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An improved valuation method for Startups in the social-media industry

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Preface / Acknowledgment

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Abstract

Startup valuation is often referred to as an art because many inputs traditionally required for companies' valuation are missing due to the early stage phase and its business nature. Academic corporate finance methods fail in providing the good value for a seed stage Startup. Therefore, this paper has the aim to give an improved and trustful model for entrepreneurs, to make them understand better the value of their idea, as well as the risky essence of their business.

Based on existing literature as well as primary and secondary research, this paper develops an integrated model of valuation for Startups present in the seed stage. With insights from real life players, the model is enriched by practical needs explicitly demanded by them. Furthermore, this research paper provides important guidelines on the interpretation and the understanding of those numbers that come up from the model.

Keywords: Financial valuation, seed stage, Startups, entrepreneurship finance

Executive summary

This paper starts with the clarification of the different subjects and stages in the Startup framework. Then the paper continues with the traditional valuation theories and their pitfalls when valuing companies at their starting phase. The research methodology, made by face-to-face interviews, is then deeply explained since it is determinant for the final model.

The model is developed and interpreted in chapter 4. Finally a conclusion is drawn and the usability and adaptability of the model are discussed.

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List of abbreviations

FCFF

WACC

NPV

CCA

CAPEX

CAPM

EBITDA

AHP

DFC

CAPEX

OPEX

CAPM

1. Introduction

This chapter introduces the objective of the thesis, its importance in the Startups' context and the underlying research plan that was followed.

1.1. Background, problem definition and objective

Entrepreneurship can be seen as a possible solution for the current unemployment problems. This is proved also by many public and not-public incentives that push for more entrepreneurship. The number of entrepreneurs, all over the world, dreaming to build the next Google, Facebook, and Instagram is increasing day by day. But how is it possible to distinguish a good project from a bad one? And what is the value that has a company, if it is in such a raw stage as the seed one? The fundamentals of a company's valuation are straightforward and well established; however, challenges arise when companies are at their initial life cycle. The main reason of this lies in the high level of **uncertainty** that the company has to bear in the mentioned period. Some analysts even consider that finding the correct value for a Startup is impossible. However, the truth is that a value must be calculated; especially when entrepreneurs need to raise capital.

The model proposed in this paper aims to prevent entrepreneurs in the social media business from facing these kinds of obstacles. This thesis is not only a compilation of the best methods explained in a way that the entrepreneurs can have an idea about what valuation is and how it can be computed through the final model. It is more a *step-in-front*, in the sense that it proposes a combining approach - made by the two most relevant valuation methods – discounted free cash flow and relative valuation - in order to give a concrete comparison of them and practical guidelines on how to interpret those final valuation numbers.

From an **academic point of view**, it contributes to the state-of-the-art research in Startups' studies as well as corporate finance theories and combines both fields, based on an analysis of the existing literature review and primary qualitative research.

From a **practical point of view**, this paper is relevant to all entrepreneurs in the social media business that are looking for investors or that want to find a proper valuation method for their Startup. Thus, this paper will contribute to the area of entrepreneurship finance and lead to a more successful and efficient valuation method in the future. This increases the chance of a successful capital raising and helps to accelerate the process of negotiation between entrepreneurs and investors.

The following research questions will be answers within this thesis:

1. How can an entrepreneur in the social media business get to the final value of his Startup company in the seed stage?
2. What are the practical guidelines that must be given to the entrepreneur to interpret the final valuation range?

1.2.Underlying research methodology

In the research approach, two broad methods of reasoning can be used. Through the inductive one, the development of a new model is based on findings from the reality. Deductive research tests the applicability of an existing theory on empirical findings (Bryman and Bell 2003). This paper is based on an inductive approach and it aims to provide generic guidelines on the interpretation of the different approaches integrated in the final model.

As a start, existing valuation theories have been reviewed and primary and secondary data have been collected.

Sekaran (1992) stated the great importance of combining both qualitative and quantitative data, when it's not possible to do only a quantitative experiment. Therefore, this thesis incorporates the two analysis. Initially a qualitative approach was used as a way to explore and understand needs, opinions

and motivation of the subjects involved in the problem previously stated. Twenty-five entrepreneurs and six investors were interviewed and participation at Startup events and conferences enabled for a gathering of information regarding teams' motivation. The group interviewed was very heterogeneous in order to have complete and relevant data: Sekaran (1992) argued, in fact, that the main advantage of qualitative data is elaborating the problem for different perspectives. Qualitative data are necessary for this study since, as Quinn (2002) stated, they are suitable to study topics that do not have a single truth. Quantitative data was gathered from various well-established data sources such as *AngelList*, *VCExperts* and *Seed-DB* websites.

Data sources can be divided into primary and secondary data (Quinn 2002). Primary data has been gathered through semi-structured interview: these allowed for an analysis of the problem from very different perspectives. The secondary data was mainly collected from literature and important venture capital websites. Consistency of data was also taken into account because it ensures the reliability of the tool.

1.3. Assumptions and the expected outcome

The focus of the final model will be for Startup companies operating in the **social media business** and that are at the seed stage. They include companies that come from websites, applications or platforms and that are dedicated to community-based input, interaction, content-sharing and collaboration. The reason why this hypothesis was chosen will be explained in chapter 3 and chapter 4. This is a basic assumption important to highlight because it allows to narrow and specify the model in order to make it stronger and more reliable.

Full motivation and devotion of the team as well as the presence of technical skills are taken as granted in the model. The only indicator regarding the team composition is the number of MBA in the team as it will be deeper explained in chapter 4.

“The valuation of a firm with negative earnings, high growth and limited information will always be noisy” (Damodaran, 2002). In this thesis, the reader will find a deep analysis of the best practices in early stage company valuation, when the credibility of information held is very weak. But the novelty of this paper is the extremely practical excel tool and the fact that the study goes even deeper: creating concrete guidelines for interpretation of values and highlight a comparison of the two most used models in corporate finance - discounted free cash flow and relative valuation. To conclude, the valuation method was designed in a very easy-to-manage way with the aim to be a good guide for entrepreneurs willing to raise their capital.

2. Literature Review

This chapter provides the fundamental methods and tools for a Startup’s valuation analyzed in the literature review.

In order to create the theme’s boundaries that are the basis of the developed model, a proper context description is initially done. Different purposes of valuation as well as the involved subjects and the different Startup’s stages are discussed and then completed with the traditional valuation models of Corporate Finance applied in the entrepreneurship field.

2.1.Context Delimitation

Business valuation, as the words suggest, is a process of analyzing different economic factors of a business in order to give a final **value** to the company and provide a **financial snapshot** of the company to its stakeholders.¹

¹ <http://www.businessdictionary.com/definition/business-valuation.html#ixzz46psP6dZA>

In the Startup² context, business valuation has further risks and challenges worth to be taken into account. However, according to Damodaran (2012), even if it's more difficult valuing a young firm rather than valuing an established one, the fundamentals of valuation do not change. One of the main issue is the "information constraints". When valuing a firm, you draw information from three sources: the first is the current financial statements for the firm, the second is the past history of the firm and the third is getting information from the firm's competitors or peer group (Damodaran, 2012). It is easy to understand that there are difficulties in finding this kind of information when dealing with young companies.

According to Mark Grossman one of the first step to take in order to understand the Startup valuation is the proper differentiation of "before the money" (or pre-money) and "after the money" (or post-money). "Before the money" refers to the value of the company before the venture investment. The latter refers to the value of the company after the investment (M. Grossman)

Defined by the research question, this paper is focused on the pre-money valuation. In this chapter an investigation on the foundations of valuation and an introduction on the factors that affect a Startup valuation is done by exploring the purposes, the stakeholders of the valuation process, the different Startup businesses and the traditional valuation methods.

This is a process, together with the fieldwork, crucially needed for the model presented in chapter 4.

2.2.Factors that affect a financial valuation model building

Before starting to value the Startup, it's important to define the **purpose of valuation**. Valuation can have different purposes depending on the subjects interested in it. A description of these subjects will be further developed.

² It represents *the initial stage after a business has been formed. The product is generally still untested and does not have an established market. The firm has little in terms of current operations, no operating history and no comparable firms.* (Damodaran, 2012)

“A new business searching for capital has no track record to present to potential investors and lenders. All it has is a plan – sometimes written sometimes not – that projects its future performance.”

(W. Bygrave & A. Zacharakis, 2010)

According to the conventional wisdom, the final part of a business plan is composed by the financial analysis and perspectives of the company, therefore the company valuation can have as a purpose the one of being part of an overall **business planning**, in order to see whether the business is feasible or not.

“A feasible business venture is one where the business will generate adequate cash-flow and profits, withstand the risks it will encounter, remain viable in the long-term and meet the goals of the founders.” (D. Hofastrand, M. Holz-Clause, 2009). In this view, the entrepreneurs would be the ones interested in the valuation tool to see if carrying on the project is something worth it.

On the other hand, *“the perceived value of the entrepreneur’s concept is a critical factor to make investors select the projects in which they invest.”* (Smith J.K., Richard L.S., Bliss R.T, 2011).

According to this view, giving a value to a Startup has the more classical purpose to **raise capital**, and to make investors understand how they can contribute to value the project.

As we can see, this purpose involves different subjects that will be named “business valutors” in this paper, referring to the investors and the entrepreneurs and that will have different valuation analysis depending on which **side of the negotiation** are we looking at.

“Entrepreneurs need to put a value on their Startups in order to raise money, and investors need to put a value on their investments to generate liquidity.” (Asheesh Advani³)

³ <https://www.entrepreneur.com/article/72384>

Thus, from this clear needs' distinction, it's evident that both groups have to come up to one final value in order to be able to negotiate.

“Along with venture capital, banks, individual investors (or "angels"), and corporations are among the other providers of capital for these firms. Our understanding of many of the alternative forms of finance-especially "angel" investing-is highly incomplete”.

“Venture capital has developed as an important intermediary in financial markets, providing capital to firms that might otherwise have difficulty attracting financing. These firms are typically small and young, plagued by high levels of uncertainty and large differences between what entrepreneurs and investors know. Moreover, these firms typically possess few tangible assets and operate in markets that change very rapidly.” (Gompers & Lerner, 2001, p. 145)

Following the intuition of João Guerreiro Freire de Andrade in his master thesis called “Internet Startup Valuation Tool - BET Valuator”, investors can be defined as *“business angels and Venture Capitals depending on the slightly different stages of the Startups, despite the fact that in practical terms the boundaries between those two types of investors are not precisely defined.”*

Although literature hasn't suggested different valuation models depending on the different interested subjects yet, it's important to highlight that entrepreneurs might not have the same financial and technical skills as the investors.

“Many entrepreneurs are intimidated by numbers, even after they've gone through the business planning process.” (Bygrave W. & Zacharakis A., 2010). This possible lack of skills has therefore an impact in the valuation tool.

Another factor that might influence a Startup valuation is the **kind of business** in which the company operates. Startups, but generally companies, can be grouped in user-first or revenues-first whether they prioritize growth or revenues.

User-first Startups represent those kind of strategies in which the primary goal of the entrepreneur is to get new users, then he will think how to monetize. It's evident how the growth factor has a huge impact on the valuation in this case. Therefore, it's important to keep feet on the ground when forecasting it in order to value properly the young company. Some real life examples can be the "super unicorns" like Twitter and Facebook.

Revenues-first Startups represent the traditional businesses: they look at the bottom line of the financial statement as a way of forecasting.

Another factor affecting the valuation process is the Startup stage where the company is. *"There is a role for valuation at every stage of a firm's life cycle."* (Damodaran, 2011)

Therefore, it is crucial to ask when the Startup's valuation is taking place. As Bygrave and Zacharakis stated in their "The Portable MBA in Entrepreneurship, 2004": *"Risk and, consequently, the cost of venture capital vary dramatically over the developmental stages of a new venture."*

More specifically, according to Pratt's Guide to venture capital sources, early-stage financing sources can be grouped in the following six main categories.

The first is called *Seed Financing*. At this stage, a provision of a very small amount of capital is needed because the aim is to prove a concept and if successful to further develop it.

The second is *Start-up financing* in which the capital is given to companies that have already completed their product and initial marketing. They might be already in the business for one or less than one year and they have a business plan.

In the *First stage financing*, the capital is provided in order to initiate full-scale manufacturing and sales. In the *Second-Stage Expansion financing*, a growth of accounts receivables and inventories is usually showed, although the company has made some progress it may not show profits yet.

During the *Third-stage, or Mezzanine, financing*, funds are used for marketing, working capital, plants' expansion or product's improvement.

The last stage is *Bridge financing*, that is needed when the company is between stages or when it plans to go public within a year.

Depending on the stage, different risks are associated, hence, different expected rate of return are expected by investors that will impact the company's valuation.

According to these different stages, different types of financing sources are highlighted and **Exhibit 1** encapsulates this concept. **Exhibit 2** shows a representative range of risk/return relationship. It represents the required anticipated returns that go in the deal. (Bygrave and Zacharakis, 2004)

Exhibit 3 and **Table 1** give a snapshot of the different financing sources.

2.3. Valuation theories

In this section the relevant corporate finance valuation methods will be introduced because they are fundamental in order to build a proper valuation tool. Although there is an extensive and meticulous literature about these methods, this section will be only a very detailed introduction, necessary to understand this paper.

According to Damodaran⁴, valuation approaches can be classified in three main categories:

- Discounted Free Cash Flow Valuation
- Relative Valuation
- Contingent Claim Valuation⁵

⁴ Damodaran, 2002 p. 11

⁵ Contingent Claim Valuation refers to the Option Pricing Method

is showed in **Exhibit 4** in the Appendix - it relies on anticipated future returns, therefore on the quality of forecast. (Presenti, 1993)

The **Relative Valuation** describes valuation in a more straightforward and intuitive manner. It uses indeed information from comparable firms that are operating in the same industry because they should have high probability to have similar features. In other words, it's a matter of infer from other similar companies some "value indicators". These indicators can be growth, risk, timing of the cash flows and capital structure (Lerner & Willinge, 2011). The "peer group" is a set of companies that are selected because sufficiently comparable to the company being valued. The peer group can be composed by public quoted companies or by companies that have been involved in merger and acquisitions. In the latter case the type of relative valuation is described as "transaction analysis" or "private market multiples". Even if this method does not rely on so many explicit assumptions as the previous method, there are some issues to consider. Firstly, there must be consistency and clear understanding of the "peer group"; secondly, as Damodaran stated, the median of the ratios gathered should be used instead of the simple average. Lastly, it's important to choose the right comparables: even though there is not a right way to find them, starting with the industry is a valid approach. (Patrik Frei, 2006 o damodaran 2002 p 459)

Examples of multiples can be the price/earnings multiple, the revenue multiple or alternative multiples.⁹

"Contingent claims analysis (CCA) is the application of option-pricing theory to the valuation of assets, the future value of which depends, in turn, on the future value of other assets." (Gray, Merton, Minhan, 2008)

⁹ For more details about last two see Damodaran (2002), p. 543,565.

Contingent Claims Analysis based on option-pricing method is built on the concept that flexibility has value (Frei, 2006). In order to evaluate projects with uncertainty, a real option analysis can be used.

A real option is basically a call option applying real concepts. The concept behind a real option of investing in a Startup is a financial call option which is defined by the right the holder has to buy a specified quantity of an underlying asset at a fixed price (called Strike) at, or before the expiration date of the option. (Joao Freire de Andrade, 2012).

The big advantage of this method resides exactly in the capacity to absorb that haziness and transform it into a valuation. (Damodaran, 2009)

The limitations here are the practical difficulties in gathering and estimating the necessary inputs, but the method has received more importance in the recent years.

To compute the value of the option, the recommended method is the Binomial tree despite the Black-Scholes also be valid. (Damodaran, 2009). The latter is showed in the **Exhibit 5**, in the Appendix.

2.4. Qualitative dimensions to be included

As I said before, traditional financial valuation for new ventures present some challenges because they mainly rely on strict assumptions and require information that new ventures cannot typically provide. From this critic, T. Miloud, A. Aspelund and M. Cabrol (2012) developed an empirical study that looks at Startups' valuation from a new angle, different from the typical Corporate Finance perspective. It is showed that the attractiveness of the industry, the quality of the founder and the top management team, as well as external relationship of a new venture, significantly and positively affect its valuation for investors.

These qualitative central factors have been studied in three selected parts of strategic management literature (industry organization, resource-based view, network theory) to see how they can affect new ventures' valuation.

Extrapolating the empirical results, the following observations can be done.

The **industry structure** has been analyzed through two elements: the degree of product differentiation and the industry growth rate. The conclusion is that both of them are positively related to the valuation of new ventures in this industry.

Entrepreneurial resources also have effect on Startup valuation. *“For a Startup, the entrepreneur and his management team have been reported as the most important resources in various streams of research, including venture capital investment (see, e.g. Tyebjee and Bruno 1984; MacMillan, Siegel, and Narasimha Subba 1985). The heterogeneity of the entrepreneurial team in terms of experience, education or function provides a signal to potential investors and is associated with a higher capital accumulation especially during an initial public offering (IPO) (Zimmerman 2008).”*

The conclusion of the study made by T.Miloud is that a new venture is valued more if its founders have previous Startup experience and if it's founded by a team rather than only one individual.

Finally, as Stuart, Hoang and Hybels (1999) stated, an **entrepreneur's network** is crucial for new opportunities, acquisition of resources and gaining legitimacy. More specifically, Deeds and Hill (1996) have found a positive correlation between the size of the network and the benefits accrued for the focal firm. (T. Miloud, A.Aspeund, M. Cabrol, 2012)

Some models already include these qualitative factors, like the valuation worksheet developed by William Payne (1990) and showed in the Appendix (**Table 2**). This model has however the limitation to have a lack of standardization and modification. The Analytic Hierarchy Process (AHP) tries to solve Payne's method pitfalls. The AHP is a knowledge-based, multi-criteria, decision-making framework that has recently been suggested as a tool for stimulus project prioritization. (Jenny M. Karlsson, 2009)

This model is developed for investors and has the advantages to optimize decision making, to encourage buyers and sellers to share more information and to ranks the companies regarding their

overall desirability. It shouldn't replace the existing valuation model because it is merely a way to enhance qualitative methods already available.

2.5. Conclusion Literature Review

From the analysis of the state of art, a first important conclusion can be drawn: there is no single method that fits for all Startups' valuation because it depends on a huge range of different factors such as the opportunity size, the subjects, the stage in which the Startup is operating and the purpose of valuation itself. Therefore, the analysis should be specified and narrowed according to those factors.

A common confusion is the one between pre and post money valuating, therefore a clear and transparent set of assumptions has to be done.

Interestingly, very few is said in the literature regarding the different valuation of user-first versus revenues-first Startups.

As previously explained, stages choice is extremely important in valuation, because if at a very raw stage, the company may not even have a business model. Furthermore, in a proper model, qualitative dimensions should be taken into consideration as well.

The last observation is that subjects can make valuation change from a planning point of view to an investing point of view; but valuation from entrepreneurs' point of view is little explored.

My overall opinion, according to this literature review, is to develop a pre money valuation tool for entrepreneurs, in order to make them understand about numbers and financial stuff. The stage should be at least after the seed stage in order not to have too abstract data and the business has to be specified as well because it affects the kind of valuation method. So the goal is to give a value, or at least a range of value where to start negotiation because valuation is not an exact science, especially in the field presented.

3. Research Fieldwork

3.1. Methodology

In order to get to a useful and complete Startups' valuation tool, after the first step of the literature review about "*the dark side of valuation*" - referring to Startups valuation - the second step has been complementing this with a qualitative research method. More specifically, 6 investors and 25 entrepreneurs¹⁰ have been interviewed. The type of interview chosen was a semi-structured one because it allows a systematic information gathering, still providing some space to the interviewees to approach new topics. The reason why both investors and Startups have been interviewed is because this way, both sides of the valuation coin are analyzed. Furthermore, no kind of businesses have been excluded in order to have holistic feedback of all kind of industries. Entrepreneurs interviewed are some of the Startups from the *Vodafone Power Lab* accelerator and from the *Fabrica De Startups* incubator. Furthermore, more entrepreneurs' opinions have been collected at some important events as the *GoYouth Conference* in Lisbon. Investors interviewed are both from important venture capital companies – like EDP INOVAÇÃO – as small business angels' boutiques - like PNV - and they all deal with Startups' transactions.

The ultimate goal is to try to understand their knowledge about valuation, the importance they give to it and the importance of a possible valuation tool.

3.2. Observations

3.2.1. Investors Perspective

All investors interviewed, differently from the entrepreneurs, had obviously a method to value Startup companies.

Two very different approaches emerged.

¹⁰ Entrepreneur term used as a general Startup founder, co-founder or team member.

One was the use of the classical discounted free cash flows; the other was the use of the CAPEX¹¹ as a proxy of valuation.

The first one implies the classical use of an excel tool able to discount year by year the free cash flows at a discount rate calculated through the CAPM¹² and considering a Beta¹³ depending on the country risk.

The second one does not imply an excel tool and it is used just as basis – that is a premium can be added to the CAPEX, depending on the “chemistry interaction” (cit. Luís Paulo Tenente) with the team. As a matter of fact, a great importance to the product and the team was given. People are the condition to transform an idea in a business, that’s the reason why investors give meaning to the people: they invest in people and businesses not in ideas (Luís Paulo Tenente).

The discounted free cash flow in the “CAPEX method”, was not totally excluded though; it was described as a way to prove, to see deviations from the initial valuation.

The type of business of a Startup, affects the valuation (e.g. internet Startups are considered riskier).

In conclusion, two totally different approaches to valuation were described: one based on forecasting numbers, the other based more on beliefs in the team and in the product. It’s important to consider that the use of relative valuation was also emphasized by all of them, especially for companies that operate in well-established businesses and therefore the use of multiples can be proper and reliable.

3.2.2. Entrepreneurs Perspective

Entrepreneurs’ opinions significantly change whether they have a business-management background or others.

¹¹ Capital Expenditure: all the expenses where benefits continue over a long period. E.g. acquisition of permanent assets.

¹² Capital Asset Pricing Model: used to calculate the required rate of return based on the risk level assumed.
[$r = r_f + \beta(r_m - r_f)$]

¹³ Beta (β), the Greek symbol for the market systemic risk: it measures the volatility of the stock compared to the market’s volatility

The latter group gave a notable attention more to the team and to the product rather than to a “*cold Startup value*”. A wide variety of point of views were stated; in the overall, however, an “emotional valuation” was perceived more suitable by them. Valuation of Startup was even called “useless” by some of them.

More specifically, among this group, some interviewees placed emphasis on the business importance: when dealing for example with B2B Saas¹⁴, giving a final value to the company was stated as not important because the key according to them is to look at numbers like participants, users, downloads. Other interviewees stated that valuation is a process that comes only after the initial Startup stage; valuation was perceived as limited to the moment of raising capital needs, therefore a choice that has to be done in the late future. One participant’s opinion, worth to be mentioned, was linking the valuation importance to the length of the “time to market”: if the time to market is small, there is no need to raise capital and therefore to value the Startup. *“If you want to raise capital with a small time to market business basically you don’t believe in your idea”* (Miguel Santos of Boldplaces).

Besides the different reasons why they believe valuation is not needed, they all share the worry of a new financial tool adoption. Furthermore, they were all interested in knowing a possible comparison of their Startup with general industry trends through the tool. The strict requirement they were asking was the easiness and clarity of managing it.

It was interesting to see that the business models they were using were mainly composed by EBITDA as a possible valuation figure.

The group that had business, management or finance as their academic background gave a stronger importance to the Startup valuation issue. Of course they also considered qualitative evaluation before going into a valuation process, but they generally agree on the valuation significance also in the

¹⁴ Software As a Service

Startup framework. There was a broad agreement, indeed, on the use of comparable method through some indicators. The discounted free cash flow was unanimously taken as a not very appropriate approach due to the huge discount rate to be used and to the difficulty in finding a proper and reliable growth rate of the revenues. However, their management background let them understand that valuation is important regardless the need of raising capital or the type of business they are in.

3.3. Interviews' observations

Results clearly show that a unified approach to Startups valuation for both "Business Valuators" is extremely tough to implement.

Investors already have their methods and they strongly rely on them. Each investor has their own model, therefore there is no market need to further investigate on it.

The interesting gap to fill is the one of entrepreneurs: they often don't have any method, they sometimes don't believe in valuation importance and they seem scared of using numbers. The useful goal to provide is to make them know as much as investors.

The model has to fulfill the needs that emerged in the interviews, such as the easiness to manage. The research is further narrowed in the following section.

4. Proposed valuation tool

4.1. The context

Thanks to a deep analysis of the literature review, and thanks to the field work interviews, the initial research question can be narrowed into a more specific and adaptive model.

Firstly, the tool has the aim of helping **entrepreneurs**: to make them understand the importance of valuation in a straightforward and easy-to-manage way. As explained in the excel file, the tool relies on important assumptions such as the stage and the industry in which the Startup operates.

The industry of **social media** - roughly defined as “as group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content” (Kaplan and Haenlein, 2010) - has been chosen because it is a rapidly innovating and emerging field, continuously subject to changes and therefore more likely to have Startups players. The choice has also come as a personal choice, as it appears to me very interesting and I feel curious to analyze it.

This industry includes social networking website publishers and developers. The industry does not include companies that predominantly develop games, internet content, online dating websites or online forums.¹⁵

The stage on which the model is focused on is the **seed stage** because it is at this stage that it is more difficult to get to a final valuation due to a lack of information – as explained in the previous literature review. Therefore, it is interesting and challenging to see how a proper valuation can be done at this such raw stage.

4.2. Theoretical Note

From all the possible methods analysed in the literature review chapter, two methods have been chosen. One is the DCF – Discounted Cash Flow – that is more classical, academic and it allows entrepreneurs to discuss explicitly about assumptions and forecasts with investors. The other is the relative valuation, which is newer and more practical.

The reason why both methods have been chosen is exactly in the basic difference I have just explained. The DCF model is very often asked by investors, therefore it is included in the proposed model. However, it can be prone to failure because of its too theoretical essence. It deals with a lot of uncertainty which is taken into account by the use of a very large discount rate. As it is showed in the

¹⁵ <http://www.ibisworld.com/industry/social-networking>

model, a tiny change of this rate leads to a huge change of the valuation; so, can this discount rate truly be responsible of the uncertainty? Furthermore the DFC can be subject to manipulation because of a possible asymmetry of information between entrepreneur and investor: when investors ask for the DFC prospect, most likely they have no idea how those free cash flows and the whole P&L¹⁶ came out. Hence it is prone to error, fallible.

In the proposed model the DFC is designed in such a way the entrepreneur can easily fill the cells and see the valuation according to the model's assumptions.

To face the cons of DFC, the relative valuation is included in the model as well. The peer group – determinant for the relative valuation as described in the literature review - has been selected in such a way to respect relevance and completeness requisites. Companies' data have been, in fact, statistically and properly collected in order to be significant and accurate.

Angellist website was the primary source to get to the companies information about valuation and funding. Strict criteria about the location, the market and the type of stage were used in order to get to the most accurate peer group. The final peer group is composed by companies established in Western Europe, that operate in the social media industry and the focus of the valuation is at their seed stage. Other websites such as *vceexpert.com* and *seed-db.com* were useful to get to complementary information that *Angellist* was not able to give me.

In the next section a proper technical description about the tool and about the data collection is done.

4.3. Technical description and assumptions

The tool is an Excel file that includes six sheets that are showed in Appendix B - random inputs were put in order to make the model work.

¹⁶ Profit & Loss statement.

The first is the **cover** of the tool and the name of the builder.

The second one, called “**Read Me**” is divided in three sections: context, assumptions and instructions.

The context is describes how the tool works and what the user expects to achieve from it. The assumptions’ section specifies the industry and the stage considered, the unit of money (USD) as well as the hypothesis for the DFC worksheet: the percentage of depreciation and amortization assumed, the account and payment receivable period, the discount rate. The discount rate is assumed at 30%: the common discount rate ranges for Startups in a seed stage is around 20% and 30% (P. Queiró) the model assumes the target company is in a very uncertain stage and in an uncertain environment, therefore the highest discount rate value is applied. Moreover, the interest is fixed at 0, because it’s assumed the company doesn’t ask for bank debt, which is a reasonable decision according to the trade-off model (Damodaran, 2011).

The third section in the second worksheet is composed of by “instructions”: the user by reading this part is aware of what inputs he/she has to have before using the model. More specifically he/she is asked to fill the cells of Sales, CAPEX and OPEX¹⁷ forecasts for the current and next 4 years; and to fill its own indicators named revenues, number of MBA in the team and number of followers on AngelList website.

The number of MBA in the team wants, in a way, to represent the quality of the team; while followers on AngelList are assumed as a proxy function of real followers of the relative app/website/platform.

The third worksheet, as the name suggests, is composed by **inputs** needed and the final **outputs** of different kinds of valuation. The model has been designed purposely with the willing to show potential

¹⁷ Operating Expenditure: on-going costs a company pays to run its basic business.

differences of the different methods. In this way, the user has a more evident view of how valuation is something that cannot be exact and precise, but it's more proper to talk about a **range** of valuation.

The DFC method is in the fourth worksheet of the model and it is designed in the traditional and academic way. That is by the forecasts of Sales, CAPEX and OPEX, free cash flows are computed and then discounted by the established discount factor (30%). CAPEX and OPEX are the basic categories of business expenses and they are treated differently only for tax purposes. The final value according to the DFC method, is in cell F14.

The fifth, and last worksheet, is the most revolutionary one. It is composed by the peer group, the valuation of each company inside the group and the indicators chosen.

The choice of the **peer group** was the first step done: it was a selection of comparable Startups for the targeted early stage companies of this paper. In order to have a consistent peer group, a strict selection of filters was utilized. In particular 1) social media industry 2) Western Europe region and 3) seed stage filters were chosen as peer group assumptions on AngelList website. The peer group is composed by 78 companies: this big number ensures validity and reliability of the model.

The second step was finding the funding amount for each company at the seed stage: AngelList website was also crucial for this use. The third column represents the seed stage valuation of each element of the peer group: some of these values were found through deep web searches, for the most of the companies, a multiplier that ranges from 2 to 3 was used, depending on the trust investors had in the Startup. E.g.: investors that perceive less faith in the team, they value less the company; therefore a smaller multiplier should be applied.

For each of the company, three main metrics were found. Revenues indicator was chosen because it's the most classical and most used one. Since they are all private companies, they don't show their

revenue and profit numbers: this data was found thanks to Owler website. When the mentioned website was showing a revenue of “less than 1 million USD”, an approximation of 800k USD was used. For companies that data was not available on Owler.com, an average of the revenues found for the others was assumed as their revenues.

Number of followers on AngelList was chosen as a metric because it can represent the interest of investors in the company. It is assumed, in this paper, that AngelList followers are a proxy of the real followers. Number of people with MBA was chosen as a way to take into account the management and business skills of the team. It is a number between 0 and 1 because it is the proportion of people that have an MBA within the founders’ team. Such information was gathered through LinkedIn; in case public websites were not enough to have such information, MBAs were assumed by looking at the professional background of team members.

The last three columns represent the key metrics’ calculations: the company’s valuation is divided by the indicator and then at the bottom of the column, it’s computed an average – the great number of the peer group ensures that the average is less prone to calculation mistakes.

The work was quite time-consuming, as evident, but this represents the value-added by this paper.

All the valuation outputs are connected in the third sheet as mentioned above.

The sixth, final worksheet includes the valuation chart in a way to visually show valuation according to the different methodologies used. A red line shows the average value.

4.4. Practical Guidelines and Limitations

When building a tool, it’s important to let the user understand what those outputs really mean. Especially in such a delicate topic, like Startup valuation, entrepreneurs should be aware and confident of what they have to show to investors. Therefore, practical guidelines must be clearly stated.

Each entrepreneur knows the business in which he/she operates, hence, different indicators' valuations have a different meaning for each of them. For example, the number of MBA indicator changes its importance whether it's a business in which management skills are required or not.

The entrepreneur should be conscious to take the indicator that best fits with his/her business.

In other words, a clear understanding of each multiple is required for a proper use of the model.

Using different multiples, users get to different valuations as it has been clearly showed in the final graph. Significant differences in the valuation under different methods can be a signal of mistakes in the assumptions. A median of the different valuations can be used in order to get to the most reliable final value of the Startup.

The model has some limitations worthy mention. First of all, its dependence on the selected peer group: the model is designed only for entrepreneurs who are operating in the social media industry and that see the peer group of the tool as a comparable one. In other words, there must be the existence of nearly comparable companies.

However, through the technical description, the user could understand the logical process to build the model.

Secondly, the quality and the collaboration of the team couldn't be taken into account because it can be tested only by case by case. The use of the number of MBA wants in a way to take into account the quality of the team, but it has however its limitations.

To conclude, the best advice when using the model is to use common sense. If the user understands the basic concepts highlighted in this paper and the different influencing parameters, this knowledge can be used to solve potential arising issues.

5. Outlook and Conclusion

Valuation is a topic everybody in Startup context is talking about, especially for the particular uncertainty problem. There is much literature available on this; however, the weakness of the already established models are in their underlying assumptions. **Assumptions** must be solid and coherent. Referring to the initial research questions, this paper is an attempt to provide practical guidelines to explain such assumptions and create a **logical process** of assessment of seed stage Startups in the social media industry.

As previously mentioned, valuation is more an art than a science, hence it cannot exist a “right valuation method”. This is the reason why this paper recommends to use a set of different valuation methods. Each of them has its own advantages and disadvantages but benefits can be gained by the interpretation of the all final outputs. It’s evident that in order to get more significant results, the model could be implemented to different companies: it would be interesting specially to see how and in which companies, the DFC method differs to the relative valuation.

Besides the practical relevance of the tool, this paper also adds on entrepreneurship finance theories. The proposed model is a reduction of the complex world, however without such reduction a comparability and transparency wouldn’t be possible. With the ability to assess but specially to compare different types of valuations, **entrepreneurs** can be more **conscious** when they face negotiation with investors. Startup companies are becoming more and more important for the economic growth, hence, more efficient investment decisions and more aware entrepreneurs, can benefit the overall economy.

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