In Receivables	Link	31.8203	51.0017	35.1598	34.0854	32.1514	34.0059	-
ROE - Return On Equity	Link	-113.1781	-3.7636	-52.3483	-57.2351	-13.3649	47.131	-
Return On Tangible Equity	Link	442.9471	-13.2159	-128.2206	-58.1659	-12.9528	46.6243	-
ROA - Return On Assets	Link	-28.4593	-1.4701	-20.4138	-26.8002	4.1146	-26.1442	-
ROI - Return On Investment	Link	-52.702	-2.3341	-33.0686	-41.3626	-191.2791	73.2075	-
Book Value Per Share	Link	4.026	7.7694	7.01	8.6632	-16.1531	-	-
Operating Cash Flow Per Share	Link	0.5599	1.3311	1.8955	-0.2443	0.1087	3.7532	-7.079
Free Cash Flow Per Share	Link	0.5895	1.5253	2.0151	-0.3207	0.8376	6.547	-10.9963

Figure 26. The key financial ratio of Uber Technologies, from <https://www.macrotrends.net/stocks/charts/UBER/uber-technologies/financial-ratios> (Macrotrends.net, Uber Technologies)

As regard Uber ratio analysis, starting from the **current ratio**, its value is almost stable, not so high but representing an almost constant trend.

For the **long-term debt-to-capitalization ratio**, it is interesting to notice how it had an important negative result in 2018, with a ratio of -13.3, and in the same year a debt over-equity ratio of -0.9.

The trend of the **Debt over Equity ratio** is positive, with a value of 1.15 in 2022. These negative results can lead to the consequence that the company has a higher risk since it has more liabilities than assets.

However, after that year both ratios have become more stabilized, reaching acceptable values in the last year.

As regard **ROE**, since 2018 it has had a negative result, reaching -113% in 2022. All the data suggests that Uber is currently not profitable, some explanations could be related to the challenges that the company has needed to face in the last years, such as legal and regulatory issues, labor disputes and class action lawsuits, struggling to maintain a positive and profitable business (Pereira, 2023).

4.3.4. Comparative Analysis

After having presented the cases and their results through the study of their financial ratios, I will summarize in this section their funding characteristics and their results creating a comparison to conclude my analysis.

The three selected cases have different stories of founding and results, starting with Airbnb, the initial funding was made through Equity, and the ratio analysis suggests that the company is profitable, looking at the Debt over Equity ratio, it is decreasing, with a value in 2022 of 0.36, signaling little use of debt. The ROE of Airbnb is extremely good, with a value of 34%, signaling a good response to the problems that the company faced in 2020.

In the Meta case, the initial funding was made both of equity and debt, looking now at the debt over equity ratio, it is close to 0, suggesting that the company is not using high quantities of debt, in fact, until last year the company was not using any debt. The ROE has a really good trend, and the results are better than its industry. Uber is an interesting case since it shows that even if the business has all the characteristics to be considered profitable, and also this idea is confirmed by investors in their huge investment rounds, external and internal issues could create a disadvantage for the company, as it is possible to notice with the results, the ROE is dramatically decreasing, while the company is slowly increasing the debt over equity ratio, showing a slow but significant choice of using more debt.

I want to conclude this analysis by presenting some charts related to the financial position analysis of the three firms.

Airbnb

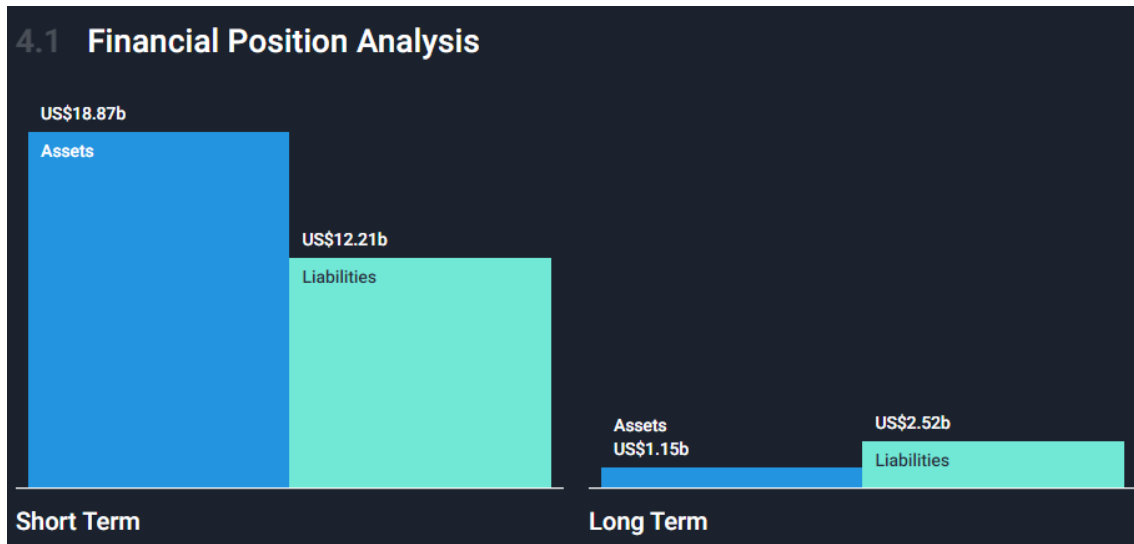


Figure 27: Financial Position analysis of Airbnb, from <https://simplywall.st/stocks/us/consumer-services/nasdaq-abnb/airbnb/health> (Simply Wall St, Airbnb)

Meta Platforms

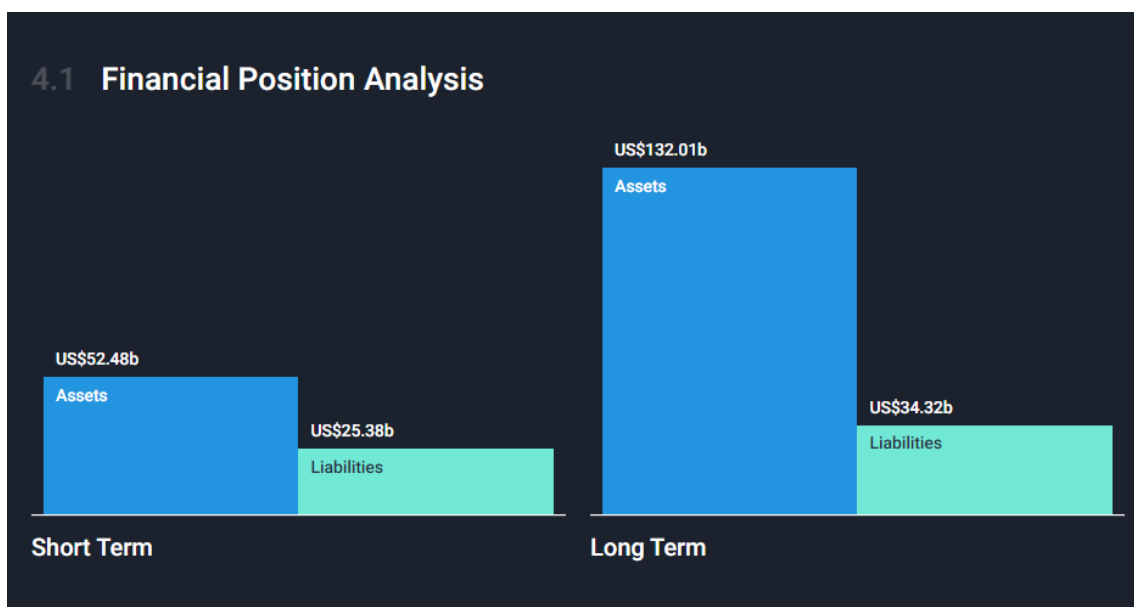


Figure 28: Financial Position analysis of Meta Platforms, from <https://simplywall.st/stocks/us/media/nasdaq-meta/meta-platforms/health> (Simply Wall St, Meta Platforms)

Uber

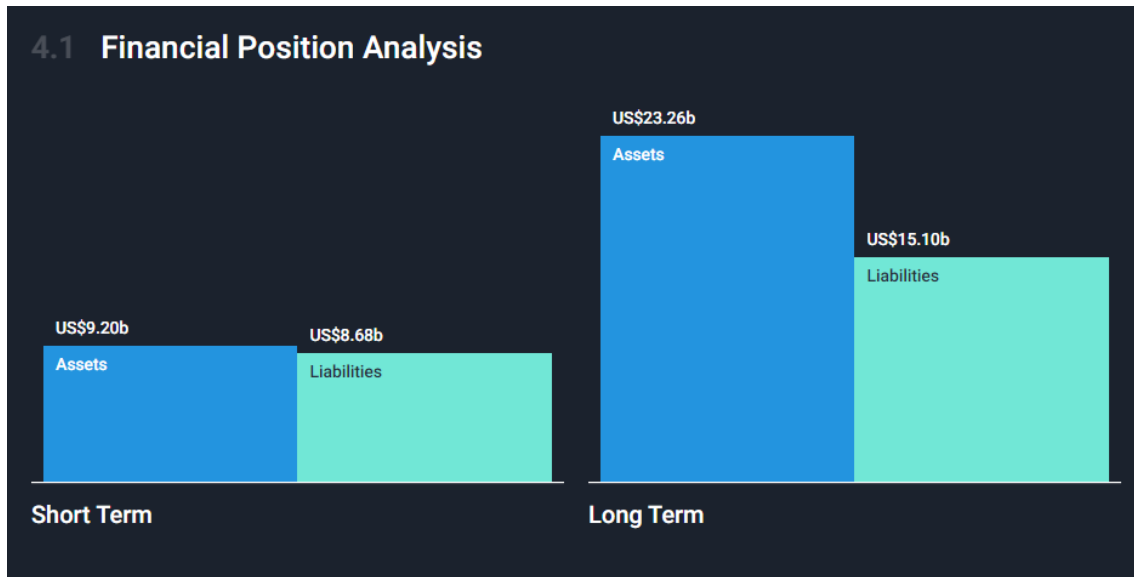


Figure 29. Financial position analysis of Uber, from <https://simplywall.st/stocks/us/transportation/nyse-uber/uber-technologies/health> (Simply Wall St, Uber)

Airbnb presents in the short term a higher predominance of assets with respect to liabilities, while is the contrary for the long-term ones. For Meta the assets both in the long and short-term fully cover liabilities. The situation for Uber is quite the same, both in short-term and long-term assets cover liabilities, showing that even if from the financial ratio the company was perceived as unprofitable, the higher amount of assets keeps it in an advantageous position.

In conclusion, with this analysis I have shown some characteristics of profitable firms born as startups, their different use of debt and equity, their results, and how to measure them through financial ratios, concluding the analysis with a comparison of the three firms, showing how in the reality the aspects evidenced in the theory are more complex to be recognized since a lot of different variables affect the firm's results.

4.4. Case Study: Qualifyze GmbH

It has already been explained how complex the Startups world is, in most of its features it keeps being related to uncertainty and lacking information.

In the previous section some stories regarding established companies that have been born as Startups have been presented, but the analysis that has been conducted only have regarded their recent financial data, when the firm was already established.

Valuation of a company is not an “exact science” (PwC.com, from [pwc.com/ee/en/services/transaction-services/pwc-deals-insights--how-to-value-a-start-up-business.html](https://www.pwc.com/ee/en/services/transaction-services/pwc-deals-insights--how-to-value-a-start-up-business.html)), and this is even more evident in the Startups field.

When dealing with Startups, for their nature, is not possible to obtain all the data as with an established company, commonly Startups have negative results, they lack historical data and the forecasts are not reliable, so the traditional approach cannot be implemented (PwC.com, from [pwc.com/ee/en/services/transaction-services/pwc-deals-insights--how-to-value-a-start-up-business.html](https://www.pwc.com/ee/en/services/transaction-services/pwc-deals-insights--how-to-value-a-start-up-business.html)).

During my curricular internship, I had the chance to work for an innovative Start-up and to conclude this work I would like to present some analysis regarding it. For both lacking reliable data and the problem of confidentiality of information, I have decided to adopt a qualitative approach to make some analysis starting from publicly available features of the company.

I have decided to implement the qualitative analysis of the firm implementing Gioia methodology, starting from available and public data of the company, trying to answer the question: “What is the business model more coherent with the firm’s information to enhance the profitability?”

Before entering the case, I would like to briefly analyze the methodology that I will use and explain why I consider it appropriate in this matter.

4.4.1. Methodology applied

The Startups world, as it has been described in this work, is nebulous, rich in asymmetric information, lack of data, and uncertainty.

When the data are available, the confidentiality of information needs to be taken into account, since is a key success factor for new firms, as has been evidenced in this chapter.

For this reason, is interesting to implement an analysis based on qualitative data to derive information worth of value for analyzing features of the Start-up.

A problem with qualitative data is given by their representation, the results obtained by qualitative data need to be perceived as right, acceptable, and credible (Magnani Giovanna, Gioia Denny, 2023) and only presenting them is not sufficient.

A solution for this shortcoming is given by the Gioia Methodology, a methodological approach that helps in developing an analysis from qualitative data, intaking rigorous standards of research, and ending up with a trustworthy analysis (Magnani G., Gioia D., 2023).

Thanks to **Gioia methodology** is possible to develop results by a deductive process, maintaining an approach that, for its rigor, is perceived as correct, and at the same time it gives the possibility to use a creative, but systematical approach while conducting qualitative research (Gioia Dennis, Corley Kevin, Hamilton Aimee, 2012).

To obtain the rigor required, data analysis needs to be developed in three analytical stages.

First, data and useful information need to be collected and organized in categories, each category is then considered as an analytical code, every code is called 1st-order code. Then from the general data and information is possible to find some common themes, to aggregate them, these new groups are called 2nd order themes. Then the data, already divided as explained, are studied to develop a grounded theoretical model, through the comparison of data across the different categories (Magnani G., Gioia D., 2023).

Finally, the last step is to present the findings, this last part is important because it ensures that the results will be perceived as correct, the narrative needs to be data-based and focused on the 2nd-order themes, as aggregate dimensions, using as references the informative 1st-order codes (Magnani G., Gioia D., 2023).

I need now to first present the company, its publicly available information, and its general traits, to then use these data as 1st-order codes.

4.4.2. Relevant data of the Start-up³

Qualifyze is a Start-up born in 2017, its core business is to offer support to pharmaceutical companies by providing audit reports of suppliers, it operates in an online platform that collects all the data regarding suppliers and audits.

It was born with the name ChemSquare, founded by Dr. David Schneider and Florian Hildebrand during a Ph.D. program at the Technical University of Darmstadt (Crunchbase.com,

<https://www.crunchbase.com/organization/chemsquare>).

The initial business model of ChemSquare was related to an online marketplace for chemicals, abandoned in 2018, for the new business model that is continued to be pursued also today. The new name, Qualifyze, was perceived as more suitable for the business since it represents the words Quality and Digitization (Qualifyze, 2020, from medium.com/@qualifyze/chemsquare-changes-its-name-to-qualifyze-2bbc7d672ca5), the new name was able to convey the message of a digital and high-quality product offering.

Now Qualifyze is one of the best companies in the world that provides digital-first third-party audits, it is in continuous expansion and it has a subsidiary based in Barcelona (pharmaceutical-networking.com, 2023, from <https://www.pharmaceutical-networking.com/qualifyze-celebrates-2022-as-year-of-achievements/>).

The **main services** offered by Qualifyze are the GxP audits, for a better understanding, GxP is intended as “Good x Practice”, with the “x” that stands for the field in which the regulation is applied (Chen Patrick, 2021).

Qualifyze offers different types of GxP compliance audits, now I’ll briefly describe them.

GMP, related to standards to be complied with during Manufacturing practices in the production of API, active pharmaceutical ingredients, excipients, packaging, medical devices, and starting materials (Qualifyze.com, <https://www.qualifyze.com/audits/gmp/>).

³ Data and information in this section have been found thanks to research online in different websites, journal articles, and listening to an interview.

GDP, is a set of standards related the to Distribution of pharmaceutical products, such as their sourcing, storage and transportation (Qualifyze.com, <https://www.qualifyze.com/audits/gdp/>).

GCP, related to standards set by international ethical analysis and scientific quality of Clinical trials that involve human tests (Qualifyze.com, <https://www.qualifyze.com/audits/gcp/>)

GLP, a set of principles to assure the quality of non-clinical Laboratory studies.

GAMP, standards that computerize systems, as Automated Manufacturing that works in the pharmaceuticals industry need to be compliant with (Qualifyze.com, <https://www.qualifyze.com/audits/gamp/>)

GVP, is related to compliance with all the standards about pharmacovigilance, to check and maintain controlled unreported adverse reactions and effects of medical drugs (Qualifyze.com, <https://www.qualifyze.com/audits/gvp/>).

As it is possible to understand from an interview made by Yan Kugel with Florian Hildebrand, co-founder of Qualifyze, and Carla Peraferrer, head of Quality in Qualifyze, the major focus of the company is to improve trust in the whole process of compliance in the pharma industry, giving a simple but effective solution to the needs of pharmaceuticals company all over the world (Qualistry - GMP Content, https://www.youtube.com/watch?v=KnBJ_JgmmUE&t=11s).

Qualifyze works with pharmaceuticals company, providing them with the audit needed and requested, and with auditors all over the world that conduct the audits.

The **business idea**, however, is not simply related to providing an audit but is linked with the creation of a global ecosystem that enables companies to share information regarding suppliers (Qualifyze, 2020, <https://medium.com/@qualifyze/chemsquare-changes-its-name-to-qualifyze-2bbc7d672ca5>).

This focus on information, and data, is what differentiates the most Qualifyze from all its competitors.

Moreover, one of the main focuses of the firm is to give access to its service through an attractive, transparent, and competitive pricing model, in an easy-to-use platform (Qualifyze.com, from <https://www.qualifyze.com/resources/case-studies/case-study-on-improving-external-supplier-qualification/>), a platform that

has collected, from the beginning until now, all the data regarding the audits conducted.

From its founding until now, Qualifyze has rapidly grown, obtaining important results, that can be summarized with some data: in 2022 more than 1000 audits were booked, the customer base grow by 400 new customers, the employees rise, adding 100 new collaborators and 63 new qualified auditors, enhancing the global auditor network, and the time to deliver an audit decrease of 50% (Qualifyze GmbH, 2023, <https://www.pharmaceutical-networking.com/qualifyze-celebrates-2022-as-year-of-achievements/>).

Another interesting fact is the reliance of Qualifyze on a lot of **technology-based** services, in fact from the website Builtwith.com, is possible to see that the firm works with software such as Hubspot, LinkedIn Insights, and Google Analytics for purposes of analysis and tracking, moreover, they track the customer experience with Algolia, uses Recrutee for the recruitment process, and have a Cloud hosting (Builtwith.com, <https://builtwith.com/qualifyze.com>).

Qualifyze is an interesting case because offers a unique service, only a few companies in the market do the same, and none of the competitors has developed a platform rich in information regarding Audits as Qualifyze.

As it has been explained, it is not possible to disclose financial information regarding the company, since it is still in a complex period of growth.

However, some information regarding financials is publicly available.

Qualifyze started its **funding** on the 17th of June 2019, with a seed round in which it raised 1.7 million dollars, the lead investor during this operation was Cherry Ventures

(https://www.crunchbase.com/organization/chemsqure/company_financials).

Subsequently, on the 2nd of August 2020, they organize another seed round of funding, raising 3.2 million dollars, with as lead investor Rheingau Founders, while other investors were APX, Mario Gotze, and Coparion.

(https://www.crunchbase.com/organization/chemsqure/company_financials).

However, the most interesting round was the last one, on the 3rd of November 2021, with a series A round, raising 14 million dollars and with the leading investor HV and other investors, a confirmation of the precedents, APX, Rheingau Founders, Cherry Ventures, with the addition of new investors: Auxxo and Dr. Udo

Jung (CMS.law, 2021, <https://cms.law/en/deu/news-information/cms-advises-digital-start-up-qualifyze-on-eur-12-million-series-a-round-of-financing>).

Now I will briefly present Investors' characteristics.

Cherry Ventures: a Venture Capital fund based in Berlin, "We're a seed-stage venture fund that champions founders in Europe" (<https://www.cherry.vc/>), despite the brevity, the description is full of content, Cherry Venture is a Venture Capital fund interested in the pre-seed and seed stage of Startups, focused on the European market, without prioritizing a particular business, their initial investment for a seed fund ranges between 300.000 euro and 3 million euro, moreover they offer support after the founding, with a team of specialists and experts, to create connections, a network to enhance the probability of success for the Start-up (<https://www.cherry.vc/about/>). Other investors are Rheingau Founders: Venture capital funds based in Berlin, "We target Startups that have the potential to sustainably disrupt existing processes and value chains."

(<https://rheingau-founders.com/about>), the lead investor chosen for the Stage A investment round is more sectorial, even if they collaborate with numerous Startups in Europe, they are most interested in Startups linked with digitalization, they fund "early-stage B2B tech companies" (<https://rheingau-founders.com/about>), also in this case, they are interested in the pre-seed, seed, but also Series A stage. They are able to offer expertise by the fact that they are a team of data experts, consultants, tech founders, and lawyers (<https://rheingau-founders.com/about>).

An interesting insight is given to the attention to sustainability, during the selection of their investments. Another investor is APX: "Based in Berlin and backed by Axel Springer and Porsche, we support and partner with the most ambitious pre-seed Startups from Europe and beyond – often as their first investor." (<https://apx.vc/>). Also in this case the Venture Capitalists are from Berlin, interested in the early stage phase, their investment range goes from 50.000 euro to 55 million euro.

Then Auxxo, its aim is: "Backing and uniting the strongest pre-seed and seed female-founded Startups in Europe." (<https://auxxo.de/>, n.d.). Auxxo is a Venture Capital based in Berlin, with a strong mission, to empower the participation of women, enhancing personal growth thanks to a feminist changemaker movement (<https://auxxo.de/about/>).

Different from the previous ones, another investor of Qualifyze is Mario Götze, he is a soccer player of Eintracht Frankfurt, Mario was pushed by the desire to make an impact and help the pharma industry through the investment in Qualifyze, especially after the pandemic event, moreover, there was personal sympathy with Florian Hildebrand, one of the two Qualifyze's founders (Ferreira Pedro, 2020).

Another interesting investor, different from Venture capitals fund, is Dr. Udo Jung, a senior advisor, based in Frankfurt, an expert in the field of Industrial good Practice at the Boston Consulting Group

(<https://www.bcg.com/about/people/experts/udo-jung>, n.d.).

It results evident how the choice of investors for the initial funding is focused on the same country of the founders, Germany, and more precisely they are all Venture Capitalists from Berlin.

It is worthy of notice the choice to not select debt capital as initial funding.

4.4.3. Understanding the Market and the Business Model

The **pharmaceutical industry** is a complex one since it embodies different levels of risks from different sources, even if risky, is profitable, full of opportunities, and in continuous growth, for these reasons, it is a perfect environment to develop a Start-up.

Moreover, for the needs of the pharmaceutical industry, it seems that **SaaS Startups** are becoming the favorite for Venture Capital investors in the pharma industry (Who Raised?, 2023, whoraised.io/saas-Startups/pharmaceutical-saas-Startups).

A SaaS, Software as a Service, company is focused on providing cloud-based software solutions on a subscription basis, a regular fee is paid by the customers to access a central cloud software with the use of an internet browser (Balfour Hannah, 2020).

When applying a subscription-based model, a firm shift from an ownership-based and product-centric view to a business model that is outcome-based, focused on the customer's value realizing a unique value proposition, respects the transactional business (Schuh Gunther, Wenger Lucas, Stich Volker, Hicking Jan, 2020).

The benefits of SaaS services in the pharma industry are numerous, for the characteristics of the pharmaceutical industry, such as the fact that is a highly regulated market, and having the possibility to work with technology as software is a benefit (Softgroup.eu, n.d.), it ensures speed and accessibility, reducing costs. In the pharmaceutical industry, the use of technology such as cloud servers and clouds storage ensures a modern and efficient way of work, enabling the company to obtain the result in a faster and more collaborative way, both bringing a new product to the market and reaching ESG (Environmental, social and governance) objectives (Balfour H., 2020).

As it has been said, in a highly regulated industry such as the pharmaceutical one, having a system that gives the possibility to be easily updated when some changes need to be done is the key to maintaining efficiency (Balfour H., 2020).

After having explained why the SaaS business model would be the correct one for the pharma industry, it is interesting to understand more about its features regarding the funding methods.

To start a SaaS business company will need capital to implement the idea itself, by needing Research and development, and Engineering talents, to implement their sales and marketing ability (Zirah Alexis, 2020).

The funding method for SaaS companies is not so different from the one described in general for Startups, but pay more attention to the characteristics of the revenue of this type of business.

One of the most successful is bootstrapping, which means relying on revenues generated, but in this case, the product offered needs to be profitable, and the customer support efficient, to be sure to rely on conspicuous revenues from customers (Zirah A., 2020)

However, as has been evidenced also for other types of Startups, without an external investment, it would take a long time to start the business and see the first results, moreover, the financial risks for the founders will be high, this is why most SaaS companies rely on Venture Capital or Venture debt.

Another way more peculiar for this type of company is to use a funding method that is coherent with the business, for example, ARR Squared is a provider of capital for SaaS and recurring revenue companies, they designed their product to adapt to the revenue of the Start-up, giving in advance capital for the annual value

of the subscription products, allowing the Start-up to continuously grow and implement its business (Zirah A., 2020).

4.4.4. Implementation of Gioia Methodology

At this point, I have presented all the publicly available features regarding Qualifyze, and after a brief focus on the pharmaceuticals industry, my research has conducted me to the hypothesis that a subscription-based business model is better suitable for this industry.

Now I will like to analyze the case study using the Gioia Methodology, understanding, from the information available, the business model structure more suitable for Qualifyze.

I think that a study on the business model is interesting at this point because the business model has a direct impact on the maximization of revenues (Huotari & Ritala, 2021).

Since the main aim of this work was to study Start-up funding and profitability, this Case study allows me to conclude with an analysis of how the firm should evolve, as a business model and funding structure.

All the information that I have provided until now regarding Qualifyze GmbH will be considered as 1st order codes since they are informative concepts useful to develop my analysis.

A choice regarding the business model could be implemented by choosing between a transactional business model, considered the traditional one, and a subscription business model, which is the model applicable to SaaS companies.

The main characteristics of a subscription business model and a transactional one will be now summarized.

Subscription model	Transactional Model
Customer-centric value proposition	Value proposition based on product value
Need to have a sure market/service fit	Applicable to one-time costumers
Metrics: member churn and engagement	Metrics: customer acquisition and sales
Subscription as a pricing structure to be perceived by the whole team as a mindset	Different possible pricing structures
Suitable for Software providers or online platform	Suitable for any type of business

Table 6. Personal interpretation of data previously cited to implement the Gioia Methodology, from (Huotari & Ritala, 2021), (Zirah A., 2020), (Schuh G., et al., 2020), (Altexsoft.com, 2022), (Baxter, 2016)

For the **subscription-based model**, there is evidence of **Customer centric value** proposition: the target for subscription-based companies is to continue to provide the customers with an outcome generated by a product or a service that is perceived as having high value for them (Schuh G., et al., 2020).

For the **transactional one**, the value proposition is focused on the **traditional product value**, based on the product creation process, with as a target the one-time customer purchase (Schuh G., et al., 2020), it is the classic way in which a company can earn money, the revenues are generated by the direct sale of the service or the product to customers (Altexsoft.com, 2022, [https://www.altexsoft.com/blog/revenue-model-types/#:~:text=A%20transaction%2Dbased%20model%20is,the%20production%20costs%20and%20margin\).](https://www.altexsoft.com/blog/revenue-model-types/#:~:text=A%20transaction%2Dbased%20model%20is,the%20production%20costs%20and%20margin).)

An interesting point regards the fact that in the subscription business model, the **fit of the market** with the service needs to be consolidated, to have a successful subscription model the customers need to be loyal and pursue the choice of the product or service offered remaining in the subscription plan (Baxter, 2016).

While in the transactional business, it is possible to have **one-time customers** without stressing too much the focus on loyalty is the price of the product or of the

service that generates the revenue, given by production costs and margin (from <https://www.altexsoft.com/blog/revenue-model-types/#:~:text=A%20transaction%2Dbased%20model%20is,the%20production%20costs%20and%20margin.>)

In the transactional business model, the measures of profitability and growth are given by the ability to enhance the **customer base and sales**, while in a subscription business, the success metric is given by **engagement and membership** churn (Baxter R., 2016).

A membership churn is given by the number of members that leaves the website or the community in which the subscription is based, so the number of subscription cancellation in a determined period gives an important insight into the perception of value by the customers and the reasons that have taken them to leave need to be analyzed through some Q&A questionnaire or other form of communication (<https://www.mightynetworks.com/encyclopedia/membership-churn>).

A subscription-based firm needs to continuously learn from customers, **tracking their behavior** on the website or when using the product.

In the transactional model, there are numerous pricing structures to attract customers, but in general, they regard **one-time purchase**, offering a product or a service that requires a single payment (from <https://www.altexsoft.com/blog/revenue-model-types/#:~:text=A%20transaction%2Dbased%20model%20is,the%20production%20costs%20and%20margin.>), usually different members of the company are not involved in the pricing tactics, and their work end when the transaction have been completed.

While in subscription-based companies the whole team needs to be part of the **membership mindset**, the sales team needs to continue their work of convincement even after the transaction, to maintain loyalty, product development needs to rapidly react to customers' feedback developing new features to maintain them satisfied (Baxter R., 2016).

From these 1st order concepts related to subscription-based and transactional-based business models, I want to develop some 2nd order themes to make inferences on the Qualifyze case.

Starting with the first one, as it has been possible to examine, the value proposition of Qualifyze is strictly linked to the product offered, and the audits, leading to higher applicability to the transactional model, however, the attention to the creation of a **platform** to exchange of information between different subjects can be an indicator of customer-centric, as they communicate on the website, they consider the human relationship as a priority.

In their proposition, they seem to be focused on supporting pharmaceuticals company, so a **specific target**, providing what they need, as it has been previously analyzed, pharmaceutical companies work in a highly regulated market, making them the perfect customer for a SaaS business.

This will lead to considering the subscription value proposition as the preferred one, in this way, Qualifyze's customers can continuously be certain of remaining compliant with regulations, since Qualifyze provides an always updated service. Even if it is not possible to infer the data regarding member churn and engagement, it is possible to analyze that Qualifyze is already involved in such practices, as it has been explained by the research related to BuiltWith, the firm relies on numerous websites for analytics and tracking analysis of customer engagement, this lead again to the conclusion that a subscription model would be suitable for them.

Finally, the core of their business is the development of their personal platform, it is the first case worldwide in which all the data related to pharmaceuticals audits are collected and can be used by various customers, for example, requesting the report of an audit already conducted (<https://www.qualifyze.com>), the impact of the technology in the firm is a strong signal of how they would benefit from a subscription business model.

I recognize that an approach as the Gioia Methodology would be more adequate for different sources of data, more various and complete with respect to the ones used in the development of my analysis; however, for different reasons, mostly related to confidentiality, it was not possible to disclose more information, anyway I consider the analysis implemented interesting since it is mostly based on different sources, among which the most interesting is the firm website and an interview that has been made to one of the Co-founder.

Based on all the information gathered, that can be considered as trustful because their origin has been checked, based on the analysis previously developed regarding the firm Qualifyze, all the publicly available information found, and the industry in which it works it is possible for me to conclude that through the approach of the Gioia methodology, a transition to the subscription business model would be an improvement in the business of the firm.

This **evolution** in the business model, from a transactional model to a subscription one, could allow the firm to pursue new and more suitable funding options, more based on their recurrent revenues, enhancing the profitability and improving its business.

5. Conclusion

In the first chapter of this work, I have first introduced the literature studies regarding the Start-up phenomenon, the aim was to highlight the importance of the Startup' business in the modern market.

Then I have presented the main characteristics of the Start-up business and its interesting traits, such as the different typologies of Startups, the drivers of success, and, lastly, the figure of the Entrepreneur and its peculiarities.

In the second chapter, I have developed an analysis regarding Start-up funding theory.

First, defining the needs of funds of a Start-up and then describing the available methods: personal savings, Angel investors, Venture Capital, Government Grant, Crowdfunding, and Debt, with a particular focus on differentiating between equity-based funding and debt-based funding, explaining the advantages and disadvantages of each of them.

Then, I have concluded the analysis with the topic of financing rounds, dividing the funding journey of a Start-up into different temporal stages and needs, and deepening the peculiarity of every round.

In the third chapter, I have developed an analysis regarding capital structure decisions, both with theoretical and practical studies, explaining the main traditional theories of Corporate Finance, and the applicability of these theories to the Startups' environment, showing the impact of the funding choices in the

profitability. To complete the analysis I have presented some cases of profitable companies born as startups, highlighting their funding methods and their results through a ratios analysis.

Finally, I had the chance to apply all the theories regarding Startups analyzed in this work to a Case Study. I have decided to analyze the company in which I have done my curricular internship, Qualifyze GmbH.

Since the firm is a Start-up, it was perfectly fitting with the purposes of this work: studying Startups' profitability and the link with funding choices.

However, as the first two chapters have highlighted, implementing analysis on a Start-up is complex for its nature of uncertainty.

Moreover, since Qualifyze was in a delicate and complex moment of its business, confidentiality and information disclosure have impacted the level of information that I was able to use.

With a focus on the resources found online, on the company website and journal articles, and an interview with one of the two co-founders, I was able to collect enough information to implement an analysis through the Gioia Methodology. After having examined the main peculiarity of this methodology, I have presented the most relevant data of the Start-up, with a focus on the service offered, the funding methods, and investors; the most interesting feature of the firm was its ability to collect numerous data regarding its customers in an online platform. I have then developed an analysis regarding the market in which the company operates, the Pharmaceutical Industry, and its main characteristics.

Then, I have shown some evidence regarding the fact that the most suitable business model in the pharmaceutical industry is the SaaS one.

From this point I have developed my analysis, demonstrating that Qualifyze GmbH may be more suitable for a subscription model rather than a transactional one.

This deduction has allowed me to conclude that the company might considering using a subscription business model: all the points highlighted in the analysis lead me to the same conclusion, the firm perfectly fits the aims and characteristics of a SaaS business. I believe that an evolution to the subscription model, together with a change in the funding methods selected, in order to follow the recurrent revenues' peculiarity of the subscription model, is likely to enhance the firm's

profitability, allowing it to finally exploit one of its unused, until now, crucial resource, the availability of data.

Bibliography and Sitography

- 7startup. (2022, February 11). *STARTUP SUCCESS STORY: AIRBNB STARTUP FOUNDERS*. <https://www.7startup.vc/post/startup-success-story-airbnb-a-world-built-on-connection-and-belonging/>.
- about.fb.com. (2021, October 28). *Introducing Meta: A Social Technology Company*. <https://about.fb.com/news/2021/10/facebook-company-is-now-meta/>.
- about.meta.com. (n.d.). *about.meta.com*. <https://about.meta.com/company-info/>.
- AccountingTools. (2023, March 26). *Current ratio analysis*. <https://www.accountingtools.com/articles/current-ratio-analysis.html#:~:text=What%20is%20current%20ratio%20analysis,Busine,ss%20should%20be%20shut%20down.>
- ACV. (2020, June 7). *Independent Venture Capital vs. Corporate Venture Capital*. <https://acv-vc.medium.com/independent-venture-capital-vs-corporate-venture-capital-a93fca5a3c29>.
- Alexy, O. T., Block, J. H., Sandner, P., & Ter Wal, A. L. J. (2012). Social capital of venture capitalists and start-up funding. *Small Business Economics*, 39(4), 835–851. <https://doi.org/10.1007/s11187-011-9337-4>
- Allis, R. (n.d.). *The history of entrepreneurship from ancient trade to the industrial age*. <https://startupguide.com/history-of-entrepreneurship-from-ancient-trade-to-the-industrial-age>.
- Altexsoft.com. (2022). *Revenue Model Types in Software Business: Examples and Model Choice*. <https://www.altexsoft.com/blog/revenue-model-types/#:~:text=A%20transaction%2Dbased%20model%20is,The%20production%20costs%20and%20margin.>
- Ammirati, S. (2019). What is a “Corporate Startup”? *Corporate Startup Lab*.
- Andrew, J. P., & Sirkin, H. L. (2003). Innovating for Cash. *Harvard Business Review*.
- ArK Kapital. (2022, November 3). *Startup business loans: Options when funding with debt*. <https://www.arkkapital.com/basics/startup-business-loans>.

- Artem Minaev. (2022, December 22). *Startup Statistics (2023): 35 Facts and Trends You Must Know*. <https://firstsiteguide.com/startup-stats/asq.org>. (n.d.). *WHAT IS A SMALL BUSINESS?* <https://Asq.Org/Quality-Resources/Small-Business>.
- Auchard Eric. (2008, May 12). *Facebook takes \$100 mln in debt as CTO departs*. <https://www.Reuters.Com/Article/Facebook-Debt-IdUSN1233958720080512>.
- Audretsch, D. B., & Fritsch, M. (1994). The Geography of Firm Births in Germany. *Regional Studies*, 28(4), 359–365. <https://doi.org/10.1080/00343409412331348326>
- Aulet, B. (2013). *Disciplined Entrepreneurship: 24 Steps to a Successful Startup* (John Wiley & Sons, Ed.).
- Babalola, Y. A., & Abiola, F. R. (2013). Financial Ratio Analysis of Firms: A Tool for Decision Making. In *International Journal of Management Sciences* (Vol. 1, Issue 4). <http://www.rassweb.com>
- Balfour, H. (2020). *How can Software as a Service drive collaboration and success in pharma?* <https://Cms.Law/En/Deu/News-Information/Cms-Advises-Digital-Start-up-Qualifyze-on-Eur-12-Million-Series-a-Round-of-Financing>.
- Baquiche, N. (2019, November 25). *Crowdfunding Advantages and Disadvantages*. <https://Seedlegals.Com/Resources/Crowdfunding-Advantages-and-Disadvantages/>.
- Bascha, A., & Walz, U. (2001). Convertible securities and optimal exit decisions in venture capital finance. *Journal of Corporate Finance*, 7(3), 285–306. [https://doi.org/10.1016/S0929-1199\(01\)00023-2](https://doi.org/10.1016/S0929-1199(01)00023-2)
- Battistella, C., Dangelico, R. M., Nonino, F., & Pessot, E. (2021). How social start-ups avoid being falling stars when developing social innovation. *Creativity and Innovation Management*, 30(2), 320–335. <https://doi.org/10.1111/caim.12431>
- Baxter, R. (2016, July 13). *Subscription Business Models Are Great for Some Businesses and Terrible for Others*. <https://Hbr.Org/2016/07/Subscription-Business-Models-Are-Great-for-Some-Businesses-and-Terrible-for-Others>.
- bdc. (n.d.). *Debt-to-equity ratio*. <https://www.Bdc.ca/En/Articles-Tools/Entrepreneur-Toolkit/Templates-Business-Guides/Glossary/Debt-to->

- Equity-
 Ratio#:~:Text=The%20debt%2Dto%2Dequity%20ratio%20shows%20how%
 20much%20of%20a,Is%20held%20by%20the%20company.
- Berger, M., & Hottenrott, H. (2021). Start-up subsidies and the sources of venture capital. *Journal of Business Venturing Insights*, 16.
<https://doi.org/10.1016/j.jbvi.2021.e00272>
- Berry, Timothy. (2004). *Hurdle : the book on business planning : how to develop and implement a successful business plan*. Palo Alto Software.
- BIRAC. (2020). *Biotechnology Industry Research Assistance Council (BIRAC) A Government of India Enterprise Biotechnology Ignition Grant (BIG) Igniting New Ideas..... Scheme Guidelines*.
- Birley, S. (1987). The Start-up. In *Small business and Entrepreneurship - Text and Cases*.
- Blank, S. (2013). Why the Lean Start-Up Changes Everything. *Harvard Business Review*.
- Blystone, D. (2023, April 18). *The History of Uber*.
<https://www.investopedia.com/articles/personal-finance/111015/story-uber.asp>.
- Bortolini, R. F., Nogueira Cortimiglia, M., Danilevicz, A. de M. F., & Ghezzi, A. (2021). *Lean Startup: a comprehensive historical review*. <https://doi.org/10.1108/MD-07-2017-0663>
- British Business Bank. (n.d.). *How to spot a gap in the market*.
<https://www.startuploans.co.uk/business-advice/how-to-spot-a-gap-in-the-market-and-act-quickly/>.
- Builtwith.com. (n.d.). *QUALIFYZE.COM*. <https://builtwith.com/qualifyze.com>.
- Carlson, R. (2022, November 30). *Debt-To-Equity Ratio: Calculation and Measurement*. <https://www.thebalancemoney.com/what-is-the-debt-to-equity-ratio-393194>.
- CFI Institute. (2020a, May 17). *Moral Hazard*.
<https://corporatefinanceinstitute.com/resources/economics/moral-hazard/>.

- CFI Institute. (2020b, December 27). *Adverse Selection*.
<https://Corporatefinanceinstitute.Com/Resources/Wealth-Management/Adverse-Selection/>.
- Chen, P. (2021, May 4). *What Are GxPs And How Do They Shape The Quality Of Your Pharmaceutical Product?* <https://Www.Outsourcedpharma.Com/Doc/What-Are-Gxps-and-How-Do-They-Shape-the-Quality-of-Your-Pharmaceutical-Product-0001#:~:Text=GxP%20is%20the%20abbreviation%20of,GMP%20%2D%20Good%20Manufacturing%20Practice.>
- CMS.law. (2021, November 3). *CMS ADVISES DIGITAL START-UP QUALIFYZE ON EUR 12 MILLION SERIES A ROUND OF FINANCING*.
<https://Cms.Law/En/Deu/News-Information/Cms-Advises-Digital-Start-up-Qualifyze-on-Eur-12-Million-Series-a-Round-of-Financing.>
- Cole, R. A., & Sokolyk, T. (2018). Debt financing, survival, and growth of start-up firms. *Journal of Corporate Finance*, 50, 609–625.
<https://doi.org/10.1016/j.jcorpfin.2017.10.013>
- Coleman, S., & Robb, A. (2012). Capital structure theory and new technology firms: is there a match? *Management Research Review*, 35(2), 106–120.
<https://doi.org/10.1108/01409171211195143>
- commission.europa.eu. (n.d.). *The Single Market Programme*.
[https://Commission.Europa.Eu/Funding-Tenders/Find-Funding/Eu-Funding-Programmes/Single-Market-Programme/Overview_en#:~:Text=The%20Single%20Market%20Programme%20\(SMP,Governance%20of%20the%20single%20market.](https://Commission.Europa.Eu/Funding-Tenders/Find-Funding/Eu-Funding-Programmes/Single-Market-Programme/Overview_en#:~:Text=The%20Single%20Market%20Programme%20(SMP,Governance%20of%20the%20single%20market.)
- Cook Scarlett. (n.d.). *What is a start-up?* <https://Startups.Co.Uk/Analysis/What-Is-a-Startup/>.
- Cooper, A. C. (1981). Strategic management: New ventures and small business. In *Long Range Planning* (Vol. 14, Issue 5).
- Corporate Finance Institute CFI, & Peterdy, K. (2023, March 21). *Venture Debt*.
<https://Corporatefinanceinstitute.Com/Resources/Capital-Markets/Venture-Debt/>.

- Crunchbase.com. (n.d.-a). *Debt-financing Meta*.
https://www.crunchbase.com/funding_round/facebook-debt-financing-4e8faa5e.
- Crunchbase.com. (n.d.-b). *Qualifyze*.
<https://www.crunchbase.com/organization/chemsqre>.
- Curry, B., & Baldrige, R. (2022, October 16). *What Is A Startup? The Ultimate Guide*. Forbes Advisor.
- Damodaran Aswath. (2023). *Return on Equity by Sector (US)*.
https://pages.stern.nyu.edu/~adamodar/new_home_page/datafile/roe.html.
- De Jong, M., Marston, N., & Roth, E. (2015, April 1). *The eight essentials of innovation*. McKinsey Quarterly.
- Deichmann, D., Rozentale, I., & Barnhoorn, R. (2017). Open Innovation Generates Great Ideas, So Why Aren't Companies Adopting Them? *Harvard Business Review*.
- Dell'acqua, A., Guardasole, A., & Bonini, S. (2013). *Grandstanding and Spinning in VC-Backed IPOs on AIM UK*.
- DeMarco, J. (2023, April 10). *Startup Funding: What It Is and How to Get Capital for a Business*. <https://www.nerdwallet.com/article/small-business/startup-funding>.
- Denis, D. J. (2004). Entrepreneurial finance: an overview of the issues and evidence. *Journal of Corporate Finance*, 10(2), 301–326.
- Dukes, J. (2023, February 8). *Series A, B, C Funding: Averages, Investors, Valuations*. <https://www.fundz.net/what-is-series-a-funding-series-b-funding-and-more#:~:text=In%20fact%2C%20less%20than%2010%25%20of%20companies>.
- ec.europa.eu. (n.d.). *Horizon Europe*. https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en.
- eig.org. (2022, January 19). *New Startups Break Record in 2021: Unpacking the Numbers*. <https://eig.org/new-start-ups-break-record-in-2021-unpacking-the-numbers/>.

European Commission. (n.d.). *Crowdfunding explained*. https://Single-Market-Economy.Ec.Europa.Eu/Access-Finance/Guide-Crowdfunding/What-Crowdfunding/Crowdfunding-Explained_en.

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS, eur-lex.europa.eu (2020).

Eurostat Statistics Explained. (n.d.). *Glossary:Innovation*. <https://Ec.Europa.Eu/Eurostat/Statistics-Explained/Index.Php?Title=Glossary:Innovation>.

Expert Panel Forbes Councils Member. (2020, November 24). *14 Effective Ways To Identify An Untapped Market For Your Business*. Forbes.Com.

failory.com. (2023, May 18). *Top 13 Lifestyle Unicorn Companies in 2023*. <https://Www.Failory.Com/Startups/Lifestyle-Unicorns>.

Ferreira Pedro. (2020, August 2). *Mario Götze becoming an investor in the digital industry by joining the Frankfurt start-up Qualifyze as a new investor*. <https://Medium.Com/Frankfurtvalley/Mario-G%C3%B6tze-Becoming-an-Investor-in-the-Digital-Industry-by-Joining-the-Frankfurt-Start-up-B3ceac6cbefc>.

Flint, P. (2019, July). *The Fundraising Checklist: 13 Proof Points for Series A*. <https://Www.Nfx.Com/Post/Fundraising-Checklist-13-Proof-Points-Series-a>.

Folger, J. (2023, April 29). *Current Ratio vs. Quick Ratio: What's the Difference?* <https://Www.Investopedia.Com/Ask/Answers/062714/What-Are-Main-Differences-between-Current-Ratio-and-Quick-Ratio.Asp#:~:Text=A%20strong%20current%20ratio%20greater,Move%20quickly%20without%20pricing%20discounts>.

Fresneau, V. (2023, January 3). *10 innovative social impact startups to watch in 2023 and beyond*. <https://Www.Eu-Startups.Com/2023/01/10-Innovative-Social-Impact-Startups-to-Watch-in-2023-and-Beyond/>.

fsb.org.uk. (2022). *What is a business plan?* <https://Www.Fsb.Org.Uk/Resources-Page/What-Is-a-Business-Plan.Html#:~:Text=A%20business%20plan%20is%20an,To%20be%20in%20the%20future>.

- Ganti, A. (2023, April 21). *Preferred Stock*.
<https://www.investopedia.com/terms/p/preferredstock.asp>.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking Qualitative Rigor in Inductive Research. *Organizational Research Methods*, 16(1), 15–31.
<https://doi.org/10.1177/1094428112452151>
- Girdley Michael. (n.d.). *The Agency Problem and Startups*. <https://girdley.com/the-agency-problem-and-startups/>.
- Glasner, J. (2019, June 12). *Unicorn Class of 2019: Richer, More Autonomous, And More American*. <https://news.crunchbase.com/venture/unicorn-class-of-2019-richer-more-autonomous-and-more-american/>.
- Gómez, L. (2007). *The process and problems of business Start-Ups* (No. 22; Pensamiento & Gestión).
- Gompers, P. A. (1996). Grandstanding in the venture capital industry. *Journal of Financial Economics*, 42(1), 133–156. [https://doi.org/10.1016/0304-405X\(96\)00874-4](https://doi.org/10.1016/0304-405X(96)00874-4)
- Gregory, A. (2022, November 29). *What Are Gaps In The Market?*
<https://www.thebalancemoney.com/identifying-gaps-in-the-market-for-your-small-business-4177776#citation-1>.
- Hassan, E. ul, Hameed, Z., Moin, F., & Shaheen, M. (2014). *Innovation is the Key Driver for Corporate Success*.
- Hayter, C. (2013). *Harnessing University Entrepreneurship for Economic Growth Factors of Success Among University Spin-offs*.
- Hekkert, C. (n.d.). *Debt Financing For Startups: When And How To Get It*.
<https://www.zeni.ai/blog/debt-financing-for-startups#:~:Text=%E2%80%8D,What%20is%20debt%20financing%20for%20startups%3F,Pays%20it%20back%20with%20interest>.
- Hellmann, T., & Puri, M. (2002). Venture Capital and the Professionalization of Start-Up Firms: Empirical Evidence. *The Journal of Finance*, 57(1), 169–197.
<https://doi.org/10.1111/1540-6261.00419>
- Hor, S. C. (Timothy), Chang, A., Torres de Oliveira, R., & Davidsson, P. (2021). From the theories of financial resource acquisition to a theory for acquiring financial resources - how should digital ventures raise equity capital beyond seed

funding. *Journal of Business Venturing Insights*, 16.
<https://doi.org/10.1016/j.jbvi.2021.e00278>

Hower, L. (n.d.). *How equity dilution impacts early stage startups*.
<https://www.svb.com/startup-insights/startup-equity/startup-equity-dilution>.

<https://ambergrantsforwomen.com/>. (n.d.). *Amber Grants by WomensNet*.
<https://Ambergrantsforwomen.Com/>.

<https://apx.vc/>. (n.d.). *APX VC*.

<https://auxxo.de/>. (n.d.). *Auxxo*.

<https://rheingau-founders.com/about>. (n.d.). *Rheingau Founders*.

<https://www.bcg.com/about/people/experts/udo-jung>. (n.d.). *Udo Jung*.

<https://www.cherry.vc/>. (n.d.). *Cherry VC*.

<https://www.mightynetworks.com/encyclopedia/membership-churn>. (n.d.). *What is membership churn?*

<https://www.startupranking.com/countries>. (n.d.). *Startup Ranking*. Retrieved June 14, 2023, from <https://www.startupranking.com/countries>

Huotari, P., & Ritala, P. (2021). When to switch between subscription-based and ad-sponsored business models: Strategic implications of decreasing content novelty. *Journal of Business Research*, 129, 14–28.
<https://doi.org/10.1016/j.jbusres.2021.02.037>

Huyghebaert Nancy. (2003). The Capital Structure of Business Start-Ups. Policy Implications. *Review of Business and Economic Literature*, 0(1), 23–46.

Iskold, A. (2020). *How to Run a Series A Fundraising Process*.
<https://www.alleywatch.com/2020/01/how-to-run-a-series-a-fundraising-process/>.

Jaros, J., & Bartosova, V. (2015). To the Capital Structure Choice: Miller and Modigliani Model. *Procedia Economics and Finance*, 26, 351–358.
[https://doi.org/10.1016/S2212-5671\(15\)00864-3](https://doi.org/10.1016/S2212-5671(15)00864-3)

Jia, Y. (George). (2015). Financing High-tech Start-ups: Moral Hazard, Information Asymmetry and the Reallocation of Control Rights. *The B.E. Journal of Economic Analysis & Policy*, 15(2), 685–708. <https://doi.org/10.1515/bejeap-2013-0190>

- Johnson, H. (n.d.). *History of entrepreneurship*.
<https://Bebusinessed.Com/History/History-of-Entrepreneurship/>.
- Kappel, M. (2022, October 27). *What Is Crowdfunding, and How Can it Take Your Business to the Next Level?*
<https://Www.Patriotsoftware.Com/Blog/Accounting/What-Is-Crowdfunding/>.
- Keks, A. (2019, July 3). *Case Study: Airbnb*. <https://Medium.Com/Future-Sensor/Case-Study-Airbnb-7f4e2a66184c>.
- Kerner, S. M. (n.d.). *initial public offering (IPO)*.
<https://Www.Techtarget.Com/Whatis/Definition/Initial-Public-Offering-IPO>.
- Kotashev, K. (2022, December 14). *Start Up failure rate: How Many Startups Fail and Why in 2023?*
- Landstrom, H. (1993). Agency Theory and Its Application to Small Firms: Evidence from the Swedish Venture Capital Market. *Journal of Small Business Finance*, 2(3), 203–218.
- Lattanzio Daniel. (2018). *Reasons Why a Business Plan Is Important for Entrepreneurs*. <https://Www.Wsifranchise.Com/Blog/5-Reasons-Why-a-Business-Plan-Is-Important-for-Entrepreneurs>.
- Lavinsky, D. (n.d.). *Angel Round Vs. Seed Round Funding*.
<https://Www.Growththink.Com/Capital-Raising/Angel-Round-vs-Seed-Round-Funding#:~:Text=The%20angel%20round%20of%20funding,On%20in%20a%20company's%20development>.
- Lechmanová, K., & Vedeikytė, I. (2020). *How one company disrupted the whole industry*. <https://doi.org/10.13140/RG.2.2.30372.50565>
- Lerner, J., Bernstein, S., Dev, A., & Bai, J. (2021, May 14). *The government as an (effective) venture capitalist*. <https://Cepr.Org/Voxeu/Columns/Government-Effective-Venture-Capitalist>.
- Livescault, J. (n.d.). *What exactly is Open Innovation?* Braineet.Com.
- Loeb, S. (2014, November 29). *Explaining the Post-Seed gap: why is it happening?*
- MacMillan Dictionary. (n.d.). *a gap in the market*.
<https://Www.Macmillandictionary.Com/Dictionary/British/a-Gap-in-the-Market>.

- Macrotrends.net. (n.d.-a). *Airbnb Financial Ratios for Analysis -2023 | ABNB*.
<https://www.macrotrends.net/stocks/charts/ABNB/Airbnb/Financial-Ratios>.
- Macrotrends.net. (n.d.-b). *Meta Platforms Financial Ratios for Analysis -2023 | META*. <https://www.macrotrends.net/stocks/charts/META/Meta-Platforms/Financial-Ratios>.
- Macrotrends.net. (n.d.-c). *Uber Technologies Financial Ratios for Analysis -2023 | UBER*. <https://www.macrotrends.net/stocks/charts/UBER/Uber-Technologies/Financial-Ratios>.
- Magnani, G., & Gioia, D. (2023). Using the Gioia Methodology in international business and entrepreneurship research. *International Business Review*, 32(2), 102097. <https://doi.org/10.1016/j.ibusrev.2022.102097>
- Magnussen, E. (2014, September 12). *Maslow's Hierarchy of Needs Adapted for Innovation*. <https://workology.com/maslows-hierarchy-needs-adapted-innovation/>.
- Mattson, B. E. (1985). Spotting a market gap for a new product. *Long Range Planning*, 18(1), 87–93. [https://doi.org/10.1016/0024-6301\(85\)90183-9](https://doi.org/10.1016/0024-6301(85)90183-9)
- Maverick, J. B. (2023, May 25). *Equity Financing vs. Debt Financing: What's the Difference?* <https://www.investopedia.com/ask/answers/042215/what-are-benefits-company-using-equity-financing-vs-debt-financing.asp>.
- McCann, S. (2020, March 27). *What does seed funding look like across the world?* https://medium.com/@stephenmccann_3391/what-does-seed-funding-look-like-across-the-world-d79f5ba8c483.
- McClure, B. (2023, April 17). *How ROA and ROE Give a Clear Picture of Corporate Health*. <https://www.investopedia.com/investing/roa-and-roe-give-clear-picture-corporate-health/>.
- McKinsey & Company. (2022, August 17). *What is innovation?* <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-innovation#/>.
- McLeod, S. (2023). *Maslow's Hierarchy Of Needs Theory*. <https://simplypsychology.org/maslow.html>.
- Meyer, J.-U. (2014). *Strengthening Innovation Capacity through Different Types of Innovation Cultures*.

- Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48(3), 261–297.
- Mueller, D. C. (1972). *A Life Cycle Theory of the Firm* (Vol. 20).
<https://doi.org/10.2307/2098055>
- Murphy, M. (2017, February 2). *Facebook's execs just revealed their shameless plan for taking down Snapchat*. <https://Qz.Com/901289/Facebooks-Fb-Earnings-Call-Revealed-Zuckerbergs-Plan-for-Taking-down-Snapchat-before-Its-Ipo>.
- Mustapha, A., & Tlaty, J. (2018). The Entrepreneurial Finance and the Issue of Funding Startup Companies. *European Scientific Journal, ESJ*, 14(13), 268.
<https://doi.org/10.19044/esj.2018.v14n13p268>
- Nanda, R., & Rhodes-Kropf, M. (2013). Investment cycles and startup innovation. *Journal of Financial Economics*, 110(2), 403–418.
<https://doi.org/10.1016/j.jfineco.2013.07.001>
- Newman, D., & Kenan, F. (2022, January 19). *New Startups Break Record in 2021: Unpacking the Numbers*. Economic Innovation Group.
- Nexigroup.com. (n.d.). *POS solutions to accept in-store payments*.
<https://www.nexigroup.com/en/business/retailers-and-merchants/in-store-payments/>.
- Nibusinessinfo.co.uk. (n.d.). *5 ways to protect your idea during a business pitch*.
<https://www.nibusinessinfo.co.uk/content/5-ways-protect-your-idea-during-business-pitch>.
- Nigam, N., Benetti, C., & Johan, S. A. (2020). *Digital Start-Up Access to Venture Capital Financing: What Signals Quality? Digital Startup Access to Venture Capital Financing: What Signals Quality?*
<https://ssrn.com/author=3098914://www.elsevier.com/open-access/userlicense/1.0/VersionofRecord:https://www.sciencedirect.com/science/article/pii/S1566014120300273>
- Nunziata, L., & Rocco, L. (2014). *The Protestant Ethic and Entrepreneurship: Evidence from Religious Minorities from the Former Holy Roman Empire*.
- Ockenfels, M. (2016, December 12). *A step-by-step-guide to prepare your Series A fundraising*. <https://medium.com/techstars/a-step-by-step-guide-to-prepare-your-series-a-fundraising-f9d51ba27f6>.

- Ohr, T. (2023, February 21). *The Startup Funding Journey: A Guide to Pre-Seed, Seed, Series A, B, C, D, and E Funding*. <https://www.eu-startups.com/2023/02/the-startup-funding-journey-a-guide-to-pre-seed-seed-series-a-b-c-d-and-e-funding/#>:
- Pereira, D. (2023, March 16). *Is Uber Profitable?*
<https://businessmodelanalyst.com/is-uber-profitable/>.
- Peterdy, K. (2022, December 11). *Loan Covenant*.
<https://corporatefinanceinstitute.com/resources/commercial-lending/loan-covenant/>.
- pharmaceutical-networking.com. (n.d.). *Qualifyze celebrates 2022 as Year of Achievements*. <https://www.pharmaceutical-networking.com/qualifyze-celebrates-2022-as-year-of-achievements/>.
- Picken, J. C. (2017). From startup to scalable enterprise: Laying the foundation. *Business Horizons*, 60(5), 587–595.
<https://doi.org/10.1016/j.bushor.2017.05.002>
- Pixr8. (n.d.). *Funding Facebook : From Harvard Dorm Room to \$500 Bn Company*.
<https://pixr8.com/story/funding-facebook-from-harvard-dorm-room-to-500-bn-company/>.
- Popli, C. (2023, June 8). *The Top 12 Startup Business Grants Around The World*.
<https://www.feedough.com/startup-business-grants/>.
- Pratt, M. K. (n.d.). *Definition: startup company*.
<https://www.techtarget.com/searchcio/definition/startup>.
- PwC.com. (n.d.). *PwC Deals insights: How to value a start-up business*.
<https://www.pwc.com/ee/en/services/transaction-services/pwc-deals-insights--how-to-value-a-start-up-business.html> .
- Qualifyze. (2020, April 14). *ChemSquare changes its name to Qualifyze*.
<https://medium.com/@qualifyze/chemsquare-changes-its-name-to-qualifyze-2bbc7d672ca5>.
- Qualifyze GmbH. (2023, January 17). *Qualifyze celebrates 2022 as Year of Achievements*. <https://www.pharmaceutical-networking.com/qualifyze-celebrates-2022-as-year-of-achievements/>.

- Qualifyze.com. (n.d.-a). *Case study on improving external supplier qualification*.
<https://www.qualifyze.com/resources/case-studies/case-study-on-improving-external-supplier-qualification/>.
- Qualifyze.com. (n.d.-b). *Good Automated Manufacturing Practices*.
<https://www.qualifyze.com/audits/gamp/>.
- Qualifyze.com. (n.d.-c). *Good Clinical Practices*.
<https://www.qualifyze.com/audits/gcp/>.
- Qualifyze.com. (n.d.-d). *Good Distribution Practices*.
<https://www.qualifyze.com/audits/gdp/>.
- Qualifyze.com. (n.d.-e). *Good Manufacturing Practices*.
<https://www.qualifyze.com/audits/gmp/>.
- Qualifyze.com. (n.d.-f). *Good Pharmacovigilance Practices*.
<https://www.qualifyze.com/audits/gvp/>.
- Qualistry - GMP Content. (n.d.). *Who Are Qualifyze and What Is Their Mission?*
https://www.youtube.com/watch?v=KnBJ_JgmmUE&t=11s.
- Riani, A. (2021, April 22). *The Difference Between An Entrepreneur And A Startup Founder*. <https://www.forbes.com/sites/abdoriani/2021/04/22/the-difference-between-an-entrepreneur-and-a-startup-founder/>.
- Ries, E. (2011). *The Lean Startups: how today's entrepreneurs use continuous innovation to create radically successful businesses*. Crown Business.
- Rietveld, C. A., & Burg, E. Van. (2014). Religious beliefs and entrepreneurship among Dutch protestants. *International Journal of Entrepreneurship and Small Business*, 23(3), 279. <https://doi.org/10.1504/IJESB.2014.065515>
- Rizwan, K. (2023, February 28). *Understanding Equity Dilution: The What and the Why?* <https://www.linkedin.com/pulse/understanding-equity-dilution-what-why-rizwan-khan>.
- Rona, S. (n.d.). *Protecting intellectual property: What every startup founder needs to know*. <https://www.svb.com/startup-insights/startup-strategy/protecting-intellectual-property-startups>.
- Rose, A. (2019, June 9). *8 steps to making your first angel investment*.
<https://seedlegals.com/resources/8-steps-to-making-an-angel-investment/>.
- Rotefoss, B., & Kolvereid, L. (2005). Aspiring, nascent and fledging entrepreneurs: An investigation of the business start-up process. *Entrepreneurship and*

- Regional Development*, 17(2), 109–127.
<https://doi.org/10.1080/08985620500074049>
- Ruan, K. (2019). Case Study: Insuring the Future of Everything. *Digital Asset Valuation and Cyber Risk Measurement*.
- Sacks, D., & Ruby, E. (2021). *The SaaS Metrics That Matter*.
<https://Sacks.Substack.Com/p/the-SaaS-Metrics-That-Matter?S=r>.
- Sarath. (2021, April 15). *CAPITAL STRUCTURE FOR STARTUPS*.
<https://Eqvista.Com/Capital-Structure-for-Startups/#:~:Text=What%20is%20a%20capital%20structure,Is%20called%20the%20capital%20structure>.
- sba.gov. (n.d.). *Microloans*. <https://Www.Sba.Gov/Funding-Programs/Loans/Microloans>.
- Schaltegger, C., & Torgler, B. (2009). *WORK ETHIC, PROTESTANTISM, AND HUMAN CAPITAL* (107(2)).
- Schools, D. (2016, January 15). *The Truth About Idea Stealing*.
<https://Entrepreneurshandbook.Co/the-Truth-about-Idea-Stealing-47bcb8a0106a>.
- Schuh, G., Wenger, L., Stich, V., Hicking, J., & Gailus, J. (2020). Outcome Economy: Subscription Business Models in Machinery and Plant Engineering. *Procedia CIRP*, 93, 599–604. <https://doi.org/10.1016/j.procir.2020.04.146>
- Shaikh Moin. (n.d.). *6 Types of Startups that Can Grow Substantially With a Dedicated App – Part 2*. <https://Www.Peerbits.Com/Blog/Tech-Startups-Grow-with-Mobile-App-2.Html>.
- Shontell, A. (2010, November 10). *JUST ANNOUNCED: Airbnb Raises \$7.2MM Series A Round and Releases iPhone App*. <https://Www.Businessinsider.Com/Airbnb-Raises-72mm-Series-a-Round-and-Releases-Iphone-App-2010-11>.
- Simply Wall St. (n.d.-a). *Airbnb Financial Health*.
<https://Simplywall.St/Stocks/Us/Consumer-Services/Nasdaq-Abnb/Airbnb/Health>.
- Simply Wall St. (n.d.-b). *Meta Platforms Financial Health*.
<https://Simplywall.St/Stocks/Us/Media/Nasdaq-Meta/Meta-Platforms/Health>.

- Simply Wall St. (n.d.-c). *Uber Technologies Financial Health*.
<https://Simplywall.St/Stocks/Us/Transportation/Nyse-Uber/Uber-Technologies/Health>.
- Simply Wall St. (2023, April 6). *Are Robust Financials Driving The Recent Rally In Airbnb, Inc.'s (NASDAQ:ABNB) Stock?*
<https://Simplywall.St/Stocks/Us/Consumer-Services/Nasdaq-Abnb/Airbnb/News/Are-Robust-Financials-Driving-the-Recent-Rally-in-Airbnb-Inc>.
- Softgroup.eu. (n.d.). *[Blog] Cloud Technology in 2021: Benefits of SaaS services in heavily regulated industries*. <https://Www.Softgroup.Eu/2021/06/09/Blog-Cloud-Technology-the-Benefits-of-Saas-in-Pharma/>.
- Spender, J. C., Corvello, V., Grimaldi, M., & Rippa, P. (2017). Startups and open innovation: a review of the literature. In *European Journal of Innovation Management* (Vol. 20, Issue 1, pp. 4–30). Emerald Group Publishing Ltd.
<https://doi.org/10.1108/EJIM-12-2015-0131>
- Spiridonova, K. (2023, April 1). *Best 6 minimum viable product examples and stories behind them*. <https://Www.Purrweb.Com/Blog/Best-6-Minimum-Viable-Product-Examples-and-Stories-behind-Them/>.
- Startupranking.com. (n.d.). *Facebook Funding Rounds*.
<https://Www.Startupranking.Com/Startup/Facebook/Funding-Rounds>.
- Statista Research Department. (2023a, January 24). *Global unicorns - statistics & facts*.
- Statista Research Department. (2023b, April 6). *Number of venture capital investment deals in the United States from 2006 to 2022*.
<https://Www.Statista.Com/Statistics/277505/Venture-Capital-Number-of-Deals-in-the-United-States-since-1995/>.
- Steve Blank. (2013). Steve Blank: The 6 Types of Startups. *The Wall Street Journal*.
- Stevens, A. J. (2012). Capitalization the art of the cap table. *Journal of Commercial Biotechnology*, 18(2), 83–97. <https://doi.org/10.5912/jcb.522>
- Stewart, E., Harris, E., & Lewis, D. (2020). *Skilled labour and professionalism in ancient Greece and Rome*. New York: Cambridge University Press.
- Stresing, M. (2018, July 22). *Raising startup capital from friends, family or someone you just met? Here's how to keep it legal*. Seedlegals.Com.

- Sullivan, K. (2022, September 7). *Startup funding: how it works and how to raise it*. Seedlegals.Com.
- SVSG. (n.d.). *Pre-seed vs. Seed Fundraising*. <https://svsg.co/pre-seed-vs-seed-fundraising/#:~:Text=What%20Exactly%20is%20the%20Difference,Of%20proving%20product%2Dmarket%20fit>.
- Teare, G. (2021, October 28). *How Seed Funding Has Exploded In The Past 10 Years*. <https://news.crunchbase.com/venture/seed-funding-startups-top-vc-firms-a16z-nea-khosla/>.
- The Startups Team. (2018, June 19). *Venture Capital: What It Is & Why Use It*. <https://www.startups.com/library/expert-advice/what-is-venture-capital>.
- The Startups Team. (2022, December 20). *What Is Startup Funding?* Startups.Com. <https://www.startups.com/library/expert-advice/what-is-startup-funding>
- Trader Andrew. (2018, November 20). *Startup puberty: How to get from seed to Series A*. <https://venturebeat.com/entrepreneur/startup-puberty-how-to-get-from-seed-to-series-a/>.
- Ueda, M. (2004). Banks versus Venture Capital: Project Evaluation, Screening, and Expropriation. *The Journal of Finance*, 59(2), 601–621. <https://doi.org/10.1111/j.1540-6261.2004.00643.x>
- U.S. BUREAU OF LABOR STATISTICS. (n.d.). *Business Employment Dynamics*. https://www.bls.gov/bdm/entrepreneurship/bdm_chart3.htm.
- U.S. Small Business Administration. (n.d.). *Write your business plan*. <https://www.sba.gov/business-guide/plan-your-business/write-your-business-plan#:~:Text=works%20for%20you-,Business%20plans%20help%20you%20run%20your%20business,Key%20elements%20of%20your%20business>.
- U.S. Small Business Administration. (2013). *Guide to SBIR/STTR Program Eligibility*. www.sbir.gov
- Van Osnabrugge, M. (2000). A comparison of business angel and venture capitalist investment procedures: An agency theory-based analysis. *Venture Capital*, 2(2), 91–109. <https://doi.org/10.1080/136910600295729>
- VeFund. (2023). *Six Different Types of Startups and How They Seek Funding*. <https://www.vefund.io/en-blog/six-different-types-of-startups-and-how-they-seek-funding>.

- Viguerie, P. S., Calder, N., & Hindo, B. (2021). 2021 Corporate Longevity Forecast. *Innosight*.
- Wang, C. S. H., Chen, Y.-C., & Lo, H.-Y. (2021). A fresh look at the risk-return tradeoff. *Pacific-Basin Finance Journal*, 68, 101546.
<https://doi.org/10.1016/j.pacfin.2021.101546>
- Whitworth, E. (2022, July 28). *Lifestyle Startups: An Intro to the Basics*.
<https://www.shortform.com/blog/lifestyle-startups/>.
- Who Raised? (2023, January 24). *2 SaaS Startups in the Pharmaceutical Industry*.
<https://www.whoraised.io/saas-startups/pharmaceutical-saas-startups>.
- WIM Committee, & Fu, Y. (2019). *Innovation is the Only Way to Survive Competition*.
 EqualOcean.Com.
- Yahoo Finance. (n.d.-a). *Balance Sheet Meta Platforms Inc*.
<https://finance.yahoo.com/quote/META/financials?p=META>.
- Yahoo Finance. (n.d.-b). *Balance Sheet of Airbnb Inc*.
<https://finance.yahoo.com/quote/ABNB/balance-sheet?p=ABNB>.
- Yahoo Finance. (n.d.-c). *Balance Sheet Uber Technologies Inc*.
<https://finance.yahoo.com/quote/UBER/balance-sheet?p=UBER>.
- Yahoo Finance. (n.d.-d). *Income Statement Airbnb Inc*.
<https://finance.yahoo.com/quote/ABNB/financials?p=ABNB>.
- Yahoo Finance. (n.d.-e). *Income Statement Meta Platform Inc*.
<https://finance.yahoo.com/quote/META/financials?p=META>.
- Yahoo Finance. (n.d.-f). *Income Statement Uber Technologies Inc*.
<https://finance.yahoo.com/quote/UBER/financials?p=UBER>.
- Zhou, H., Sandner, P. G., Martinelli, S. L., & Block, J. H. (2016). Patents, trademarks, and their complementarity in venture capital funding. *Technovation*, 47, 14–22. <https://doi.org/10.1016/j.technovation.2015.11.005>
- Zirah, A. (2020, July 14). *4 Types of Funding Every SaaS Founder Needs to Know*.
<https://www.rrsquared.com/post/4-types-of-funding-every-saas-founder-needs-to-know>.
- Ziuznys, A. (2022, October 4). *Complete Guide to Startup Funding Rounds: Seed, A, B, and C*. <https://coresignal.com/blog/funding-rounds/>.