INVESTMENT RISKS: AN ANALYTICAL STUDY OF THE RISK REDUCTION STRATEGIES USED IN DECIDING INVESTMENTS IN START-UPS.

Research dissertation presented in partial fulfilment of the requirements for the degree of MSc in Accounting and Finance Management

Griffith College Dublin

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23rd August 2019

Candidate Declaration

Candidate Name: Samuel Oluwagbemiga Shokunbi

I certify that the dissertation entitled:

INVESTMENT RISKS: AN ANALYTICAL STUDY OF THE RISK REDUCTION STRATEGIES USED IN DECIDING INVESTMENTS IN START-UPS.

submitted for the degree of: MSc in Accounting and Finance Management is as a result of my own work and that reference is made to work done by others.

Candidate signature:

Date:

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Date:

Dedication and Acknowledgement

Firstly, I would like to express my gratitude to God for the successful completion of this dissertation and master's degree.

Secondly, I would like to thank my parents Mr and Mrs Shokunbi and siblings; Tope and Eniola for their support and words of advice throughout the process. I could not have done this without your belief and words of encouragement along the way. This dissertation is dedicated to you.

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Abstract

Investment risks: An analytical study of the risk reduction strategies used in deciding investments in start-ups.

Samuel Oluwagbemiga Shokunbi

This paper attempts to provide an insight to the decision-making process and methods of evaluations when making investment decision in relation to start-ups. It examined the risk considerations and strategies used by fund managers, investment analysts and VCs to minimise the risks.

With start-ups on the rise and growing, they make their additions to the world's economy. It is therefore important to know the risks they face; both for survival and when choosing to invest in them. With the likes of Apple, Facebook, and so on having sprung up as start-ups, it is of note that start-ups cannot be overlooked.

The research aimed at answering questions that were focused on the risks start-ups faced both for survival and investing in them, the strategies used to minimise these risks and determine if there was a relationship between the risks and returns. The research was conducted using interviews and the valuation of a start-up recently listed on the London Stock Exchange via an Initial Public Offering.

Although the results show that there were indeed a lot of risks faced by start-ups for survival and investments; both of which were centred around regulations, political risk and loss of investments itself. It also found that the risk reduction strategies used were mainly diversification, reduced exposure and having oversight or protected interest in the business. However, the relationship between the risks and returns could not be proven due to limitations encountered.

At the end however, it was also discovered that there were certain emotional biases when it came to investments which this research has identified as a possible option for further research.

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List of Abbreviations

DCF- Discounted Cash Flow

FCF – Future Cash Flow

GAAP – Generally Accepted Accounting Principles

IFRS – International Financial Reporting Standards

PESTEL – Political, Economic, Social, Technological, Environmental and Legal

PPE – Property, Plant and Equipment

SWOT – Strengths, Weaknesses, Opportunities, Threats

VC – Venture Capitalists

WACC – Weighted Average Cost of Capital

1. Introduction

1.1 Overview

In this chapter, an appropriate background to the study, the objectives, purpose and the significance of the study will be provided. It will also give the justification and structure of the study. It will give some further description of terms and concepts to be used in this study also.

1.2 Research Purpose

This study looks at the ways and considerations of fund managers, investment analyst and VC in determining how they reduce the risks involved in investing in start-ups. This dissertation will be focused on the approaches used to help maximise returns while reducing risk to an acceptable level in the decision-making process of investing in a start-up.

Risk and its evaluation play an important role in investment decisions. With the general world itself facing risks every day; from science and technology, politics, business and other risk-related matters (Hansen and Hammann, 2017).

With this development, risk management therefore becomes important. According to Virglerova (2018), business risks make up segments of the corporate setting which everyone involved in must face every day. It is therefore important that risk is managed from the onset of any venture to allow its growth and ultimately survival.

There exist several valuations methods in accessing the risks involved with investments. Some of which include; brand valuations and return on investments in marketing (Haxthausen, 2009), financial rations, stock prices and cash flows (Danielson and Scott, 2000) and scrutiny involved making these decisions.

The growing rate of start-up is growing and in Ireland alone in 2018, there were 1190 recorded start-ups (Sanyal, 2018). Knowing that start-ups are often hit or miss investments, it has not stopped investments and growth of these companies. Everyone seems to believe they have the next best thing. Notwithstanding the size of start-ups, it is important to evaluate any risk involved. Start-ups aim to meet needs while trying to make profits, and when these needs are met there are often urges to grow bigger and make more profits.

Investments are never risk free. Even with free and new information gathered, according to Disatnik and Steinhart (2015), investors still do not react to these when making their decisions. With start-ups, these risks tend to vary from the nature of the business, the experience of the founders, needs the business is meeting, etc. The need for close attention to detail, how the product or service is set up, business strategies and value proposition as stated by Carnall (2001).

With a wide range of options to choose from when sourcing for capital in start-ups, angel investors and venture capitalists being the go to options (Cohan, 2012), in reaching investments decisions, different considerations and views must be critically evaluated to know which company, stock or a combination of investment portfolios to choose.

Knowing the volatility rate of start-ups, it has not stopped the rate in the growth and frequency of start-ups. Just as these entrepreneurs want to meet needs and make money while doing it, so do investors who they seek funds from want to maximise their profits (Pridham, 2018).

The need for professional advice is however still considered in most investment decisions. In a study carried out by Guillemette and Jurgenson (2017) it was found out that people, especially low income earners heeded to the advice of stockbroker and financial advisers when evaluating risks and making investment decisions.

Just like buying car, considerations such as fuel consumption, maker, sound system, engine capacity, etc would be looked at from an ordinary point of view. However, these and more may be considered when an auto mechanic is asked.

1.3 Research Objective

The purpose and objective of undertaking this research project is to get advanced insight and understanding through an analytic study of how major players in determining investments measure and preserve risk, what is done to reduce and in due course manage it.

In line with the questions this study aims to answer, the purpose and objective of this study is to:

- Determine the risk minimisation strategies used by fund managers, investment analysts and VCs in start-up investments
- Determine the correlation of these strategies to the returns on investments
- Determine the evaluation methods used to appraise start-ups

1.4 Significance of the Study

The overall aim of this study is to discover the strategies used by fund managers, investment analysts and VCs to reduce the investment risks they face when choosing to invest in a start-up. With start-ups playing an imperative role in the world's economy, its significance has grown overtime. Governments and other stakeholders as a result are trying to make procedures and create inducements that boosts the growth of start-ups (Panigrahi, *et. al.*, 2018).

According to Panigrahi, *et. al.*(2018), start-ups over the years have had a high insubstantiality rate. Although they are important to the world's economy and are given a good enough environment to thrive in, they do not always succeed. This is often due to a number of reasons not limited to; management planning, capital raising, industrial issues, marketing, resource allocation, among others.

Getting investors is never easy. Investors do business to get returns and therefore evaluate the business (start-up) in which they look to be a part of. This is why the researchers in looking to gain insights to the evaluation process of the risks involved in investing in start-ups and serve as a source of reference for future investors and start-ups alike to manage investment risks. Also, the researcher hopes that at the end of this study, further work can be done on the recommendations at the end of this study.

1.5 Structure of the Study

This study will be divided into five chapters. The study begins with an introduction of risks and start-ups along with their influences on business and the world's economy. It further contains various subheading including the purpose of the research; underlining the research focus and issues to be addressed in the study, the aims and objectives of the study along with the research questions and the significance of the study.

The next chapter of the study is the literature review. This looks at and provides a critical review of previous scholarly work done on start-ups, risks, investment risks, investment decisions and other relevant topics associated with the study.

This is then followed by the methodology in chapter three. This is where the method of the study which involves data collection and its analysis is evaluated. For this study, an interpretivist approach will be used. This is then backed up with the use of both an inductive and deductive approach as well as a qualitative research method. The methodology will be further backed up with some quantitative analysis.

The next chapter which entails the presentation and analysis of the finding carried out in this study. It will entail the presentation of the findings from the interviews carried out as well as the statistical analysis to be performed. This chapter will also highlight the parallels and variances between the reviewed literature and findings made during the research. This chapter will be concluded with recommendations and conclusions.

The last chapter will include the summary of the findings carried out in the study and conclusion. It will also evaluate the finding in the previous chapter with the research objective as stated in chapter one. Furthermore, it will explain the limitations and challenges encountered while carrying out this study as well as recommendations for further study based on the findings.

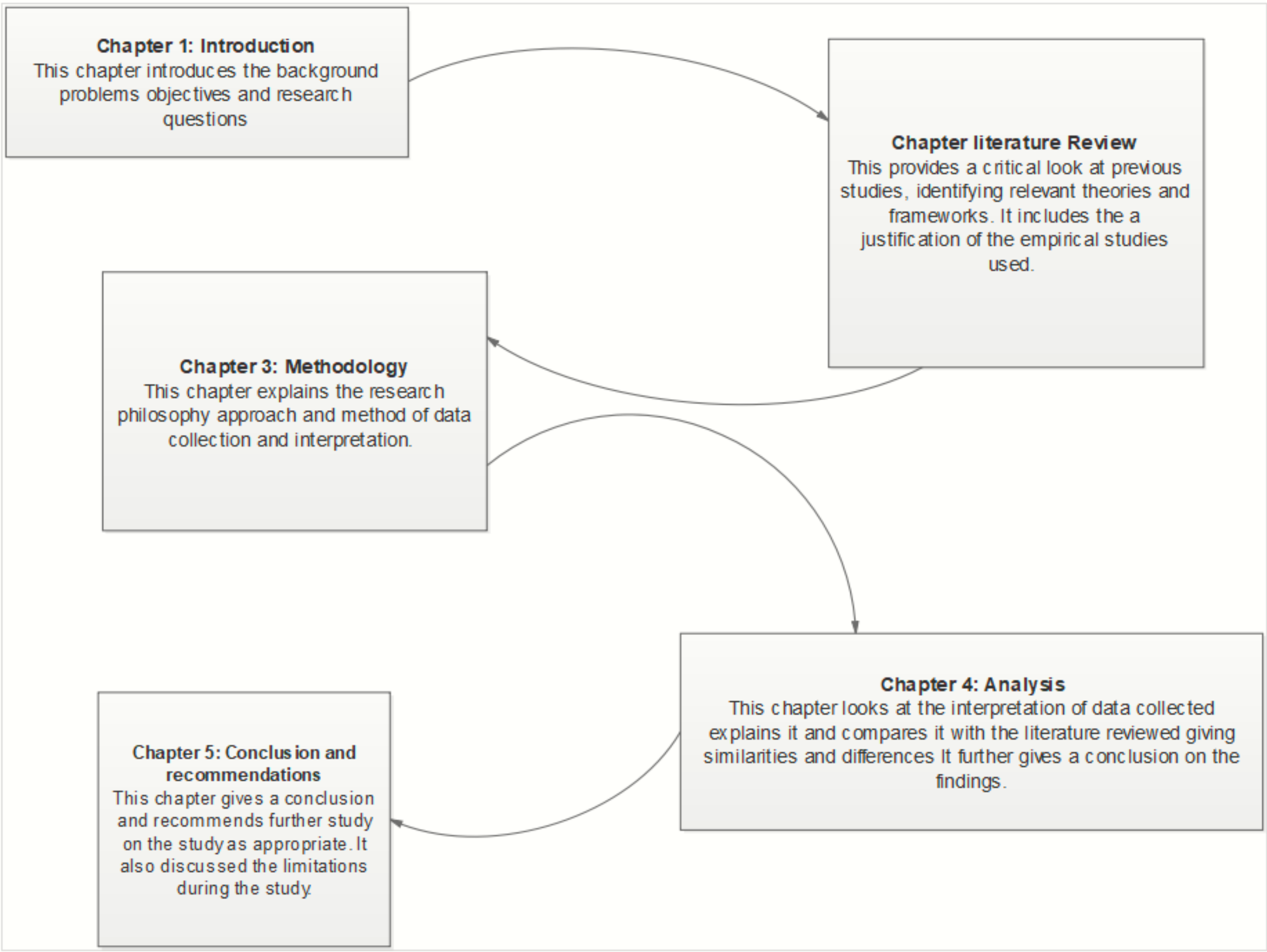


Figure 1: Research Outline

2. Literature Review

2.1. Overview

This section of the study aims to help the research examine and gain an understanding of past studies done which are applicable and relevant to the objectives of this study. In this chapter, a cross section of peer-reviewed and non-peer-reviewed articles form SAGE, EBSCO, Science direct and SSRN have been reviewed and assessed for a background to the topic and sub-topics of this study.

The literature reviewed looks at the concepts of risks, investments, start-ups, perception of risks, drivers of investment decisions and some risk reduction strategies used. These facets of the literature were gotten from the use of articles gotten from the sources mentioned above.

2.2 Start-ups

Start-ups have overtime had several definitions and classifications. With relations to size, revenue, number of employees and often times number of years of existence, stat-ups have been seen in different lights.

Start-ups are usually defined by three criteria (Steigertahl and Mauer, 2018);

- Age: how old the company is, usually between five and ten years depending on the industry or sector.
- Innovation: in product or services offered. This can also extend to business models.
- Intention to grow in terms of employee numbers, markets, operations, etc.

However, there has been attempts to give views on what start-ups can be defined as. According to Kollmann *et al.* (2015) start-ups are said to be organisations which are founded to search for an accessible and sound business model. Based on this definition, they assessed start-ups with the features of age, significance in the market with growth propensity and innovation. This is also a common theme to what Steigertahl and Mauer had defined start-ups to be.

Others seemingly looked at start-ups as companies looking to solve a problem in the society, whose solution to said problem is not guaranteed and the survival of the company still in doubt (Robehmed, 2013). Robehmed also emphasised in the further breakdown that start-ups were characterised mainly by its ability and potential for growth and age.

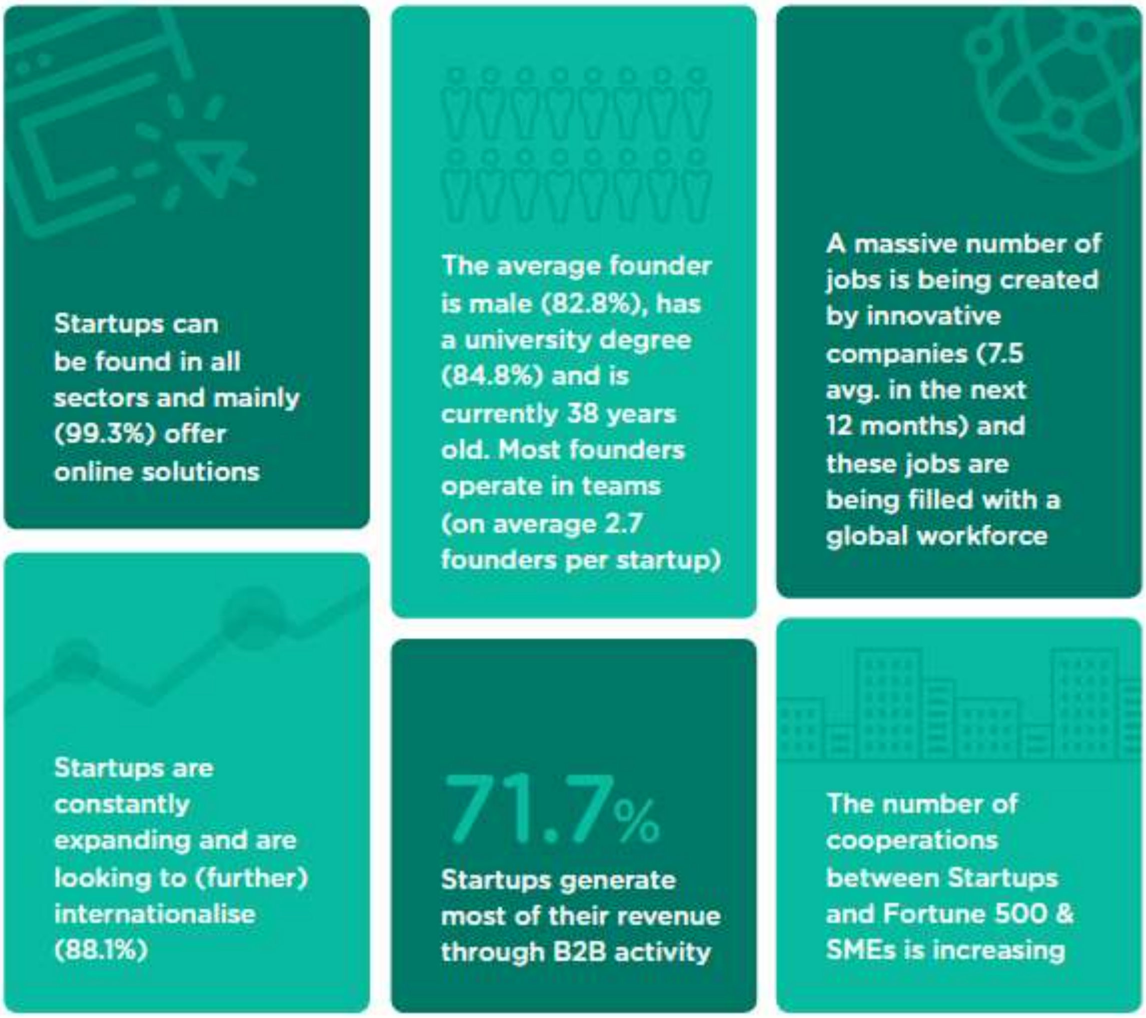


Figure 2: Start-up facts (2018)

With start-ups playing an important role in the world's economy from job creation (Steigertahl and Mauer, 2018) and growing revenues and profits (Robehmed, 2013), they have come to stay and have grown from the stereotype of basements and garages with the likes of Apple, Microsoft and other giant tech companies. Even without a defined, it is evident that start-ups have drawn concepts for its definition from how long it has existed, its innovative capacity and tendency to grow.

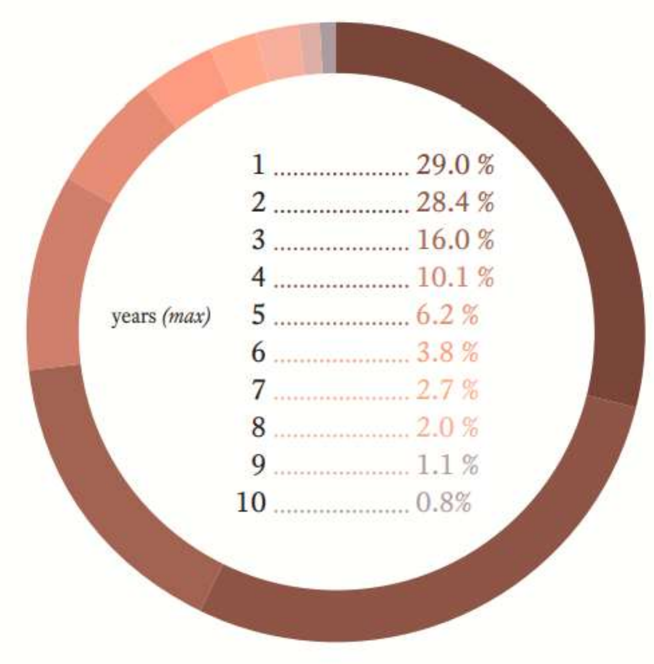


Figure 3: Average age of start-ups in years (2015)

Figure 4: Start-up profiles (2018)

2.3 Start-up Challenges

Although start-ups do not have a generally acceptable definition, the one thing agreeable on is that they face defined and common challenges. These risk and challenges do have a common theme with the definition criteria addressed above.

According to Meng (2004), in a start-up's innovation process, it is exposed to three major challenges and uncertainty with relations to technological start-ups and patents. Firstly, market demand uncertainty; as their technology would not generate income until it is finished. With this, they are faced with the challenge of incurring expenses and never generation the income or being beaten to it the market by competitors. This is also closely linked to its second uncertainty; Technological uncertainty where the new technology might work or not. Thirdly, start-ups are faced with the Competitive uncertainty; with the way it interrelates with others in its field and area of business.

Steigertahl and Mauer (2018) however puts it in a more general context from its study of start-ups in Europe, stating the overall challenges faced by start-ups across various industries and sectors. It identified cashflow, liquidity and profitability to be the major challenges faced by start-ups.

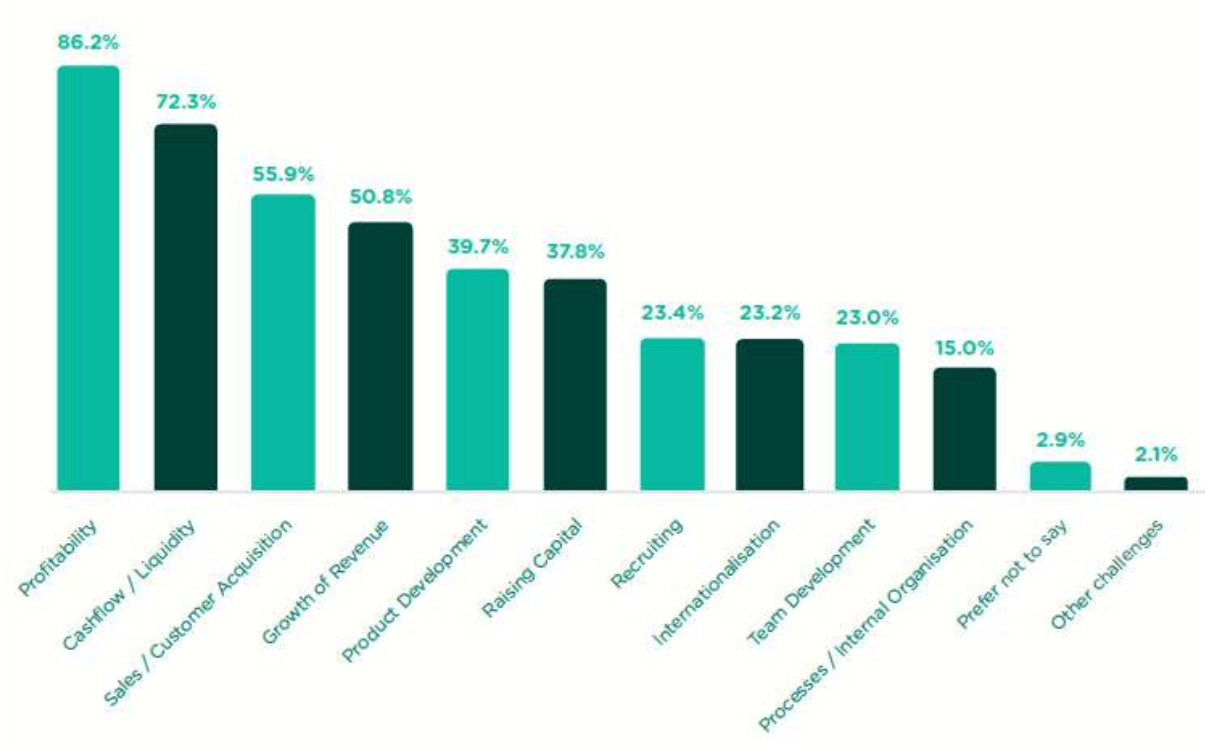


Figure 5: Challenges categories in start-ups (2018)

2.4 Investments and Risk Perception

Entrepreneurs, or start-ups as they are mostly referred to as now have become a part of the business world and gained popularity. With the successes of companies like Apple, Facebook, Microsoft, etc, which had humble beginnings. According to Statista (2019) the number of start-ups worldwide haven't just grown, the funding which they have received across various industries has grown by 50% between 2012 and 2017.

However, these start-ups do not become successes overnight. After creating a product, they need funding. This is usually gotten from various sources with the most worthwhile being venture capital (Cohan, 2012).

Risk is an ever-present notion in daily life. From sicknesses to new technical resolutions to problems being created, climate change, medical improvements, and so on it is important to know the risks one is faced with in everyday life and be able to conceptualise it (Hansen and Hammann, 2017). This theory is also applicable to investments and start-ups. Risk perception also very from the concept of realism prevalent in natural sciences and medicine with the belief that risk is quantifiable and measurable through the features of an events occurrence. Risk also is perceived from the constructive model which views risk as being subjective and has to do with the mind of individuals. Risk in this sense is observed with relation to several beliefs, attitude, information processing, judgements, cost benefit analysis, feeling and often familiarity with the subject. This perspective of risk is more applicable to investment decisions. With a series of information presented and needed to be processed while arriving at a judgement after considering the cost and benefits to be derived from such investments.

Hansen and Hammann (2017) further started that although everyone is exposed to risk, risk itself has been loosely defined. This is also made evident in the daily usage of the word as it is more than often used interchangeably with other terms such as peril, hazard or danger. However, Cho, *et. al.* (2015) described risk as a concept varying across several disciplines and sometimes within same disciplines. With risk being viewed from a health perspective as illnesses and number of deaths that may occur from such, in the same discipline, risk to someone else could be the further outbreak of such an illness. In business and investments, the risk can be defined in terms of not making profits or losing money from the investor's perspective.

Risk paradigms according to Cho, et. al. (2015) also described risk as being viewed in social and cultural mechanisms supporting Hansen and Hammann's views. It was argued that risk is perceived by shaped by values and communication process.

In a more general sense of risks as related to industries, particularly to the drugs industry, Bratic, et. al. (2014) considered that various risks apply to this industry involved cost measurement and reimbursement, litigation, human resources, counterfeit, outsourcing, parallel trade, supply chain and distribution and competitors. Although not all these risks are applicable to start-ups in general, it does affect start-up in the pharmaceutical industries. Some of them however overlap to other industries such as manufacturing.

Risk perceptions relating to investments also vary in its perceptions. While pushing to get investments, start-ups are also exposed to risks as they are often pitched against companies with similar products or services. Investors, fund managers, investment analysists and venture capitalists all look at risk from different perspectives which informs their investment decisions also.

It is therefore important to know what these angel investors and venture capital firms with the help of their fund managers and investment analysts consider before investing in start-ups. And if they do invest, what strategies do they put in place to minimise their risks.

The risks pertaining to start-ups is one of the challenges it faces. With banks often less than willing to lend money to them as they do not usually have the physical assets to back up such loans, especially in the early stages (Block and Sandner, 2009), the risk of investment is then pushed to the venture capital markets.

Overtime, according to Long et. al (2018), for people who knew nothing about investments and for those who were deemed as specialists in the field, more funds were allocated to companies which were hard to understand. Be it a risk adverse or risk taker. It discovered however that, the risk perceptions were different in the long run for the professionals once a level or sense of understanding had been achieved. Traditionally, the links between company performances, capital investments and organizational risks has a role to play in determining if they are invested in and largely who invested in them (Bhattacharya and Wheatley, 2006).

With risks being a consistent factor in investments considerations, several authors have looked at different topics as to how risk is measured from the perspective of gender. Mittal and Vyas (2011) stated that in the real sense of it, even in investments, men take more risks. From an emotional angle, Cheng (2014) argued that since returns on investments are futuristic in nature, a certain level of emotions and utility function is applied in evaluating risks and determining investments.

Another perception however often ignored is that of the non-financial investors such as customers, employees and suppliers (Franck and Huyghebaert, 2010). Having a need to build relationships with these investors, which is also a risk in itself especially in cases where lager specific investments have to be made directly to the start-up which might fail. These investors also view risk in their own perception by negotiating and contracting their relationships with whatever bargaining power they hold.

2.5 Investment Consideration Drivers

Several researches have been done to consider what professional investors look at when they choose to back a start-up. Going beyond having a bright or right idea would not cut it in trying to get finance. So far, none has however taken a broad look into different considerations but chosen a specific angle to view the matter from.

Start-ups are viewed to be risky business (Guo, *et. al*., 2015) with a lack of regularity between material given by all parties involved and the financial implications. With this in mind, knowing that factors needed to be consider before investing in a start-up vary, several studies still looked at it from points that stood alone.

Parwada (2008), examined and found that location of start-up to a fund managers locality mostly determined their investments. It found a high correlation between fund managers and investing in portfolios and start-ups in a closer proximity. With an origin bias established, personal familiarities and relationship with environment drove interest. This concept can however be flawed as the basis of the assumption is already biased due to locality and comfort. These fund managers had established and enjoyed certain level of trust within their environment, associates and relationships which had been formed overtime.

The case was however different with others who looked at the founders of start-up rather than their location. In Zaleski (2011) which looked at the role of experience as an entrepreneur in getting finance. The study found that as entrepreneurs were important in economic growth after the recession and in getting finance for start-ups, the entrepreneurs had to be evaluated as well.

Zaleksi in the study suggested the role of experience as an entrepreneur played an active role in start-ups getting funded. Pitching the already experienced and inexperienced entrepreneurs against each other. Looking at factors used in evaluating an experienced entrepreneur and if such measures could be used for one with little or no experience with relation to funding. This then goes to wonder if experience or people relation mattered in investments. In doing this, factors such as gender, provision of additional services, sales to business or government, level of education, ethnicity, and so on were evaluated and measured against relevant industry experiences in which the start-ups were being set up.

With many variables and limitations to data, Zaleksi's paper failed to show if the extent or number of years played a role in funding.

Innovation and human capital which most often are good attributes of a business and those who run it. This could prove as a factor considered when looking to get outside finance. Although this was never fully considered with relation to finance in their study, Kato *et. al.* (2015) determined that founders with good human capital would be innovative and hence more successful in their start-ups. One may say the founders of the biggest start-ups in technology today did not have the human capital when it all began; their innovation was what they had.

Other studies in relation also looked at the social capital of a start-up founder. In determining the success of a start-up, the business model was examined based on the social capital the founder had. Spiegel *et al.* (2016) viewed that a start-up with a founder who has significant social capital (friends, status and networks) tend to be quite successful and attract investments. Debrulle, *et. al.* (2014) added to this by finding that the absorption capacity of start-ups in coping with its environment which it may find itself is positively related through its owners social wealth, management capacities, formal education and experience of the start-up itself.

Although both studies were more barely related to finances, they both concluded that the adaptability of the founders and their level of social wealth could be an influencing factor in investment considerations.

While considering what to invest in, there is a tendency for natural bias. This could range from nature of business to even who the founder is.

Notably, the drive to invest in start-up look beyond the business model, founder or even its geography. The risks involved the industries, return on investments, the start-up process and quite often the product itself is evaluated.

A further consideration is the analysis of the business or start-up environment itself. The analysis of the strengths, weaknesses, opportunities and threats (SWOT analysis) faced by the start-up forms a basis of investment. Dibrova (2015) showed that through a proper SWOT analysis, angel investors can get good results in evaluation of start-ups by breaking down their components to its barest minimum.

In determining factors to consider, Cassar (2009) examined how the preparations of financial statements and management accounts, affected the decision in funding start-ups. This usually is the basic and often fundamental factor. With different financial reporting systems in various parts of the world, this can be difficult. This could pose a problem for an investor who does not proper understanding of the accounting system in the start-up location.

Varying accounting reporting frequency and financial statement preparations from cash flow statements prepared showed the investors the sustainability of the start-up. In Cassar’s study, more attention was paid to the accounting statements related to liquidity with the statement of financial position fairly ignored. In the technological sector however, financial projections and forecast of sales with importance to the company’s intangibles were prepared more frequently to engage potential investors.

Further financial measures as described in (Bratic, *et. al.*, 2014) such as; the asset approach calculating the value of the business by comparing the fair value of its assets to the fair value of its liabilities. The income approach is also used to determine the value of the business based on the present value of its future cashflows by discounting. Lastly, the market approach can also be used where the start-up is compared through measures from public companies in the same industry.

Huyghebaert and Van de Gucht (2007) pointed out that with start-up usually having no historical data since they do not spring out or are a division of an already established firm, this makes investment consideration difficult. This therefore makes investment and their capital structure more difficult as they are often over leveraged on debts from those who would provide it to them.

2.6 Risk Reduction Strategies

With start-up funding in Finland dropping between 2002 and 2003 (Hemmilä, 2004), investors put money in traditional companies rather than start-ups. In reducing this risks, a German study examined “smart capital” based on its economy being a bank-based system (Schäfer and Schilder, 2009). It concluded that there was a flow of information between the portfolio company and the financier.

Overtime, to help minimise risks in investments, fund managers have employed varying means of reducing their risks. According to Grant and Xie (2007), one of these acts was of counter balancing a bet with another one.

While trying to reduce risk and combining investments can be difficult, some have argued that it reduces the returns or profitability and disqualifies portfolio variance (Lucas and Siegmann, 2008).

Comparing traditional mutual funds, hedged mutual funds and hedge funds Agarwal *et. al.* (2009) found that hedged mutual funds would outperform both tradition mutual fund and hedge funds by almost 50%. This was because of hedged mutual funds being more flexible and having a higher "gross-of-fee and net-of-fee".

However, trading behaviour and competencies of an investor play a part in choosing who and what to invest in. Chandra (2009) suggested that age, education and income played a part in investment decisions. Although the study was limited to a certain location and based on behavioural finance, it speaks to the decision-making pathways of fund managers.

Risk reduction strategies differ from fund manager to fund manager, investment analyst and to the venture capital firm itself (Grant and Xie, 2007; Ming and Yi-Chuan, 2009; Croci, *et al.*, 2017) there has also been correlation as well (Mensi *et al.*, 2017).

Further studies however show that hedging is to be done from a view of influence, information and a well knowledgeable analysis of the market through heavy statistical data gathered to make decisions that the ordinary investor is not able to ascertain (Eyraud-Loisel, 2011).

Overall, investment decisions and relevant risk minimisation policies involved in start-ups have not been fully investigated. This has brought about a gap in the literature as bits and pieces of start-up investment considerations have been made. Studies relating to both start-up investments and the risks relating to them have been elusive.

Drawing from these studies however, they provide a bedrock and insight to what they considerations are in investing generally and start-ups in a few cases. This can then be applied in forming if the criteria and risk analysis has changed overtime.

Conceptual Framework

The conceptual framework follows to give a structure to the elements addressed in this study and aims to give a clearer understanding of how the concepts flow in accordance with the research objectives and questions. With reference to the literature reviewed, the conceptual framework is based on the risk, behaviours and risk perception with relations to experienced investors and investment analysts (Walia and Kiran, 2012). The study follows a range of investors who were active, passive and aggressive this would not be considered in this study.

This framework is aimed at guiding the study through the data collection processing in asking the relevant questions, coding themes, data analysis and reach a conclusion regarding the strategies used by fund managers and investment analysists.

Start-ups

Definition and Classification

Start-ups although do not have specific definitions, they are however classified based on:

- Age: how old the start-up has been in existence
- Innovation of products or services
- Intention to grow its market

Profiles and Importance

Start-ups have become an integral part of the business and financial world. Some of its importance are listed below:

- They are found in all sectors and industries
- Start-up encourages entrepreneurship
- Through start-ups, job creation opportunities are grown
- Start-ups are an avenue for revenue generation
- Start-ups are expanding and growing but new and old

Challenges faced by start-ups

Start-ups are posed with problems like;

- Capital raising or funding
- Profitability

- Cashflow
- Sales and customer acquisition
- Recruiting

Investment and risk perception

With start-ups, the risks involved are quite similar to the general view. This is classified in two broad areas:

- Realism which believes risks to be concrete, defined and easily measurable.
- Constructive which believes risks are subjective and mind based. They relate to judgements, cost benefit analysis, information processing and familiarity.
- Other forms of risks include; market demand risks, competitive risks and technological risks

Investment decision drivers

When making investment decisions, there are often financial and non-financial drivers or considerations. These are included in the valuation process of the start-up. #

Non-Financial drivers

Some of the non-financial drivers include but are not limited to;

- Location of the start-up
- Founders or ownerships with relations to; social capital, experience, leadership, innovation, absorption capacity, etc
- External factors: PESTEL and SWOT analysis

Financial Drivers

Major financial drivers in determining investments in start-ups include:

- Financial statements – The frequency of its preparation and the methods of preparation
- Management accounts – its budgets, projected cashflows, etc
- Valuation methods – including asset approach, market approach and cashflow approach

Risk reduction strategies

Some of the examined risk reduction measures looked at include:

- Use of smart capital
- Multiple investments
- Mutual funds
- Hedge funds
- Trading behaviours of investors
- Efficient risk analysis

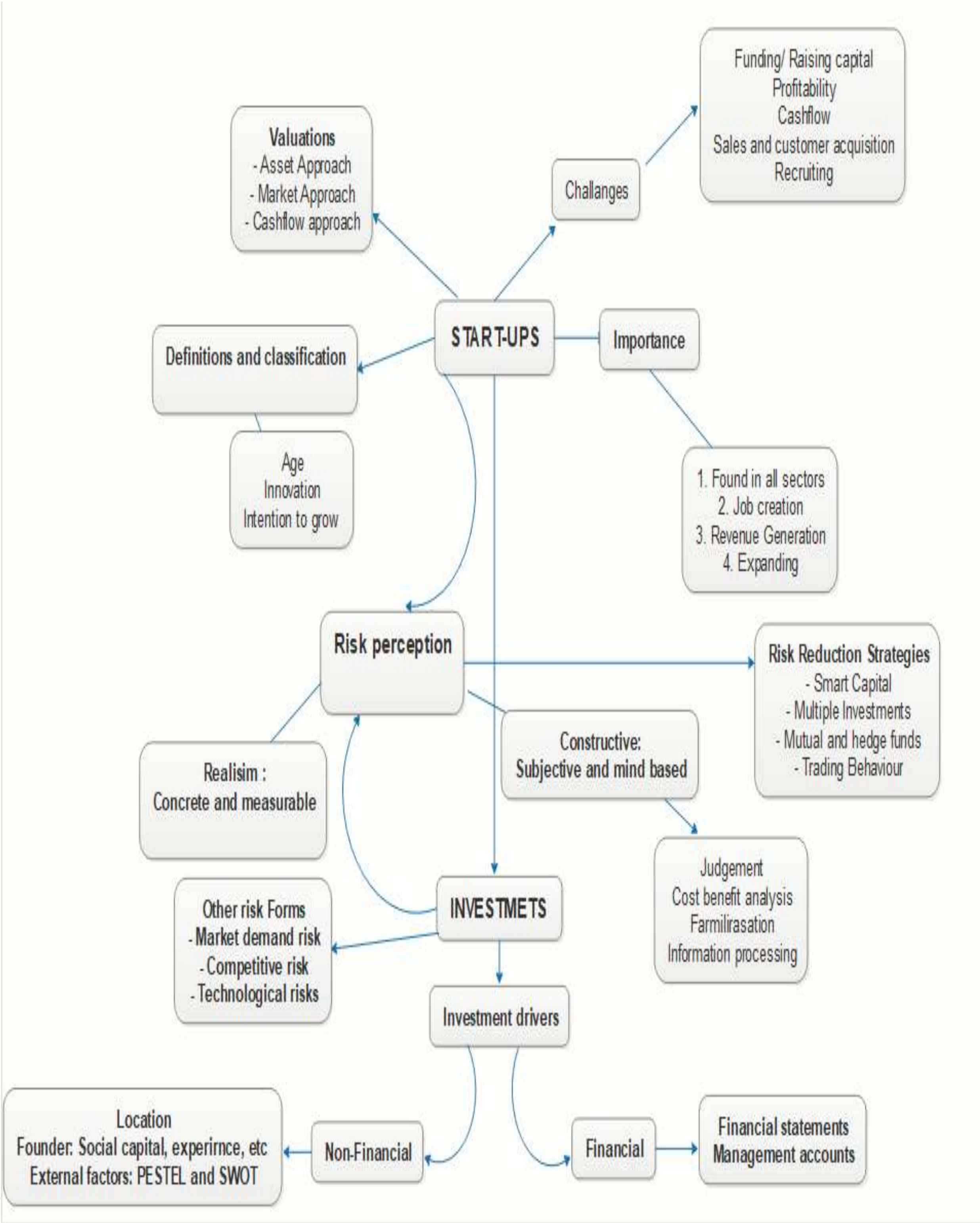


Figure 6: Conceptual framework

3 RESEARCH METHODOLOGY AND DESIGN

3.1 Overview

This chapter describes the research method(s) employed in this paper. From the research questions identified in the first chapter along with the objectives that are aimed to be achieved at the end of the study and the conceptual frame work formulated in the second chapter, the research method and design relies on them to decide on the paradigm used and why it was chosen to other methods available. This chapter also looks at the research strategy, data collect method, issues of ethics and the limitations to this study.

3.2 Research Paradigm and Approach

The paradigm and approach offer the researcher an operational style that helps in identifying a research paradigm and method of collecting data and analysing it as in the paradigm chosen. It is important to point out that the trails are not fixed, the main objective is to recognise and rationalize the associations of the choices made.

As stated by Collis and Hussey (2014), scientific studies are steered by a philosophical framework. This is as a result of the way things and events are viewed by different individuals and their approaches to reality. This approach could either be of positivism/realism which beliefs that reality is particular and objective. And on the other had is interpretivism with the belief that reality is subjective and multiple. This research would however apply both approaches. This is to help make the results more defined backed up as much as possible.

As a result of the subjective nature of the questions being posed in this study with the reality being subject to individual views and perception of risk, the interpretivism approach would be used. The research paradigm is used because due to the nature of questioning to be employed in the stated objectives of this study, an inductive process of explaining the subject matter. The interpretation of the author when analysing the findings might also be subjective.

In relation to this study, the qualitative method is tailored along the use of an interpretive research paradigm. This research paradigm according to Creswell (2014) would usually depend on the participants perspectives and notions of the subject in consideration. The main point of the qualitative point of the research is therefore to collect the data which would help in achieving the research objective. This approach helps to get the full perception and experience of each respondent with relation to the subject matter. To achieve this, a series of interviews would be conducted to enable the researcher to get a more adequate interaction between him and the respondents while trying the achieve the highest possibility of saturation and specific information rather than generalising.

With the information to be collected qualitative in nature, this follows the flow and concept of an interpretative approach. This is further supported with the proposed sample size being small, neutral location of research, and finding having a relatively high strength but low dependability (Collis and Hussey, 2014).

According to Sobh and Perry (2006), the issues researchers face is not identified with the methodologies selected but with the assertions of the experimental standards. Therefore, in this research, in addition to the interpretative approach, a positivist approach is also employed to help with presenting the quantitative research method. Using both methods at the end may produce diverging results, it does help to ensure a balanced approach to the research.

A quantitative approach as stated in Creswell (2014) is one in which the researcher basically adopts a positivists claim for developing their own knowledge, using methods such as experiments, surveys, and collect data on predetermined instruments to form a statistical data. The positivists claim is formed using current views and does not give room for being subjective where there may be doubts in the verification process of the approach. Collis and Hussey (2014) described the concept of positive information as information that can be proven mathematically and or acceptable using scientific methods.

The positivist approach applies the theory that perspective can be measured and tested by the reality of an object even when one has no experienced it. Just like getting the height of a person, an objective approach would study the same result no matter who does the measuring (Al-Saadi, 2014).

This research uses both the qualitative and quantitative due to their variations in methods, data gathering and results. Although this could in the end establish a link or create a divergence in reaching the objectives set out for this research. As qualitative research hope to find an in depth result as opposed to quantitative research, where its results are given in numbers and statistical form.

3.3 Research Strategy

With the initial gap in literature showing that the risk notions in investments have been researched under specific headings, this study would start as an exploratory study with the aim of getting to put together a collective view from all stand points. As a complex area of study, a quantitative study will fall short in failing to consider the variables, multitude of factors and inter relationships between the social, human and knowledge factors (Gummesson, 2006).

To allow for flexibility, the dependence on a qualitative strategy would allow the respondents answer the research questions with a degree of depth that is needed to form an inductive approach.

As the set of data to be collected and findings based on individual views (Irvine and Gaffikin, 2006), knowledge and experiences, a semi-structed interview to help tap into the knowledges and perceptions of the respondents as contrasting to structured interviews which gives a streamline and often limited views.

Finally, to build a foundation which a firm generalisation can be built on, a mix of investors from different countries and investment backgrounds would be used. This aims to help get a wider view in order to form a basis for this generalisation rather than the view from a certain cohort.

To further back up finding, a quantitative approach collecting the historical of start-ups. This would enable a statistical analysis to provide a parallel to the established generalisation in the qualitative method used.

This mixed method strategy, of both qualitative and quantitative methods, this will enable this research gather data from both a narrative and numbers approach making the results more aligned with the objectives set out.

Qualitative research	Quantitative Research
The aim is a complete, detailed description.	The aim is to classify features, count them, and construct statistical models in an attempt to explain what is observed.
Researcher may only know roughly in advance what he/she is looking for.	Researcher knows clearly in advance what he/she is looking for.
Recommended during earlier phases of research projects.	Recommended during latter phases of research projects.
The design emerges as the study unfolds.	All aspects of the study are carefully designed before data is collected.
Researcher is the data gathering instrument.	Researcher uses tools, such as questionnaires or equipment to collect numerical data.
Data is in the form of words, pictures or objects.	Data is in the form of numbers and statistics.
Subjective – individuals interpretation of events is important ,e.g., uses participant observation, in-depth interviews etc.	Objective: seeks precise measurement & analysis of target concepts, e.g., uses surveys, questionnaires etc.
Qualitative data is more 'rich', time consuming, and less able to be generalized.	Quantitative data is more efficient, able to test hypotheses, but may miss contextual detail.
Researcher tends to become subjectively immersed in the subject matter.	Researcher tends to remain objectively separated from the subject matter.

Figure 7: Features of quantitative and qualitative research (Langkos, 2014)

3.4 Data Collection

Data collection methods are the ways in which the researcher makes use of to collect the suitable and exact data to answer the questions raised in the research. Data collection is one of the important aspects in every research. It is very often dictated by the strategy employed by the study.

This study applies both the qualitative and quantitative approach. It would therefore use primary data in form of interviews for the qualitative aspect to it and make use of secondary data in form of financials and historical information for the quantitative aspect.

Qualitative Data Collection

In addressing the questions raised in this study, primary data will be used. This primary data as a result of the subjective nature and in need of a qualitative approach, a series of interviews would be conducted.

The interviews would be carried out in a semi-structed manner to help accommodate the different perspective of the respondents. With 5-8 respondents being the target respondents, the aim is to get an inclusive involvement of fund managers, investment analysts and a venture capitalist to get a wider range of views and risk perceptions. These cohort is being looked at as they form the scorecard of investment decisions.

A certain degree of inclusiveness would also be aimed at to help get a fair range of views and perceptions from different backgrounds. To achieve this, the respondents have been chosen from different countries, continents and investment backgrounds. The interviews would be conducted in a semi-structured manner with the questions helping to get the view of the respondent without narrowing or broadening the answers to make saturation impossible. A considerable level of experience has also been examined in choosing the respondents as this has allowed them to vast knowledge of the world of investments and investment decisions.

With the interviews to be done on a one-on-one basis via skype or WhatsApp (due to distance form certain respondents), there should be no room for a high level of bias since the respondents are giving their personal views.

To achieve consistency but still having a larger view of different perspectives, the following questions as relating to the research objectives have been put together to help understand at each level of the conceptual framework better;

1. How would you define a start-up?
2. What is/are the biggest challenge(s) you would say start-ups face?
3. Is/Are these challenges a risk to them?
4. With regards to investments in start-ups, what other risks are involved?
5. Are these risks defined and measurable or changing and unmeasurable?
6. With start-ups as the case in point, what is considered as the right investment?

7. Is the location of a start-up and your proximity to them an influence in your investment decision?
8. Is the experience of the founder(s) a driver in your investment decisions?
9. What other factors relating to the founder(s) of a start-up would be considered before investing?
10. What other non-financial factors do you consider before investing in a start-up?
11. What are the financial drivers and considerations in investing in a start-up?
12. Are there any differences and similarities in the risks involved compared with companies that are non-start-ups?
13. What methods are used in evaluating the risks identified in start-up investments?
14. What are the strategies used to minimise the risks you identified in investing in start-ups?

Quantitative Data Collection.

To further address the research questions, a quantitative data collection will be used. The data will be in secondary form due to the study strategy. That collection method will be based off internet research with the aim of finding start-up which have been recently listed through Initial Public Offerings (IPOs).

When these start-ups are found and suits the study, there financials and historical will be looked into to help create a trend for the analysis and valuation. The majority of the data is aimed to be collected from the data from the London Stock Exchange, Yahoo finance, and the financial statements of identified start-up.

Once the start-up is identified, a valuation will be done to determine how to evaluate the company. These valuations will be done based on:

1. Discounted Cash flow (DCF)
2. Dividend method
3. Comparable Company Analysis

This form of data will be gathered to help form a case study of the relevant start-ups identified and therefore analysed.

3.5 Sources of Data

For this research, the data sources would be both primary and secondary sources. The primary data would be collected through semi-structured interviews of fund managers, investment analysists and venture capitalists. The semi-structed interview is selected because it allows certain degree of inclusiveness would also be aimed at to help get a fair range of views and perceptions from different backgrounds. This helps make the respondents give their own views and the reasons behind them.

Before commencement of each interview, the respondents would be notified, and permission sought that the interview would be recorded. Upon completion, an open line of communication would be left open to enable additions to be made to previously answered questions. A transcribed copy of the interview would also be sent to the respondent to ensure nothing has been taken out of context, if there are additions that would want to be made or corrections to certain answers given. These clarifications are being done to ensure the consent in order to use the information provided to aid the research.

The secondary data would however be collected from samples of start-ups that have been publicly listed on the stock exchange. The details of their Initial Public Offerings (IPOs), financial statements will also be gathered from their respective websites under the investor relations.

3.6 Data Analysis Technique

Qualitative Analysis

In analysing the data collected through the semi-structured interviews conducted, a system of coding would be adopted. Based on the established conceptual framework to be adopted by this study, a code book through a coding system is better to help analysis and find themes. To do this, it would first be transcribed to enable a better view of the relevant concepts and answers given during the process of the interview (Berends and Johnston, 2005).

The identification of these themes would help generate the relevant terms that are commonly used in the answers provided by the respondents. This would then be linked to the literature review and conceptual framework to help form and opinion on the data gathered. All these would be done to be able to achieve a degree of saturation.

Quantitative Analysis

For the purpose of this study, secondary data will be gathered. This would be in form of the IPO details, stock prices and financial statements. These data will be analysed to arrive at a valuation using the historical from the start-ups. This will further help to project the returns and profitability elements of the start-up.

3.6 Conclusion

Using the research objectives and conceptual framework as laid out, this chapter has been modelled after it. The aim is to help the researcher gather and employ reliable data while also putting into consideration the time frame allocated to the research. This chapter explains how the data gathered will be used in the following chapter to arrive at the finding and conclusions.

4 PRESENTATION AND DISSCUSSION OF FINDINGS

4.1 OVERVIEW

This chapter discusses the findings of the topic of the study. These findings are as a result of the objectives of this study as started earlier. The findings were gotten from the data gathered through the interviews conducted and the valuation carried out. The research focused on the risk reduction strategies to enable a cushion on losses in start-ups. In doing this, the risks facing start-ups and the investment risks, and some risk reduction methods used by fund managers, investment analysts and venture capitalist.

The results obtained in this chapter follows the methodology as previously discussed in chapter three. The findings are based on the interview responses gotten from the respondents who participated in this study. The respondents interviewed addressed question based on their risk identification and mitigation strategies. Furthermore, the case study of a start-up which recently enlisted in a stock exchange through an IPO is valued.

For the protection and anonymity of the respondents as part of the ethics of this study, the respondents will be represented by codes. Respondent 1 will be referred to as R1, Respondent 2 as R2 and so on.

4.2 QUALITATIVE ANALYSIS

4.2.1 Respondents Profile

For the purpose of this study, a total of 13 respondents were invited to take part in the study, but only 5 were interviewed and 1 had to send in their answer to the interview questions in form of a survey due to the busy schedule. The interviews were conducted via telephone calls mostly by WhatsApp and Facetime applications.

The respondents consisted of 1 fund manager based in Canada, 3 venture capitalists based in Nigeria and 2 investment analysts with their offices in Nigeria.

4.2.2 Interview Demographic Data Findings

Age range distribution of Respondents

Age Range	Frequency	Percentage	Valid Percentage	Cumulative Percentage
20 - 25	0	0	0	0
26 - 35	4	66.67	66.67	66.67
36 - 45	2	33.33	33.33	100
Above 45	0	0	0	100
Total	**6**	**100**	**100**	

Source: Interview Data

According to the data collected and the table above, the highest range of respondents in the interview falls between 26-35 representing 66.67%. This is followed by the age range that falls between 36-45 which represents 33.33% of the respondents interviewed. There were no respondents that fell in the 20-25 age range and above 45.

Sex Distribution of Respondents

Sex	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Male	5	83.33	83.33	83.33
Female	1	16.67	16.67	100
Total	**6**	**100**	**100**	

Source: Interview Data

From the table above, the sex distribution shows 83.33% of the respondents are male, while 16.67% is female.

Educational Distribution of Respondents

Educational background	Frequency	Percentage	Valid Percentage	Cumulative Percentage
High School Diploma	0	0	0	0
Bachelor’s Degree	0	0	0	0
Master’s degree	6	100	100	100

Doctorate	0	0	0	100
Others	0	0	0	100
Total	**6**	**100**	**100**	

Source: Interview Data

According to the data collected, all the respondents are holders of master's degree holders. Although one of the respondents is in the final stages of his master's programme (having completed the taught semesters), for the sake of this study, he is regarded as having completed it.

Respondents Years of Experience Distribution

Years	Frequency	Percentage	Valid Percentage	Cumulative Percentage
0-5	1	16.67	16.67	16.67
6-10	4	66.67	66.67	83.34
Above 10	1	16.67	16.67	100
Total	**6**	**100**	**100**	

Source: Interview Data

According to the data collected, the years of experience by the respondents achieved is greatest in the 6-10 range making up 66.67%. this is followed by the range 0-5 and above 10 consisting of 1 respondent each and making up 16.67% in each range.

4.2.3 Interview Data Findings

In this section of the chapter, the data gathered through the interview process will be analysed. The data collected were in relation to the research objectives and will be written as such to follow after it. The data will also be written out in relation to the questions as they were asked.

The research was able to gather 6 responses in total. The respondents were asked a series of questions ranging from various challenges and risks faced by start-ups and in relation to investing in those start-ups.

Firstly, the respondents all had varying definitions of start-ups. From the data gathered, 50% (3 out of 6) defined a start-up mainly as an idea and the vision of a business or company that is just in its early stages. The other 50% solely defined start-ups as companies that has not been in existence for too long usually between 1-5 years. It was discovered however that 100% (6 out of 6) concluded that start-ups are business that had not been in existence for up to 5years.

Secondly, when asked the question regarding the challenges faced by start-ups, it was discovered that 100% of the respondent identified finance as the major challenge faced by start-ups. It was also discovered that 33.33% (2 out of 6) considered the ability to get the right personnel working in the business as a challenge as well. 16.67% (1 out of 6) further explained that getting the right personnel also would help reduce the challenge of fraud and proper management of the start-up to enable its survival as identified by R1. Furthermore, R2 and R4 identified the challenge of a proper fleshed out goal and vision. They explained that without a proper goal and vision set out by a start-up, it could end up not surviving and only remain an idea. Also, 33.33% (2 out of 6) identified data systems and access to data as a challenge for start-ups. R2 and R3 also found the experience of the founders in terms of the business area of the start-up and general business knowledge of the founders as a challenge.

It was found that, all the respondent identified that the challenges mentioned were a risk to the start-ups in one way or another. According to R5; "Of course, they are challenges, therefore they are risks to the business*"*.

With further risks identified as well, 50% (3 out of 6) of the respondents identified regulations as a risk facing start-ups in general. With a mix of government policies and regulatory bodies with relations to the line of business the start-up was involved in. R1 also identified the currency risk involved for start-ups who were engaged in foreign exchange. 33.33% (2 out of 6) of the respondents however pointed out that one of the risks faced by start-ups is the ability to know their limits in the early stage of the business. This R2 and R4 regarded as over-trading and being able to know the limit of when to know when "false profits" are being made. R4 also identified the social risk involved in a start-up, especially when the public views the start-up is in the wrong in morals.

In addition, the study aimed to know if the respondents viewed the risks as being measurable. While 33.33% of the respondents said out rightly that the risks were measurable, 66.67 (4 out of 6) said the risks were either measurable, while some elements of the risks were not measurable. R5 said if the risks were not measurable, then it would not be possible to mitigate them. R1 said in terms of measurable risks, these involved the currency risks through hedging and regulatory risks for the penalties involved. R3 however broke it down into systemic risk;

as being what is measurable and non-systemic risk; for example, market volatility as being unmeasurable.

When asked if there were differences or similarities in the risks faced by start-ups in comparison to non-start-ups, all the respondent agreed that though these risks are no different, they are however not on the same level. R1 and R3 said that the structures put in place and experiences overtime enables non-start-ups manage these risks better. R5 however said the business cycle is what is different and not the risk itself.

Additionally, the respondents were questioned to know if their proximity to a start-up would influence their investment decision. In this area, 33.33% (2 out of 6) said that proximity has no role to play in their investment decision. 16.67% (1 out of 6) said that proximity would matter as a result of proper oversight. The remaining 50% (3 out of 6) were divided about this criterion. R1 and R2 said with the world being a global village, proximity should not play a role but depending on the kind of business and its customers, proximity does matter. R3 however said proximity had more to do with the physical closeness and knowledge of the business environment. It is natural for the mind to want to stick to what it knows and used to.

To get a wider view of the risk considerations, the respondents were asked if the founders experiences and social capital mattered. All the respondent said it mattered to a certain level. R6 said that "Yes, it is. You can only give what you have." R6 explained that the experience of the founder(s) does give a sense of assurance. R1, R3 and R4 however said that the experiences would vary. R3 identified the experience of the founder(s) must be relative to the business and if not, must have knowledge of the business in which the start-up is into. R1 and R4 both identified that although the found(s) might not have the experience, but a collective of experiences if it is more than one founder. With regards to the social capital, the responses were also in line with it. All respondents said if the founder(s) don't have the social capital, this can be acquired often through the connections and people hired to work with the start-up.

With investments in the start-ups being the major theme of this study, the financial considerations for investment in start-ups were probed. 100% (6 out of 6) identified that the returns to be gotten from the investment is the major driver for investments. However, R4 as a fund manager also considered the needs of the customer in terms of the returns. R4 said it is important to consider the risk factor of the customer when deciding the investments to the put in the portfolio. R5, an investment analyst also said the revenue generation ability of the start-up based on its value proposition will be a financial consideration in investing. For R1 and R2 as venture capitalists, they said some of the financial considerations would be the forecast and business projected incomes in terms of budgets and feasibility studies. Also, 50% of the respondents (3 out of 6) said that the founder(s) investment in terms of money must be seen in the start-up, which is identified as "having skin in the game."

However, when identifying the financial considerations, R1, R2, R3 and R4 said the frequency of the financial statement preparation and method that is using either the GAAP or IFRS would not be a consideration. R5 and R2 further explained that the use of an IFRS would be preferable as it offers a more transparent view of the financial accounts and disclosures.

The respondents were asked what evaluation process they used in evaluating the risks when it comes to investing in the start-ups. 50% of the respondents said the feasibility studies and budgets presented compared to the financial accounts presented is the evaluation procedure. However, R4 and R5 said a comparison of the start-up to other companies in the same industry as the start-up, keeping in view the challenges and experiences to help determine if the start-up was one which can be deemed viable. R4 emphasised that if the start-up is being compared to a publicly listed company in the same industry, the growth projections can be used to evaluate the start-up thereby giving it a basis for investment.

Lastly, when asked about the risk reduction strategies, it was discovered that the respondents utilised a combination of approaches. However, 100% (6 out of 6) identified diversification as the major risk reduction strategy. Another 50% (3 out of 6) said having or putting people in place either on the board or a representative to help monitor their interests is one of the risk reduction strategies they employ. R1 also said that having an exit option from the start-up and knowing when to implement this exit option is a risk minimisation strategy. This helps to reduce the exposure to losses if the start-up is a lose maker after investment.

Furthermore, 66.67% of the responses said that investing in stages with a steady amount of capital is also a risk minimisation strategy. R3 referred to is as pilot testing and R4 said it was investing at every stage what one can afford to lose. 83.33% (5 out of 6) revealed that a proper due diligence and investigation of the start-up, its goals and business plan is another risk reduction strategy used in minimising the risk in investing in start-ups.

4.3 Discussion of findings (Thematic Analysis)

This area of the study, the findings gathered from the interview will be discussed and analysed. The analysis will be done through themes created from the transcripts of the interviews carried out. The themes were through a process of cluster code as collected from the data.

Start-ups Definition and Business concept

During the course of the study. It was found that all the respondents found start-ups as businesses or companies that have been in existence between 1-5 years and were usually new ideas or concepts in an industry.

Some of the responses captured when the respondents were asked to define a start-up includes:

"*…a start-up is an organisation that just commenced operations in less than 1-5years*" according to **R2**.

According to **R3** "*I believe a start-up can be said to be a successfully incubated business idea…… I mean a company can start and after 2 years you're still struggling to put things in order, we can on that basis say that you're still a start-up.*"

"*It is a business idea that is birthed with a vision*" said **R5** who also described start-ups staying *"Another start-up can be a company that has run for about 3,4,5years……"*

"…a new business that generally has a small amount of capital and an idea." – **R4**

It is worthy of note that while defining start-ups two of the respondents also mentioned that:

"And usually a very small team like less than 5. Usually its maybe 2,3 or 4 people at most." – **R4**

"a start-up is a newly established business especially by one or two persons" according to **R6**.

Risks in start-ups

When asked what the risks associated with start-ups were, the respondents mentioned a few topics in which they view as risks to a start-up. However, the study identified that in the responses given by the respondents, some risks were recurrent and mentioned.

Some of these risks include; regulatory risk, political risk, people risk, vision and goal risk, technological risk, cash flow risks and the risk of losing capital invested in the business.

Some of the responses gathered were;

"…. if you strut-up a business that is heavily regulated by the govt then that's a big risk." – **R1**

"*Now regulations may be one thing that would make a start-up not kick off……. it is not operational because of regulatory issue. It has to meet all the regulatory issu*e**"** according to **R5.**

"…. number one you need finances to run your organisation……" according to **R2. R2** further mentioned that;

"…you need good hands to manage your investments, you need good hands to be able to achieve your goals."

In their response, **R3** stated that;

"The very first on everyone's list will definitely be finance. Access to finance…"

"You need the right people to drive your vision, if not, the vision will die. If you get the wrong people in your team, then you are in for disaster,"

While addressing the risks, **R5** answered stating "*If you invest in a start-up the founder is politically driven, it is all about politics"*

"Again, the credibility of that person……"

Furthermore, **R4** answered:

"one of the biggest risks is capital loss"

"And on top of that they risk bankruptcy which is very very expensive."

Measurability of risk

There was a high level of generalisation here as the respondents answered that the risks associated with start-ups were measurable. Some of the responses received include;

"Everything is measurable if you get the right people involved." – **R4**

"*… they are all defined, they are measurable…"* – **R5**

"… they are all measurable in one way or another." – **R1**

"… the risks could become measurable and mitigants can be put in place to manage them." – **R6**

Although, two of the respondents who answered that the risks were measurable did also mention that some risk were not measurable and referred to them as non-systemic risks.

"… in terms of measurability I mean it varies…" – **R2**

"…unsystematic risk are the ones that are within my control," – **R3**

Evaluation Methods

When asked what the evaluation methods were that they used when evaluating start-ups, the respondent explained that one of the major methods used is the analysis of the financial statements of the start-up to help make forecasts based on what is termed their "historals," From these financial statements, an analysis backed up by a valuation can be made. The returns to be generated for the investment could then be predicted with margins of errors.

While analysing the financial statements, management accounts are also considered on the part of the venture capitalist.

Further evaluation methods as identified by the respondents also included the founder(s) experience and the proximity of the investment to the investors.

Some of the responses received were;

"*I would consider the right investment would be having the right finances…*" – **R2**

"I now have to been looking at your financial statement…" – **R1. R1** further responded saying *"… you want to be sure that your income is yielding the accurate cashflow, accurate inflow of funds."*

"… moment you can look at the revenue and take into consideration the overhead……" – **R5**

"… if I would do this, I would start Toronto because it is the nearest to me…" – **R4**

"The experience would be a plus…" – **R3. R3** also *added "… as a financial driver – which is a feasibility study…. I would look at the cashflow projections*"

Risk reduction strategies

When asked about the risk reduction strategies used, the respondents identified diversification and scaling investments in order to reduce exposure.

Some responses gotten with regards to this were;

"*Diversification is number one…. only invest funds that you can afford to invest." –* **R4**

"…basically, just reduce your exposer to the business… so you do not just release these funds all at once." – **R2**

"…want to invest, why not start small and see if that project is a reliable one. Because if you start small, you lose small, but if you start big, you lose big." – **R3**

"…look at investing funds gradually in a business…" – **R5**

Also, the respondents answered that a proper due diligence before investing, making sure the founders have "skin in the game" and having someone monitor their interests is also a way in which they reduce the risks involved in investing in start-ups.

Responses gathered includes;

"…you can propose to have someone on ground that will help your interest in the business…" – **R2**

"They would monitor the funds you have received have to be allocated properly…" – **R1**

"…doing your due diligence…" – **R4**

"…must have a proper skin in the game of that business. They should have part ownership of the business. The moment you have part ownership of that business, you would want to give in your best to make sure the company runs well." – **R5**

From the above findings and thematic analysis, it was found that although there were times when the respondents agreed on certain matters, the manner in which they did differed. Also, with relation to the investment process, evaluation and decision making, there were similarities and differences found.

Firstly, when defining start-ups, two of the respondents were not eager to define it in terms of the number of years in which it had been in existence. Rather, they looked at the underlining business concept and if it was a relatively new concept that was being introduced. Although at the end, each agreed that once past initial survival after a couple of years, it can no longer to referred to as a start-up. With the rest of the respondents, the number of years of existence either as a new concept or not was not relevant in their definition. To them the vision and goal of the founder(s) were the underlining criteria for definition.

Secondly, with relations to the risks involved when investing in start-ups, the respondents all had and presented their views with respect to their experiences. This formed a level of bias but at the end did not affect the outcome of the study as it converged on the same considerations. With the respondents highlighting finances, political, regulatory and personnel risks as the factors considered when investing in a start-up.

Furthermore, it was discovered that the respondents were at an impasse when it came to the features of the founder(s). The study tried to find out if the experiences of the founder or social capital formed a basis to which an investment in the start-up would be made.

The results showed that the respondents sometimes found the experience of the founder(s) as a criterion. They concluded that when going into a business or building a start-up, it is important to have a fair knowledge of the business environment being ventured into. This would create an opportunity to help navigate the new business and stir it to survival. Also, it was seen that they expected the founder(s) to have a certain level and degree of social capital and network, as this would further progress the goals of the start-up and ensure survival.

On the other hand, however, it was discovered that the other respondents felt the need for personal experience was not a factor, but a need for general business experience was important. To them, the experience could be brought in by others as well as social capital.

This is however contradicted by the initial findings involving getting the risk personnel which was identified as a risk to start-ups.

In conclusion, on the strategies used to minimise the risks, it was discovered that the respondents all had the same answers to this question. There was however one who highlighted that having the right exit strategy from the investment and knowing when to pull out of the business was important.

4.4 Summary of Findings

While undertaking this study, the researcher was able to successfully gather five responses in full through the interviews, with only one of the respondents (R6) sending in the answers via text and no conversation was had. The respondents were made of finance analysts, venture capitalist and a fund manager.

This research attempted to get an understanding of how investment risks in start-ups are managed and the strategies used in minimising these risks as identified.

Although efforts were made to gathers as much data as possible, only six responses were gotten with one of them not being a proper interview. Some of the findings gotten from the research found that the risks involved with start-ups were centred around finance, regulations, political risk and the ability to get the right personnel as start-ups are not so attractive at the beginning. Also, the investment decisions were made majorly based on the projected returns and the financial statements of the start-up and to minimise the risk expose, two of the major strategies used involved diversification and investing small amount of capital at the initial stages.

4.5 Comparison to Literature Review

Form the literature review chapter presented earlier, some risk elements were identified and what affected the decisions made when choosing to invest in start-ups. In this section, the researcher will compare the similarities and possible differences between the findings and literature review.

Similarities between findings and literature review

According to the literature reviewed it was found that start-ups were mostly defined by their ages and how long they had existed, business model and number of employees (Steigertahl and Mauer, 2018) with the challenges and risk focused around finances, recruiting and internal organisation among others. This is similar to the findings in this study as the respondents answered that start-ups were companies or business that had ages ranging from one to five years and were ideas or vision with usually two or three at the maximum in the initial stages. Also, the challenges which poses a risk to the start-up according to respondents were found in the areas of financing, getting the right personnel and business model.

Another area where there were similarities in the areas of the risk perception and investment evaluations. While reviewing the literature, it was found that the way people perceived risks was different (Cho, *et. al.*, 2015). This was seen in the responses of the respondents as they all had different views of the risks involved in start-ups and the level of importance attached to it. The measurability of those risks also varied as some responded saying the risks were measurable while other believed some aspects of risk cannot be measured. The study also found that while evaluating investment decisions in start-ups, the financial statements analysis and returns were a major factor (Bratic, *et. al.*, 2014) along with the experience levels and attributes of the founder(s) (Zaleski, 2011) were also key factors that determined investment decisions. The finds were similar in this regard as well. Most of the respondents agreed that the financials of the start-up had to be properly evaluated to measure the profitability of the start-up and potential returns.

Lastly, the risk reduction strategies identified were very similar to the ones found in the literature. The respondents answered saying diversification and a proper due diligence based on their investment models were the strategies used in minimising the risks. This is similar to the literature review as seen in (Grant and Xie, 2007) who explained that hedging bets against one investment to another was a risk minimisation strategy. Also, one minimisation strategy reviewed in the literature was knowing when to pull out of the business (Guo, *et. al.*, 2015). One of the respondents identified that knowing the right time and having an exit strategy from the start-up was one of the ways used in minimising investment risks.

Differences between finding and literature

In the literature review, one of the investment considerations was the proximity of the start-up (Parwada, 2008). However, in the findings, it was discovered that for the respondents with an exception of one, the proximity of the start-up was not an investment consideration. This factor was cancelled out with the process of due diligence being carried out before making an investment decision.

Another difference found between the findings and the literature review is that although various risk reduction strategies were mentioned, the respondents still in ways chose to reduce their exposure to risk by investing in bits according to the needs of the start-up.

4.5 Recommendations

The research found out that the respondents, despite the risk posed to start-ups found they would still choose to invest in them. The respondents did not see any major difference in the risks involving investments in start-ups and non-start-ups.

According to the respondents, with a proper due diligence done and reducing the exposure to risk when investing, the frequency of financial statement preparation was not significant. Also, the experiences of the founder do not necessarily have to be in the business area of the start-up as if there is a proper business model and value proposition, the revenue streams would be properly managed which would in turn guarantee their profitability and returns.

4.6 QUANTITATIVE ANALYSIS

4.6.1 Company Profile

Angus Energy Plc is a company that is involved in the development, production and distribution of hydrocarbons. It is located in the United Kingdom and last listed on the London Stock Exchange in 2015.

It has a full time employee of 11 people and is in the energy sector and listed under the oil and gas industry. (Yahoo Finance, 2019a).

4.6.2 Presentation and Analysis of Data

Analysis of Historical (Financial Statement)

From the information gathered in the audited financial statement, an analysis of the financial statement was carried out. In using this data, a five-year expected projection was generated using a combination of the year on year and cumulative average growth rate to determine the future risks and estimated future assumptions.

PROFIT AND LOSS STATEMENT	**2,018 £'000**	**2,017 £'000**	**2,016 £'000**	**YOY %**	**CAGR %**
Revenue	66	70	73	-5%	-3%
cost of sales	-167	-109	-90	53%	23%
Gross loss	-101	-40	-17	156%	81%
other income	21	53	175	-60%	-51%
Admin expenses	-2,230	-1,925	-747	16%	44%
Share option charge	-75	-740	-1,349	-97%	-62%
Operation loss	**-2,385**	**-2,652**	**-1,938**	-10%	7%
Finance income	6	119	14	-102%	-25%
Finance cost	-390	0	-11	0%	229%
Gain on disposal of oil production assets	0	0	165	0%	-100%
Loss on disposal of available for sale financial investment	0	-10	-115	-100%	-100%
Write off amount due from directors	0	0	-70	0%	-100%
Write off amount due from HHDL	0	0	-200	0%	-100%
Gain on disposal of other investments	0	0	195	0%	-100%
Gain on disposal of investment in HHDL	0	0	2,069	0%	-100%
Profit/(Loss) before taxation	-2,769	-2,543	109	9%	-394%
Taxation	0	0	10	0%	-100%
(Loss)/profit for the year	**-2,769**	**-2,543**	**119**	9%	-385%
Items that may be reclassified subsequently to profit or loss					
Other comprehensive income					
AFS financial investment – change in fair value	0	-27	-98	-100%	-100%
Less: amount reclassified to profit or loss	0	10	115	-100%	-100%
Total comprehensive profit/(loss) for the year	-2,769	-2,560	136	8%	-373%

Loss for the year attributable:					
Owners of the parent company	-2,790	-2,612	152	7%	-364%
Non-controlling interest			-33	0%	-100%
	-2,790	**-2,612**	**119**	7%	-386%
Total comprehensive (loss)/profit attributable to:					
Owners of the parent company	-2,790	-2,629	169	6%	-355%
Non-controlling interest	0	0	-33	0%	-100%
	-2,790	-2,629	136	6%	-374%
Earnings per share (EPS) attributable to owners of the parent					
Basic EPS (in pence)	-0.94	-1.18	0.10	-20%	-311%
Diluted EPS (in pence)	-0.94	-1.18	0.10	-20%	-311%

STATEMENT OF FINANCIAL POSTION

	2,018	**2,017**	**2,016**	**YOY**	**CAGR**
	£'000	**£'000**	**£'000**		
Non-current assets					
Property, plant and equipment	20	13	8	54%	36%
Exploration and evaluation assets	5,218	155	0	3266%	0%
Oil production assets	5,225	2,843	553	84%	111%
Total non-current assets	10,463	3,011	561	247%	165%
Current Assets					
Trade and other receivables	791	739	630	7%	8%
Available for sale financial investments	273	260	241	5%	4%
Cash and cash equivalents	846	1,224	25	-31%	223%
Total current assets	1,910	2,223	896	-14%	29%
Total assets	**12,373**	**5,234**	**1,457**	136%	104%
Equity					
Equity attributable to owners of the parent					
Share capital	763	481	300	59%	37%
Share premium	14,142	5,753	45	146%	580%
Merger reserve	-200	-200	-200	0%	0%
other reserve	0	0	17	0%	-100%
Accumulated loss	-4,597	-1,882	-10	144%	672%
Total equity	**10,108**	**4,152**	**152**	143%	305%
Current Liabilities					
Trade and other payables	1,440	322	805	347%	21%
Total current liabilities	**1,440**	**322**	**805**	347%	21%
Non-current liabilities					

Provisions	552	500	500	10%	3%
Total non-current liabilities	552	500	500	10%	3%
Total liabilities	**1,992**	**822**	**1,305**	142%	15%
Total equity and Liabilities	**12,100**	**4,974**	**1,457**	143%	103%

CASH FLOWS STATEMENT

	2,018 £'000	2,017 £'000	2,016 £'000	YOY	CAGR
Cash flow from operation activities					
(Loss)/profit for the period before taxation	-2,790	-2,612	109	7%	-395%
Adjustment for:					
Loss on disposal of available for sale financial assets	0	10	115	-100%	-100%
Share option charge	75	740	0	-90%	0%
Equity settled in lieu professional fees	226	291	0	-22%	0%
Debt forgiven by related party	0	-116	0	-100%	0%
Gain on disposal of oil production assets	0	0	-165	0%	-100%
Gain on disposal of HHDL interest	0	0	-2,069	0%	-100%
Gain on disposal of IOW interest	0	0	-195	0%	-100%
Write off of amount due from director	0	0	70	0%	-100%
Write off of amount due from HHDL	0	0	200	0%	-100%
Interest receivables	-6	-3	-14	100%	-25%
Interest payable	390	0	11	0%	229%
Depreciation of owned assets	26	7	7	271%	55%
Cash used in operating activities before changes in working capital	**-2,079**	**-1,683**	**-1,931**	24%	2%
Change in trade and other receivables	-44	94	-158	-147%	-35%
Change in other payables and accruals	1,115	-384	-533	-390%	-228%
Cash used in operating activities	-1,008	-1,973	-2,622	-49%	-27%
Income tax paid	0	0	-95	-100%	-100%
Net cash flow used in operations	**-1,008**	**-1,973**	**-2,717**	-49%	-28%
Cash flow from investing activities					
Proceeds from disposal of production assets	0	0	187	0%	-100%
Proceeds from disposal of HHDL interest	0	0	1,489	0%	-100%
Proceeds from disposal of available for sale financial investments	151	301	1,350	-50%	-52%
Loan (advance)/repaid to director	-100	-200	-56	-50%	21%
Loan advance to HHDL	0	0	-200	0%	-100%
Acquisition of available for sale financial investment	0	-70	0	-100%	0%
Acquisition of IOW interest	0	0	-5	0%	-100%
Acquisition of property, plant and equipment	-16	-12	0	33%	0%
Acquisition of exploration and evaluation assets	-5,011	-155	0	3133%	0%
Acquisition of oil production assets	-2,399	-2,290	-36	5%	305%
Net cash flow from financing activities	**-7,376**	**-2,426**	**2,729**	204%	-239%
Cash flow from financing activities					
Proceeds from issuance of convertible loans	3,000	0	0	0%	0%
Proceeds from issuance of shares	5,056	5,598	0	-10%	0%
Net cash flow from financing activities	**8,056**	**5,598**	**0**	44%	0%

Net (decrease)/increase in cash & cash equivalents	-328	1,199	12	-127%	-401%
Cash and equivalents at end of period	1,224	25	13	4796%	355%
	897	1,224	25	-27%	230%

Source: (Angus Energy Plc, 2018, 2019)

From the above, an average of the YOY and CAGR was determined as -2%. This was estimated based on the assumption that it would take the company a few years before breaking even. This assumption is based on the revenue generated by the company on a year on year basis between 2018 and 2017. Based on that assumption, a five-year forecast was generated from 2019 expected values to 2023 expected values.

PROFIT AND LOSS STATEMENT PROJECTIONS	**2019E £'000**	**2020E £'000**	**2021E £'000**	**2022E £'000**	**2023E £'000**
Revenue	65	63.39	62.12	60.88	59.66
cost of sales	-164	-160.39	-157.18	-154.04	-150.95
Gross loss	-99	-97	-95	-93	-91
other income	20.78	20.36	19.95	19.55	19.16
	-	-	-	-	-
Admin expenses	2,185.40	2,141.69	2,098.86	2,056.88	2,015.74
Share option charge	-73.50	-72.03	-70.59	-69.18	-67.79
Operation loss	-2,337	-2,290	-2,245	-2,200	-2,156
Finance income	5.88	5.76	5.65	5.53	5.42
Finance cost	-382	-374.56	-367.06	-359.72	-352.53
Gain on disposal of oil production assets	0	0	0	0	0
Loss on disposal of available for sale financial investment	0	0	0	0	0
Write off amount due from directors	0	0	0	0	0
Write off amount due from HHDL	0	0	0	0	0
Gain on disposal of other investments	0	0	0	0	0
Gain on disposal of investment in HHDL	0	0	0	0	0
Profit/(Loss) before taxation	-2,713	-2,659	-2,606	-2,554	-2,503
Taxation	0	0	0	0	0
(Loss)/profit for the year	-5,427	-5,318	-5,212	-5,108	-5,006
Items that may be reclassified subsequently to profit or loss					
Other comprehensive income					
AFS financial investment - change in fair value	0	0	0	0	0
Less: amount reclassified to profit or loss	0	0	0	0	0
Total comprehensive profit/(loss) for the year	-5,427	-5,318	-5,212	-5,108	-5,006
Loss for the year attributable:					

Owners of the parent company	-2,734	-2,679.52	-2,625.93	-2,573.41	-2,521.94
Non-controlling interest	0	0.00	0.00	0.00	0.00
	-2,734	**-2,680**	**-2,626**	**-2,573**	**-2,522**
Total comprehensive (loss)/profit attributable to:					
Owners of the parent company	-2,734	-2,679.52	-2,625.93	-2,573.41	-2,521.94
Non-controlling interest	0	0.00	0.00	0.00	0.00
	-2,734	-2,680	-2,626	-2,573	-2,522
Earnings per share (EPS) attributable to owners of the parent					
Basic EPS (in pence)	-0.92	-0.90	-0.88	-0.87	-0.85
Diluted EPS (in pence)	-0.92	-0.90	-0.88	-0.87	-0.85

STATEMENT OF FINANCIAL POSTION PROJECTIONS

	2019E £'000	**2020E £'000**	**2021E £'000**	**2022E £'000**	**2023E £'000**
Non-current assets					
Property, plant and equipment	19.60	19.21	18.82	18.45	18.08
Exploration and evaluation assets	5,114	5,011.37	4,911.14	4,812.92	4,716.66
Oil production assets	5,121	5,018.09	4,917.73	4,819.37	4,722.99
Total non-current assets	10,254	10,049	9,848	9,651	9,458
Current Assets					
Trade and other receivables	775	759.68	744.48	729.59	715.00
Available for sale financial investments	268	262.47	257.22	252.08	247.04
Cash and cash equivalents	829	812.50	796.25	780.32	764.72
Total current assets	1,872	1,835	1,798	1,762	1,727
Total assets	**12,126**	**11,883**	**11,646**	**11,413**	**11,184**
Equity					
Equity attributable to owners of the parent					
Share capital	1,016	995.68	975.77	956.25	937.13
Share premium	13,859	13,581.98	13,310.34	13,044.13	12,783.25
Merger reserve	-196	-192.08	-188.24	-184.47	-180.78
other reserve	0	0.00	0.00	0.00	0.00
Accumulated loss	-4,505	-4,414.96	-4,326.66	-4,240.13	-4,155.32
Total equity	**12,126**	**11,883**	**11,646**	**11,413**	**11,184**
Current Liabilities					
Trade and other payables	1,411	1,382.98	1,355.32	1,328.21	1,301.65
Total current liabilities	**1,411**	**1,383**	**1,355**	**1,328**	**1,302**
Non-current liabilities					
Provisions	541	530.14	519.54	509.15	498.96

Total non-current liabilities	541	530	520	509	499
Total liabilities	**1,952**	**1,913**	**1,875**	**1,837**	**1,801**
Total equity and Liabilities	**12,126**	**11,883**	**11,646**	**11,413**	**11,184**

CASH FLOWS STATEMENT PROJECTIONS

	2019E £'000	**2020E £'000**	**2021E £'000**	**2022E £'000**	**2023E £'000**
Cash flow from operation activities					
		-	-	-	-
(Loss)/profit for the period before taxation	-2,734	2,679.52	2,625.93	2,573.41	2,521.94
Adjustment for:	0	0.00	0.00	0.00	0.00
Loss on disposal of available for sale financial assets	0	0.00	0.00	0.00	0.00
Share option charge	74	72.03	70.59	69.18	67.79
Equity settled in lieu professional fees	221	217.05	212.71	208.46	204.29
Debt forgiven by related party	0	0.00	0.00	0.00	0.00
Gain on disposal of oil production assets	0	0.00	0.00	0.00	0.00
Gain on disposal of HHDL interest	0	0.00	0.00	0.00	0.00
Gain on disposal of IOW interest	0	0.00	0.00	0.00	0.00
Write off of amount due from director	0	0.00	0.00	0.00	0.00
Write off of amount due from HHDL	0	0.00	0.00	0.00	0.00
Interest receivables	-6	-5.76	-5.65	-5.53	-5.42
Interest payable	382	374.56	367.06	359.72	352.53
Depreciation of owned assets	25	24.97	24.47	23.98	23.50
Cash used in operating activities before changes		-	-	-	-
in working capital	**-2,037**	**1,996.67**	**1,956.74**	**1,917.60**	**1,879.25**
Change in trade and other receivables	-43	-42.26	-41.41	-40.58	-39.77
Change in other payables and accruals	1,093	1,070.85	1,049.43	1,028.44	1,007.87
Cash used in operating activities	-988	-968	-949	-930	-911
Income tax paid	0	0.00	0.00	0.00	0.00
Net cash flow used in operations	**-988**	**-968**	**-949**	**-930**	**-911**
Cash flow from investing activities					
Proceeds from disposal of production assets	0	0	0	0	0
Proceeds from disposal of HHDL interest	0	0	0	0	0
Proceeds from disposal of available for sale financial investments	147	145	142	139	136
Loan (advance)/repaid to director	-98	-96	-94	-92	-90
Loan advance to HHDL	0	0	0	0	0
Acquisition of available for sale financial investment	0	0	0	0	0
Acquisition of IOW interest	0	0	0	0	0
Acquisition of property, plant and equipment	-15.68	-15.37	-15.06	-14.76	-14.46
		-	-	-	-
Acquisition of exploration and evaluation assets	-4,911	4,812.56	4,716.31	4,621.99	4,529.55
		-	-	-	-
Acquisition of oil production assets	-2,351	2,304.00	2,257.92	2,212.76	2,168.51
Net cash flow from financing activities	**-7,228**	**-7,083**	**-6,942**	**-6,803**	**-6,667**

Cash flow from financing activities					
Proceeds from issuance of convertible loans	2,940	2,881.20	2,823.58	2,767.10	2,711.76
Proceeds from issuance of shares	4,955	4,855.78	4,758.67	4,663.49	4,570.22
Net cash flow from financing activities	**7,895**	**7,737**	**7,582**	**7,431**	**7,282**
Net (decrease)/increase in cash & cash equivalents	-321	-315	-308	-302	-296
Cash and equivalents at end of period	1,199.52	1,175.53	1,152.02	1,128.98	1,106.40
	879	861	844	827	810

Source: Secondary data collected

From the above presentation and future estimations, it can be seen that between 2019 and 2023, the projections made for the company, it is a loss maker.

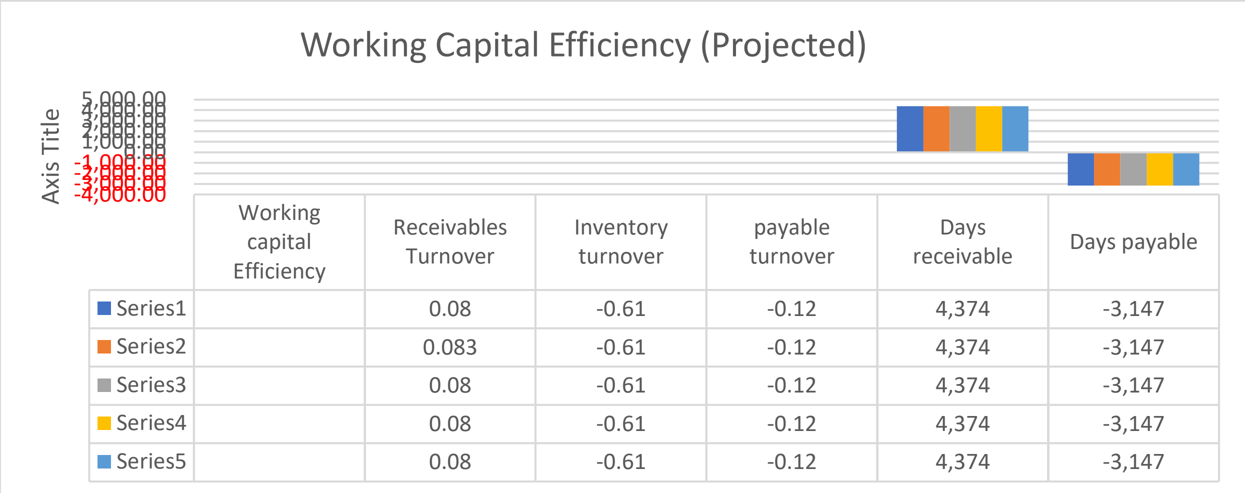
Revenue is deemed to reduce yearly by 2%. These projections go to affect the overall standing of the business. At this point, it is likely that future investments would cease in the company. With assets including oil exploration assets not growing while running a deficit on its cash flow statement year after year.

Financial Statement Analysis

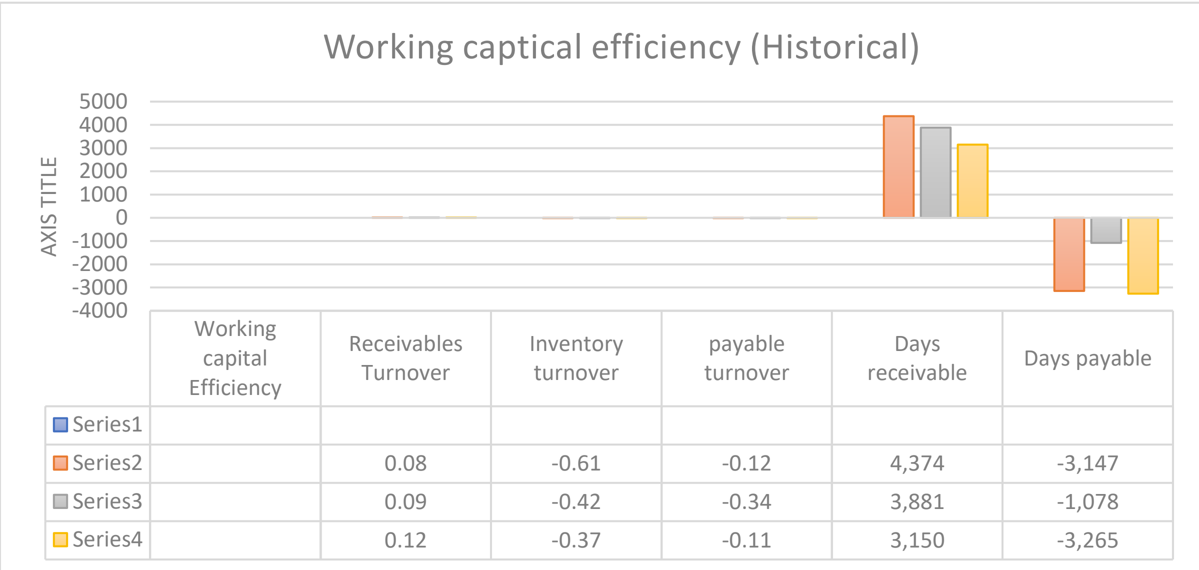
From the above projections made, it was discovered that the company is a loss maker for the next five years. To determine its profitability, an analysis of its financial ratios was carried out. This is presented in the tables and graphs below for the historical and projections.

Profitability			
EBIT margin	-4195%	-3658%	149%
Net margin	-4195%	-3658%	149%
Solvency and Liquidity			
Cash ratio	58.8%	380%	3%
Quick ratio	840%	1545%	151%
Current ratio	133%	690%	111%
Working capital Efficiency			
Receivables Turnover	0.08	0.09	0.12
Inventory turnover	-0.61	-0.42	-0.37
payable turnover	-0.12	-0.34	-0.11
Days receivable	4,374	3,881	3,150
Days payable	-3,147	-1,078	-3,265
Returns			
Returns on average assets	741939%	207439%	78917%
Returns on average equity	-13%	-31%	38%
Returns on capital employed	-13%	-31%	38%

Source: Secondary data collected



	Working capital Efficiency	Receivables Turnover	Inventory turnover	payable turnover	Days receivable	Days payable
Series1		0.08	-0.61	-0.12	4,374	-3,147
Series2		0.083	-0.61	-0.12	4,374	-3,147
Series3		0.08	-0.61	-0.12	4,374	-3,147
Series4		0.08	-0.61	-0.12	4,374	-3,147
Series5		0.08	-0.61	-0.12	4,374	-3,147

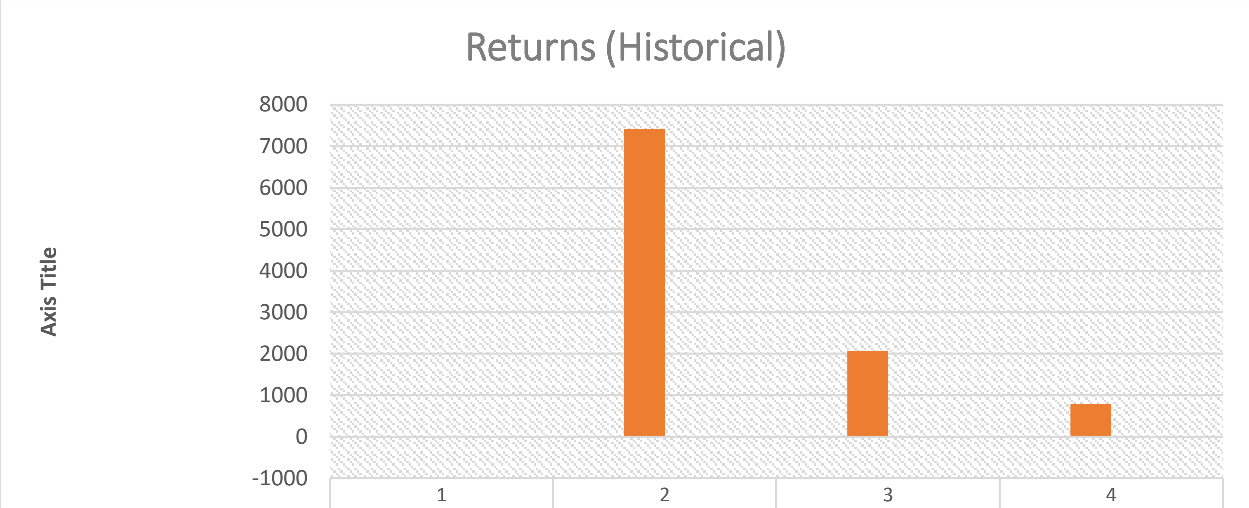


	Working capital Efficiency	Receivables Turnover	Inventory turnover	payable turnover	Days receivable	Days payable
Series1						
Series2		0.08	-0.61	-0.12	4,374	-3,147
Series3		0.09	-0.42	-0.34	3,881	-1,078
Series4		0.12	-0.37	-0.11	3,150	-3,265

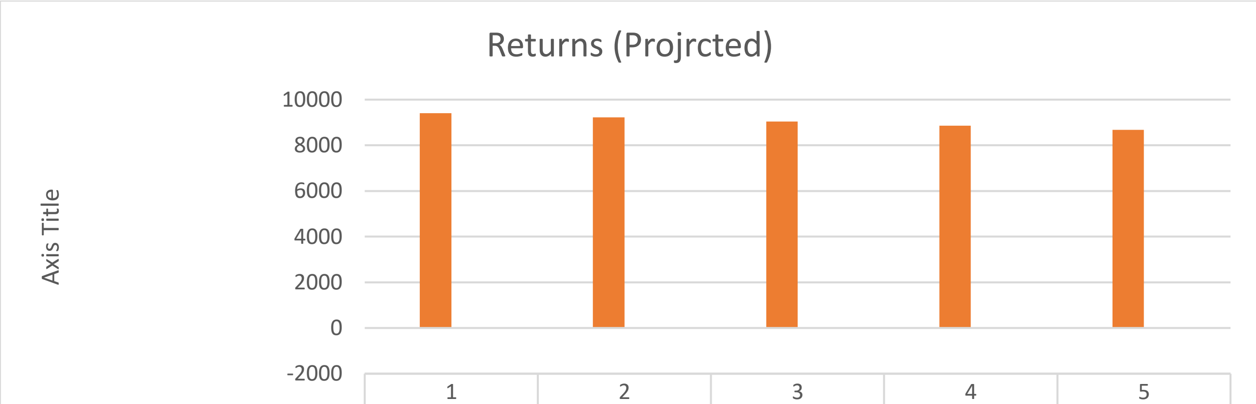
From the above table and graphs, the working capital efficiency in 2018, 2017 and 2016 are presented respectively. It shows a receivable turnover of 0.08,0.09 and .012 in 2018, 2017 and 2016 respectively. It also shows that it had an inventory turnover deficit of 0.61, 0.42 and 0.37 in the three years considered. This is consistent with the five-year projections as the trend remains the same at a rate pf 0.083 for the receivable turnover and inventory turnover at -0.61.

With a standard of receivable and payable days being in the range of 3,000 to 4,300 days in the three-year historical. This also follows the same trend with projections done for 2019 to 2023. The receivable and payable days fall between 3,200 days – 4,400 days.

The numbers remain unchanged over the years of assumption based on the 2% decreased rate of growth assumed. This therefore makes the rate of change minimal and the results identical.



	1	2	3	4
Returns				
Returns on average assets		741939%	207439%	78917%
Returns on average equity		-13%	-31%	38%
Returns on capital employed		-13%	-31%	38%



	1	2	3	4	5
Returns					
Returns on average assets	941240%	922416%	903967%	885888%	868170%
Returns on average equity	-11%	-11%	-11%	-11%	-22%
Returns on capital employed	-11%	-11%	-11%	-11%	-22%

From the above graph, it was discovered that being a start-up and a new listing, the return on capital employed in 2016 was as high as 38%. This is consistent with the returns on its average equity. However, in the years after, it fell to -31% in 2017 and in 2018 rose to -13%.

In the five-year projections however, also due to the 2% assumption of growth, the returns on average equity and capital employed would rise further to -11%.

With that, although the company is seen as a loss maker, over the years when it balances out and breakeven, the retunes are expected to grow further and reach a positive state.

Company Valuation

Discounted Cash Flow (DCF)

The company was then valued using the DCF method. Here, the Weighted Average Cost of Capital (WACC) had to be determined first. Hence, the future predicted cash flows were calculated and then discounted to their present value.

WACC COMPUTATION	
Effective tax rate	19.00%
Asset Beta	1.50%
Debt/Equity	10%
Geared beta	1.50%
Risk free rate	2.1%
Debt premium	2.5%
Equity risk premium	10%
Cost of equity	2.25%
Cost of debt (after tax)	2.2%
WACC	2.25%

Valuation	**2019E**	**2020E**	**2021E**	**2022E**	**2023E**
	£'000	£'000	£'000	£'000	£'000
EBIT	-2,713	-2,659	-2,606	-2,554	-2,503
Capital Expenditure	-0.40	-0.39	-0.38	-0.38	-0.37
Changes in WC	2,018	-243	-238	-233	-228
Unleveraged FCF	-696	-2,902	-2,844	-2,787	-2,731
WACC	2.25%				
Discounted cashflows	-696	-2,838	-2,720	-2,607	-2,499
Terminal growth rate	2%				
	-				
Discounted terminal value	1,103,552				
	-				
PV of 2023E enterprise value	1,115,513				
	-				
DCF based equity value	1,115,513				
Number of shares	1,526				
fair value	-731				
Current share price	1.15				
Downside to fair value	-730				

Source: Secondary data collected.

From the valuation carried out above based on the discounted cash flow method, the WACC of the company was calculated as 2.25%. Although this is a rather low percentage, it is accepted as the company is start-up. In arriving at this, the effective tax rate is taken into consideration at 19% due to the country in which it is based. Other consideration which were constant were the asset beta and geared beat at 1.50%. The risk-free rate was determined on the basis of the UK government bond which was at 2.1%.

With that, the DCF for the assumed projection were gotten for 2019 to 2023 and then discounted to its present value. This gave it a terminal value of £1,130,552 and a current fair value of its share at -£731. With the company's current share price at £1.15, there was a downside to the shares to a deficit of £730.

According to this downside, the company is deemed to be one with a large risk appetite. Therefore, investing in it using this method of evaluation and results would be deemed risky.

Dividend Method

The divided method could not be used in this case as the company was a loss maker and was only recently listed. Also, there were no records of dividends being paid to shareholders.

Comparable Trading Analysis

In determining the valuation of this company and if it was wise to invest in, seeing that the FCF method and dividend methods could not be used, the comparable trading analysis method was employed.

The company in this case is compared to similar companies in the same industry. In this case, this is the viable method suitable for making an investment decision in the company as the DCF method yields a negative and no dividend has been paid.

To make comparisons, similar companies also listed on the London Stock Exchange are being used namely United Oil & Gas Plc and Savannah Petroleum Plc.

In comparing, it was discovered that when analysed side-by-side, the financials of the three companies were similar looking at items in their profit and loss statement, balance sheet and cashflow statements.

Firstly, it was discovered that in the profit and loss statements, all three companies were loss makers.

Consolidated Income Statement for the year ended 31 December 2018

	Notes	Year to 31 December 2018 £	Year to 31 December 2017 £
Revenue		-	-
Cost of sales		-	-
Gross profit / (loss)		-	-
Administrative expenses		(810,987)	(593,414)
Operating loss and loss before taxation	2	(810,987)	(593,414)
Taxation	4	-	-
Loss for the financial year attributable to the Company's/ Group's equity shareholders		(810,987)	(593,414)

Source: (United Oil & Gas Plc, 2019)

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Consolidated Statement of Comprehensive Income

for the year ended 31 December 2018

	Note	Year ended 31 December 2018 US$'000	Year ended 31 December 2017 US$'000
Operating expenses		(28,069)	(27,091)
Operating loss	6	(28,069)	(27,091)
Finance income	8	869	283
Finance costs	9	(2,361)	(561)
Fair value adjustment	23	4,953	—
Loss before tax		(24,608)	(27,369)
Tax expense	10	(5)	(13)
Net loss and total comprehensive loss		(24,613)	(27,382)
Total comprehensive loss attributable to:			
Owners of the Group	20	(24,519)	(27,350)
Non-controlling interests	20	(94)	(32)
		(24,613)	(27,382)
Loss per share			
Basic (US$)	11	(0.03)	(0.10)

Source: (Savannah Petroleum PLC, 2019)

Secondly, from there Statements of fivincail postions, there were similarieies found in the Property, plant and equipment sections. All three companies had less PPE and more of other assests which were mainly exploration assets. Also, the only cuurent asset they had were receivables and had no inventory.

Consolidated Statement of Financial Position

as at 31 December 2018

	Note	2018 US$'000	2017 US$'000
Assets			
Non-current assets			
Property, plant and equipment	12	2,431	2,933
Exploration and evaluation assets	13	150,425	111,733
Long-term financial assets	14	88,956	–
Total non-current assets		241,812	114,666
Current assets			
Receivables and prepayments	16	22,672	3,999
Cash and cash equivalents	17	1,750	14,904
Total current assets		24,422	18,903
Total assets		266,234	133,569
Equity and liabilities			
Capital and reserves			
Share capital	18	1,240	520
Share premium	18	–	157,188

Source: (Savannah Petroleum PLC, 2019)

United Oil & Gas plc

Consolidated Balance Sheet as at 31 December 2018

	Notes	2018 £	2017 £
Assets			
Non-current assets			
Intangible assets	7	4,095,715	1,166,169
Property, plant and equipment	8	3,696	2,342
		4,099,411	1,168,511
Current assets			
Trade and other receivables	9	579,237	124,870
Cash and cash equivalents	10	4,035,910	3,034,968
		4,615,147	3,159,838
Total Assets		8,714,558	4,328,349
Equity and liabilities			
Capital and reserves			
Share capital	11	3,456,140	2,321,850
Share premium	11	7,486,946	4,213,944
Share-based payment reserve	12	1,114,636	455,493
Merger reserve	11	(2,048,084)	(2,048,084)

Source: (United Oil & Gas Plc, 2019)

4.6.3 Summary of Findings

The above analysis was carefully carried out in the valuation of Angus Energy Plc. In carrying out the analysis, it was found that the DCF method of valuation resulted in a downside to the fair value of the share price of -£730. The fair value estimated was calculated to be -£731 with the company's current trading price at £1.15 (Yahoo Finance, 2019a). With this, an investment decision cannot be made as the company has a downside.

Furthermore, the dividend method of valuation could not be used. This is as a result of the company being newly listed and no dividend had been paid out as this is not reflected on its financial statements.

Therefore, the comparable trading analysis had to be employed in making an investment decision in the company. This comparison was done using similar companies in the same industry to compare side-by-side the financial statements to see if this was a normal trend for companies in such sector.

With Savannah trading at £12.43 (Yahoo Finance, 2019b) and United trading at £4.0687 (Yahoo Finance, 2019c), there were similarities found in the income statements and statements of financial position. According to this analysis, all companies were determined to be loss makers.

However, with the companies having similar attributes, it is the decision of the investor to choose either to make an investment in the company with its risk profile.

4.7 Conclusion

Following the combination of qualitative and quantitative methods of data analysis employed, the findings above have been presented. The qualitative analysis showed that different risk factors were considered presented itself in different ways depending on the evaluator ranging from investment analyst, fund manager or venture capitalist.

The quantitative analysis however shows a combination of the evaluation methods mentioned. From these, it was shown that there were overlapping and converging areas in making investment decisions as a wide array analysis of the risk appetite of the start-up has to be evaluated to know the risk reduction strategy to be employed.

5 Contributions, Limitations, Recommendations and Implications of Research

5.1 Overview

The aim of this research was to analysis the risks involved in investing in start-ups, how they are evaluated, and the risk reduction strategies used in mitigation of the risks identified in order to make use of this for future investment models to be used when choosing to invest in start-ups.

In undertaking this study, the researcher created a number of interview questions which was carried out speaking to fund managers, investment analysts and venture capitalists. Although five interviews were conducted successfully, one of the respondents provided their answers in written format.

Therefore, this chapter will be reviewing and providing the conclusions they study has achieved with regards to the research objectives. It will also discuss the limitations to the study and the recommendations for further research purposes.

5.2 Implications of Findings for the Research Questions

The major objectives of this research were to know the types of risks faced when investing in start-ups, the evaluation method and the risk reduction strategies used minimise these investment risks. These objectives guided the research in developing the literature and research questions leading to the conceptual framework.

This section of the research examines the implications of the findings discovered during the research to the research questions presented earlier.

Firstly, it was discovered that the risks involved with investing in start-ups were related and closely based off the risks involved in the survival of the start-up itself. The respondents as discovered from the research showed that with a start-up facing the risk of survival due to a number of reasons from regulations, vision and goal, financing, and so on, these risks also formed the basis of its investment risk. Although all the risks identified were significant, regulatory risks, personnel and finance risks were the major investment risks affecting the investments in start-ups.

Secondly, the evaluation methods based on the second research question looked to evaluate the methods used to analyse the risks in start-ups. Form the findings, it can be concluded that a proper evaluation and analysis of the financial statement of the start-up is the one method the respondents agree on. This gives a proper view of where the company stands and where it could be in years to come.

In doing this, three main methods are used in reaching the conclusions of choosing if to invest in a start-up or not. Although a combination of these methods is often used to help in reaching a better decision.

Lastly, it was discovered according to the research with respect to the last research question that the risk reduction strategies were universal across the respondents. The risk reduction methods used were to generally reduce the exposure of investors. The major method used as discovered in the answers given by the respondents is the use of diversification. In addition to that, investing bits and only investing amounts according to the needs of the start-up was a strategy employed to reduce the risk exposure.

In conclusion, for those who could, usually venture capitalists, one way in which the try to minimise the risk in investing in start-ups is to have someone sit on the board of the business and monitoring their interests as well as the activities of the business.

5.3 Limitations of the Research

During the process of the research, the researcher faced some challenges in gathering and analysing data used in the findings of this research.

The first limitation was the pool of respondents, as a limited number of respondents participated in the study. Although a large number of respondents (about 25) were reached out to, the researchers ended up being able to successfully complete five interviews with the sixth respondent choosing to respond to the question in a written format due to a backed-up schedule. Also, some of the respondents did not take part in the study as they felt it was a sensitive area and it would mean sharing trade secrets.

Also, another limitation faced was the understanding of the questions by the respondents. This was evident in the ways in which the questions were answered. Some of the respondents took the questions out of context and had to be pulled back through a proper explanation of the question to align with the objective of the research.

Furthermore, while trying to gather data for the quantitative analysis, the data set out to be used were the returns on investments from previous start-ups and comparing it with the return's ratio in a new start-up. This information was however deemed to be sensitive for those who had it and therefore could not be released.

Finally, time constraints did not allow for much probing questions into the responses given by the respondents. This therefore left some questions unanswered that would have been able to shed more light on the findings of the research.

5.4 Contributions of the Research

This study aims to provide literature on investment risks with a particular reference to start-ups to further add to the findings carried out by Meng (2004) and Steigertahl and Mauer (2018). It will help to inform the risks in the setting up of start-ups and the investment risks inherent to them.

The information in this research will also hopefully help inform the layman who knows nothing about investments and investments risk know what to watch out for when determining investments. This evaluation would help in understanding the views of risk evaluation methods examined by others (Chandra, 2009; Eyraud-Loisel, 2011). It would also help to know the right questions to ask when choosing to invest either in a start-up or non-start-up.

In conclusion, it would hopefully help founders of start-up understand the risks inherent to them when starting a business and what investors look out for when choosing to invest in them. Thereby helping them gather finances in further for expansion.

5.5 Recommendations for Future Research

This study aimed at evaluating the risk reduction strategies used when investing with a focus on start-ups and the risk pertinent to them. This study was not country nor industry specific. Future research can be carried out with a focus on specific countries or industry or a comparison of two countries or industries.

Future research can also choose to look at the emotional impact and roles that emotions play in choosing investments. This aspect of future research can be tied to the proximity and knowledge of businesses as stated by Parwada (2008) This arises as during the research, one of the respondents mentions that emotions also have a role to play in investments.

5.6 Recommendations for Practise

The investment decision is a though enough process even for the more experienced professionals who do it on a daily basis and have to make investment decisions from time to time. It is therefore important to educate the “outside world” to these decision-making processes. This enables them to know the challenges that the decision makers face in making these decisions.

This would also enable the transparency of the process where it also makes known the options available to minimise investment risks even in non-start-ups.

Also, the founders of start-ups need to know that financing is not the only challenge they face when it comes to setting up a start-up. With regulatory risk, political risk and the risk of getting the risk personnel inherent as well.

5.7 Conclusion and Reflection

The research has shown that start-ups go through a lot of risks not just with choosing to invest in them but their survival as well. For the investors however, the research as evaluated the risk areas that should be paid attention to.

Even with these risks, start-ups should be given a chance and invested in as they can come to be big given the right investment and management. With the proper mix of risk reduction strategies, the exposure to risks and losing one’s investment in start-ups can be greatly minimised.

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Appendices

Appendix A. Study Preview

Introduction

My name is Samuel Shokunbi, an MSc student at Griffith College Dublin.

I will be doing a research on investments risk as regards start-ups and would like you to participate in my research. The aim of the study is to find out the risk reduction strategies applied to investments in start-up.

The participation method is through an interview, which as a result of the distance will be **via skype or any means that suits your convenience** for **about 30-45mins. The list of questions has been attached in this email. DO LET ME KNOW THE BEST TIME THAT SUITS YOU FOR THE INTERVIEW.**

As a respondent at no point **during and after the study will your name, firm or any of your personal information be revealed** as I will be following and subject to the **GDPR regulations**. **You will also be sent a transcript of the interview for your approval before I analyse and submit it to my supervisor.**

A consent/ethics form detailing how your information and any data you have supplied would be treated has been attached as well.

At the end of the research, if you choose, I will be happy to share my findings with you to help you in anyway it can.
If you have any questions, please do not hesitate to contact me. I look forward to hearing from you.

Appendix B Respondent 1

SAMUEL: First up, how would you define a start-up in your own business sense. How would you define a start up?

R1: Okay. For me I think a start-up is say how long the company has been listed, say less than a year. Also, I won't use the capital involved to define a start-up because I don't think that would be the best. I think it is in terms of how long the company or the business has been listed. Except you want me to define it in other criteria.

SAMUEL: Okay, what other criteria would you use then?

R1: Apart from the… How long it has been listed. Maybe I could look at how new the business is or how new that line of business is. So, if it is something that hasn't been too long in a particular location, I could call it a start-up. For example, in Nigeria now, we have this bike riding system, where by you book for a bike ride using your phone. So, I would call that a start-up because that is new in Nigeria.

SAMUEL: What would you say is/are the biggest challenges that start-ups tend to face?

R1: Okay. Should I still continue to use the bike riding business as my example or reference point.

SAMUEL: Oh yes, yes you can?

R1: Because I would need to put it in context

Samuel: Oh yes, sure.

R1: so, for that kind of start-up, their biggest challenge should be the Nigerian data system or internet system. For example, how many people would be able to order for that bike, I mean people that use that bike are the low-level people mostly. I mean the common man on the street. How many people would be able to order for that bike using their phones I amen you know what the internet is like in Nigeria. How many people would have that kind of internet enabled phone to order a bike. So, what these guys have come up with is that you don't need to just order it from your phone, if you see any of them passing by, you can also flag them down. And take a ride. That's the way they have been able to take care of that challenge. Apart from that, another challenge again is the case of….

Samuel: Case of what?

R1: A case of trust, trust of the employee. The integrity of the employees. How well can they really trust those guys? I am not really sure what their system is in terms of the bike. They could do hire purchase for the bike, like they give someone the bike okay, take this my bike. This bike is in my name and use it to make money over a period of time after a while, it becomes yours. So, but I don't know what that system is, but a system of trust would manifest when the bike belongs to the company, the bike company. Ad then they give out to individuals to ride. So, it is possible that those guys might have some personal trades which they would benefit from. This attributes to income from all trips that is supposed to go to the company. When they keep this, they are able to go behind or find their way around it and ensure on or two trips at least goes to their pocket. I mean that is a bid challenges, because money, the company loses income losing fund and all of that. So that is another challenge. I am not sure how they can tackle that, because this is an integrity issue. The character issues.

Samuel: So, would you say these challenges that you have identified, would you say they are a risk to the start-up itself or to the particular start-ups or the start-ups in general?

R1: I think the character this is a general issue for start-ups. You are establishing a start-up, you want to be sure that your income is yielding the accurate cashflow, accurate inflow of funds. Nothing is minimising how much you would be getting. I think that character this is a general issue for start-ups. Then maybe another issue could be the data part or the internet part of it. It depends on the type of business you are running. But then, most business rely on internet. When they have to be pushing out online ads you have to make use of the internet like that. But this character thing is a general thing for start-ups. So, if someone could start up a business and the person is still in paid employment, the person putting someone else to manage that business for him or har, you just have to trust that person you are putting into that business

Samuel: Alright then. So, with regards to investments in start-ups, what other risks would you think are involved from the ones you have mentioned.

R1: Hmmm… Okay let me look at it from these angles of political risk and economic risks. Do you have a list of risks or should I just tell you what I have?

Samuel: Yeah, it's a broad area. I am not just looking at start-ups in one area alone. I am looking at it from the manufacturing angel, IT angel from every angle and industry.

R1: Okay, so the political risk is something one needs to be really really careful with. Because if you strut-up a business that is heavily regulated by the govt then that's a big risk. Because if you're not aware the different regulation that guide your business, you might not last in that business for even up to 6 months. Let's say for example, the mobile money business, you heard up to the point where I said the regulatory risk and all of that.

Samuel: Yes, yes

R1: Take for example the mobile money banks, there are certain regulation the CBN would put in place to control their activities. So, if someone wants to start up a mobile money bank which is a fairly new business, I mean that business would have been in Nigeria for I think up to 4-5years I am not exactly sure, but I believe there are regulations that guide it. Because you're are talking about moving money up and down. So, there would surely be regulations that guide it. Someone who wants to stat-up that business should be fully aware of those regulation and all, else, you will just find yourself sinking money into a place where no returns would be gotten.

Apart from the regulatory risk, I think we should also look at maybe the currency risk. That would apply to an importing business, a business that deals with importing items from abroad into the country and things like that. For the kind of business, the currency risk is inherent. One who operates that kind of business has to be able to hedge the currency risk. Say for example, you want to buy an item say from the US in 6 months, you should be able to knowhow to lock don that exchange rate would you would be transacting with before the month when you need to pay back the vendor. That is something importers need to be very careful with.

What else again… Currency risk… I can't think of other one for now, but those are the major items.

Samuel: In terms of these risks that you have identified, would you say they are the defined and measurably or they change, and they can't really measure them?

R1: Hmmm measure them in them of what now?

Samuel: Like would you say in terms of how you can forecast, and can you actually put a number to it or when you think of a certain probability. Can you say you can measure this, and this is certain that this risk would happen, and this is the way which I can measure it in that way? Or would you say dynamic risk that changes from time to time. The wat people behave, the way business behave.

R1: Okay, hmmm. From the first one, the character risk, I would say that one is measurable because there are insurance packages for those kinds of things, so if you put someone in charge of your business who deals with funds, you can insure that person under fidelity insurable up to a particular amount. So, I would say that one is measurable. That is for the character risk.

Then for the currency risk, that one is also measurable if you are able to hedge your investments and foreign currency funding such that you can make an agreement with the CBN saying I want to buy these funds at this rate in 6 months' time and keep money for it now, so that is measurable. But for the regulator risk, I would say that is measurable because there are penalties for breaching some of those regulations. If you know the penalties involved like if you don't submit particular reports at a certain date or the penalties involved if you don't notify the CBN about a change in your board or the penalties involved in a business which is not within the registered scope of your company, those are measurable as there are penalties involved for all of those. So, they are all measurable in one way or another.

Samuel: the next question, with start-ups as a case in point, what is considered as a right investment in a start-up. We are moving to the investments part of it now. In considering start-ups as a case in point, what would you say is the right investment in a start-up?

R1: that is the money aspect, right?

Samuel: it could be financial, it could be non-financial.

R1: hmmmm…. I think for start-ups, one big challenge I am going to mention is… Liquidity. Liquidity is a big challenge. The right investment is very relative. You have to look at what your kind of business is and also look at how long would you expect your income to flow in. so if I start up in January are you expecting say in 6months time would I be having sufficient income to pay bills like salaries, rent, utilities and all of that. So, I think it is very relative. But I believe for you to get the right investment, one need to have a very good forecast of the kind of expenses. But even if you have a very good forecast, income might not flow in that is the thing Apart from the income flowing in, you should have a very big fund where you can always dip your hands into to fund the business. It is very relative.

Samuel: now let us look at some of the considerations. Generally, I think people would consider. Now would you say the location of a start-up and your proximity to them would influence your investment decision?

R1: no. location no.

Samuel: why is that?

R1: for me the world is a global place now, so if I am able to have good communication with wherever the start-up is, I am fine. I mean good communication is key as long as I am able to contact the person running the show or the business.

I don't think location would be an issue for me. But then where I would look at location as an issue is when I look at the kind of business you are going into. Let me see if I can sight an example here. There are Some kind of business that you just have to identify where your potential customers are. So, if you're going to set up that business in a location that is not. A location where your potential customers are not based, then I would have an issue with them being in it. That is the only point where location would come as an issue for me.

Apart from that, if there is good communication, I am all I. either you are in Paris or anywhere.

Samuel: so now, let's look at the founder, like the person who owns the business or running the business, would you say the experience of the founder(s) coming together to set up that business, would that be a factor to influence your investment decision?

R1: yes, it would be. It would be a big issue. The founder must be very experienced.

Samuel: and what kind of experience would you say they should have? Would it be their educational background or just that they have been involved in business?

R1: not necessarily the educational background, I think I would be looking at how long have they done something close to that kind of business, or this is when the business is not really new. I will look at how long they have done that kind of business, have you ever managed a mobile money business in another jurisdiction. For me I think the experience is very key. But then apart from that I could also look at, maybe if the business has been or if I look at the potentials of the business and I see that it looks like the next big thing in town, the experience might not really matter because you can always get someone that would manage the business or that would co-manage the business with the founder. This would be one of my conditions for investment. I need to have someone also on the board with the founder. I can invest in it weather you have experience por not, I would have to put in some conditions like the co-manager.

Samuel: still in relations to the founders, the person founding the business, apart from the experience, the founders experience still sticking with the founders of the business, what other factors would the founder of the start-up have to have before you can consider investing in such a start-up? This time we are looking at would it be how connected they are, their social capital, people relations, leadership style, this has to do with the founders? Apart from their experience?

R1: okay. Apart from experience, for me also, before I begin to invest in a business, I would give myself a particular timeline to pull out of the business where necessary. This is whereby the business is not yielding returns within a particular timeline. But then, I would also look at what else the business would need for it to get to the promise land.

Fine, you have the experience of running a business or similar business but then do you need that social capital? Do we need you to be well connected? Do you really need to have a huge or large network? That's one thing I would look at. Would you need that for this business to progress? Fine even if you don't have the social capital, we can employ someone that would have that social capital. That is why we have influencers on social media. I won't really consider social capital because it is something that can be dealt with.

Leadership style I think that is really key. Leadership is really key. But then it is dicey for me because if I see that the business is something that would yield 150% returns within a short period of time, I won't be willing to consider the leadership skills of the person when I know I am going to get my returns why would I consider leadership skills. I think it is neither here nor there for me.

Samuel: Apart from all those that were listed, what other non-financial factors would you consider, or do you have any other non-financial considerations before you invest in a start-up?

R1: Let me see, I think in some cases I could look at the impact on the society. So, I mean not all investors will be money driven, sometimes it could be a way of supporting or contributing to the society. This might be a factor. If I see the business is being able to help the people even though they will still make money out of it, but then it could support the society. What else, again… I can't really think of any other thing now.

Samuel: Now let us move to the financial drivers of the business. What are the financial drivers and considerations the you would evaluate before investing in a start-up or while investing in a start up? We are looking at the financial drivers. In this we are looking at if it is the way they prepare their financial statements, returns on investments, like you mentioned earlier, you spoke about liquidity that they have to be liquid as well.

Now would you highlight the major or every financial driver that you would consider when investing in a start-up.

R1: I think the ability to generate revenue in such a short period would be a major driver for me. And when I say short period, I mean when I plan on holding investment for up to two years, I should be able to see good returns within the first six months it should be good. Although there are things that would that might make it fall short, once I am able to see that returns then I am pretty sure that the business is good.

The liquidity part of it is where my investing comes in, so I would not call that a driver. Because if I do not invest, where will you get the liquidity from? At least for the first couple of months that liquidity is very key.

I think revenue is the key thing.

Samuel: when people are evaluating the books of a start-up, would you say you would at their books and accounts, would you say the way they prepare their accounts, maybe they fact they use the GAAP, or they use the IFRSs. Would you be looking into their management accounts, their budget stream and things like that?

Are those things you would look deeply in to like using financial ratios, are those things you would look at their analysis and trends? Are those some of the financial things you would look at?

R1: Yes sure. I would do that. It would be a regular thing, it might be monthly, quarterly or bi-monthly. But it would be a very regular thing. Before I would even begin to invest, you would have given me a forecast of 1year, 2-year forecast. I should be able to see how you intend to make this income. The factors you consider the or will contribute to driving your income. And should be able to see that and do a very good analysis of your liquidity. Apart from my funds that I will be outing in, do you have any other place where funds will be gotten from?

Also, on a monthly basis, I mean the business have started, assuming I put in say $1millon, how would it impact on the operations. I need to see where those funds would go into. If you want to get investments, you shouldn't be looking at the recurrent expenditure, you should be looking at the capital aspect of it. Those things that will generate the income. So, the forecast is going to give me all of that details. By the time the funds are now with you, I now have to been looking at your financial statement monthly, at the minimum in the first 6 months. Not even that, it could be a weekly thing when it is generated from your accounting software, let me see hoe this business is fairing in this very short period of time, compared to the budget or the forecast you gave to me at the initial point. Are there factors that are not working the way we expect it to work. Are we on track, are we going to the promise land? If not, what are those thigs we need to do.

That isn’t something I would joke with. The accounting part of it is a very key area of every business. Most people that do not look at it in that light, it tends not to go far. Because you might be seeing money coming in and a lot of money coming in but are you really making profit. Are you really within your target? Are you meeting that targets? That’s the question.

Another way you can find out if you’re meeting that target is by comparing it your budget. That is the best way. And also, with the ratios, the financial ratios.

Samuel: we are almost there, almost there. In evaluating all of these things, would you say there are any differences or similarities in the risk involved compared with companies that are already established and companies that are start-up? Would there be any difference or similarities with companies already established and start-ups? Is it the same risk that every of these business face?

R1: It the same risks, but at different levels. For example, the character is, both companies: start-up and existing will experience the same kind of character risk. For the existing company, they were formerly at start-up stage, they have experienced it and know what to do for thigs to be better. So, they would put in place controls that would prevent or minimise, because you won’t prevent I 100% but control or minimise e issues of theft will be brought to the lowest minimum. With start-up, you can only just assume and hope it doesn’t bring unbearable losses to the company. They don’t have the experience, so they can only assume or forecast. With existing companies, they would know what to do because they might have experienced it. It is not just the case of experiencing it, it is a case of experiencing it in your own companies and the peculiarity, that way you know how well to deal with those issues.

For the regulatory risk, for a start-up it is the same risk they would experience. However, what matters is how it is managed or prevented. Now for a start-up, some of them may not be well funded to be able to employ a compliance or set up a compliance unit. While for the existing company that are well funded and doing very well, they will have the funds to set up a compliance unity whose duty is to always ensue every regulation issued by a regular is complied with. There are no infractions, everything is just as it is expected to be. That is where an existing company would have an edge.

They are the same risks, but the level at which or the level of risk being taken up is different.

Samuel: we are into the last two questions now, which are the major parts of this research. What are the methods used in evaluating these risks that you have identified in start-ups? What methods would you use to evaluate them? Now you did say they were measurable in a sense, so how would you evaluate these risks in start-ups?

While you want to invest in them, how would you evaluate these risks?

R1: what method would I use in evaluating…… I am not exactly sure how to go about this. For the character risk, what method……it would be a case of having a professional, having or engaging a consultant to provide relevant advice on certain fraud and integrity issues.

Samuel: do you use any financial models to go through the risk evaluation or do you have a certain risk evaluation process or risk evaluation due diligence process, take maybe provide their books of accounts, basically go through it in details. Or is there a mathematical process or evaluation process that you. Or do you just give it to an investment analyst to direct?

R1: I understand you. I was just looking at the methods, but I don't have any idea right now. Because I am not a risk or forecast person. I know there are some but right now I can't come up with any.

Samuel: the last question now is, what are the strategies you would use to reduce these risks you have identified. What are the general strategies in terms of hedging, what strategies would you use to monism all these risk that have been identified?

R1: the best way is to engage a consultant, I think that is the best way. It might just be a general consultant first of all, a financial would be able to tell you the areas you need to monitor and be able to list out the risk in the kind of business. And whoever is vast in the line of business would be able to give you the expected risk that would lead to the location where you would be operating from. From there if there are things that he is not okay with, he could always procure the services of someone who might be vast in that area. I think that is the major thing to do, that's the major strategy to adopt. These areas that affect the income being generated.

Also, if you don't want to go the route of getting a consultant that would do that, it could be the route of people who part of a business, probably one would go through the route of getting or setting up units or internal control unit which is very key. This is one unit that would prevent and manage the process and cycle of the business. Look out and be able to identify areas where loop holes would likely come from. That's another strategy to adopt if you don't want to go through the route of a consultant. And that also covers the regulatory part of it, you set up a compliance unit if the business is one that is heavily regulated. Then you need to set up that kind of unit and also a quality control unit, that would, this is another area that is also similar to what the internal control unit would most likely be doing.

For the reporting part of it after you have invested, you should have a very good person who would be able to manage the funds. Someone, like a CFO. They would monitor the funds you have received have to be allocated properly. This ensures the funds are used in the proper manner. Also, someone has to be there to know if the business is generating the right level of income.

It is also getting the right people around you. Majorly that is the best thing to do, getting the right people around you.

Appendix C Respondent 2

Samuel: so, first question is how would you define a start-up?

R2: for me, a start-up is an organisation that just commenced operations in less than 1-5years, I mean within 1-5years.

Samuel: okay, so it is usually for you within 1-5years

R2: yes, yes

Samuel: Okay. What would you say are the biggest challenges that you would say start-ups face?

R2: the biggest challenges to start-ups are in no particular order now are finance, the experience of the founders, the ability of the founders you know to get good people on their team to drive the goal of the organisation.

Yeah, basically those are the major challenges

Samuel: so, would you say these challenges are a risk to the start=up itself?

R2: Of course, they are. They are a risk to the start-up.

Samuel: In what ways are they risks to the start-ups?

R2: number one you need finances to run your organisation, your company whether a start-up or not.

Number two you need good hands to manage your investments, you need good hands to be able to achieve your goals. And if that is lacking, I mean it is a very major risk in terms of sustainability of such business.

Samuel: with regards to investments in start-ups, what other risks are involved apart from the ones you have mentioned, or does these cover it all?

R2: other risks that are involved…. Okay, another risk involved with start-up, do you know how I will put it now, overtrading.

Samuel: Overtrading?

R2: Overtrading basically, yes over trading basically is when you tend to expand by, hmmm faster than you can cope with. Or maybe not overtrading, it’s not overtrading anyways but I mean what I want to say here is another risk is when a start-up grows at a faster rate than the what is it called, than the way the founder have envisaged for them to cope with.

So, the might not be equipped to cope with certain level of growth.

Samuel: Alright then okay.

All of these risks you have mentioned in terms of finance, the experience of the founders, ability to get good hands, the case of overtrading and the forecast of the growth of the business itself with overshooting the way they have forecasted, would you say that this risked are they defined or are they measurable or they are changing and unmeasurable. Are they dynamic risks or are they things that are a fixed and you could tell that this would happen, and this would be how it could be managed?

R2: I think depending on the nature of the business, in terms of measurability I mean it varies. What is applicable to one business in one field might be different from what is applicable in another business in another field.

So, I would say it depends on the kind of business that is being……

Samuel: it would depend on the business that is being looked at for it to be able to determine if these risks are measurable or not.

R2: Yes of course, and at the same time, there are some risks that are universal through all start-ups. For example, finance, I mean the financial risk is there.

Even when you get these finances again, the is risk of the investors not getting their required returns and also losing their investments in such companies as well.

Samuel: Alright. Now in terms of these risks that you have mentioned or identified, are there any differences or/and similarities with the risks involved in investing in start-ups with companies that are non-start-ups, with companies that are already established.

Are these risks the same or are they completely different from each other?

R2: They are not different, they are not different, and I believe they are the same as well.

Finances can also make an existing company go down. When you do not get the right people to run your business either you are a statrt0-up or not, I do not see the company in operation for a very long lime. So, I mean I would say they are similar risks and they are not different.

Samuel: Alright, So, we are moving into the investments part of it now.

So, I know you mentioned earlier that the, you mentioned the experience of the founders, now ever before we move into that, with start-ups as a case in point, what would you consider as the right investment?

What is considered as the right investment?

R2: Are you talking in terms of finances or in the terms of people?

Samuel: generally, generally now. Not focusing on a specific area in generally and cutting across industries.

R2: Okay. The right investment of start-ups again depends. What might be wrong for another start-up might be right for another start-up. I mean of course there would always be common factors among all the start-ups.

So, what I would consider the right investment would be having the right finances, having adequate finances rather, having the right set-up people to grow the start-up and be able to sustain the ideas the start-up is bringing which is very important. I mean you might even, I mentioned experience earlier. You might not even have the experience, but let's say you know maybe how or maybe the business angle especially okay, let me say for tech, for start-ups that are tech related.

It is not necessary to be a tech person for you to have a tech start up. All you need to do is just have the ideas and get people to join you who have the experience when it comes to tech, I mean programming and all to help you develop a product and build your business and sustain it. You just focus on the business part of the whole operations of the business.

Samuel: so, moving on then, would you say the location of a start-up or the proximity to them, would it influence your investment decision?

R2: I would say yes and no

Samuel: Could you please explain?

R2: Now because I would say yes in the sense that you know there is let's say like a "tech village", sorry a start-up village sort of where all start-ups what it is called where new companies are located.

Now if you are in such environment, you have access to a lot of things that would help your business grow. And depending on what is your thing, you don't expect for example using Nigeria as an example.

As a tech person, I do not expect you to come to me and say you have a start-up into tech, and you are located say Ondo state. I mean because I do not think the economy of Ondo state is large enough for them to buy into what you are selling. So, I mean I would not take you as serious when you come to me.

But let us say you have a start-up and is in Ondo state and you are into the processing of cocoa. For example, I would take you seriously because I know cocoa is grown in Ondo state. And I mean for you to do the processing and all, you have to be close to the source of raw materials.

You understand?

Samuel: yes, I do

R2: So yes, that is why I said yes and no> So, it depends on what it is you are doing.

Samuel: still sticking with the investment decisions now, you mentioned earlier about the investment of the founders, would that also be a driver, or a consideration for your investment decision, the experience of the founder or people who are surrounding the business who are making key decisions in the business?

R2: of course, it is very very important. Because how do I expect to get returns. I mean even if I don't get returns on my money, how do I get the capital which I have invested in the start at the barest minimum back?

I mean like I said area, you do not have to be, you personally do not have to have to the experience, but then there should be one or two persons on your team who have the required experience for the start-up to succeed and by so doing, you are confident that yes even though you do not get those returns in the short run, but you know in the nearest future in the long run returns will start coming. So, yes, it is very important because you do not expect to invest in companies that are ran by nonentities.

Samuel: still sticking with the founders of the business, what other factors relating to the founders would you consider before investing?

In this case, we are looking at their social capital, we are looking at their leadership style, we are looking at their management style. Some other thigs that you would consider apart from their experience.

R2: I know most start-ups normally have some sort of advisers or trustees so to say, I mean so I would start-up should have a board of trustees or advisers. Now before I invest in start-ups, I would ask these questions, who are on your board of trustees and advisers

Because you have to depending on those who are on your board would determine if I would take you seriously. I do not expect people who are…. I am looking for the right word here, I mean people who don't have what it takes to even give advice related to the business.

So yeah, that is one of the things I look out for.

Another thing I would look out for I……

Samuel: is that what?

R2: How long they have been in operation. Yes, and the prospects for the business. Do I think the business or start-up will survive in the long run? These are questions I am going to ask before investing in any start-up?

Samuel: Apart from the founders itself, what other non-financial factors would you consider before investing in a start-up?

R2: Non-financial

Samuel: Yes, non- financial factors

R2: Yeah, I get that. I am going to look at the policies surrounding the start-up like, what is the ideal situations for where you are carrying out these operations. What is the government perspective?

The polices in the industry which the start-up is being operated. Because if the polices of the government are not in favour of the start-up, I do not see that start-up succeeding really. Because I am sure you know what I am talking about. You need the government polices to align with what it is you are doing or the solution you are trying to provide.

That is another thing I am going to look at.

Samuel: Now moving to the financial consideration, what are the financial drivers and considers you wound consider in investing in a start-up?

R2: Okay. Hmmm…… I would look at for the financial aspect I would look at the returns on capital employed and returns on equity or investment ROI.

For someone putting out funds or investing in any company, start-ups or not, you would be paratactically interested in the returns on investments. That is one of the financial factors.

I would also look at the margins, I mean different margins the cost to revenue, the percentage of your gross profit to your net profit, percentage of your cost to your net profit. Looking at different margins. Those are other financial factors.

Samuel: Okay still sticking with the financial factors, would you say the way the way they prepare their accounts would influence this.

For example, if a company is using the GAAP or IFRS.

R2: of course, it is very important. I mean regardless of whether start-up or not, you should have complete set of accounts. Audited accounts, because these are the things investors make judgement, I mean base their judgement on rather.

Samuel: We are actually almost done, these are the last two questions

I evaluating these risks you have identified earlier in start-ups and in relation to financial and non-financial considerations, what methods are used to evaluate these risks that you have identified and some of these considerations basically?

R2: The methods, I mean basically, I am trying to look at the best way to answer the question because when it comes to methodology, I mean I would say observation is one of the ways. Observing the trends and activities.

Let me just put it this way, you can use the quantitative and qualitative methods. I think they go side by side.

Samuel: So, are there any particle qualitative and quantitative methods?

R2: I mean when it comes to the qualitative that is where the observation comes in. for the quantitative methods that is where you analyse the risks from the financial point of view.

Samuel: The last question now, what are the strategies used to minimise these risks you have identified in investing in start-ups?

What are the methods used to minimise these risks to the barest minimum?

R2: Hmmmm…… To reduce the risks in start-ups I think basically you can impose depending on how much it is someone is investing if it is quite significant, you can propose to have someone on ground that will help your interest in the business to ensure things are done properly and ensure nothing is done behind you. Because you as an investor you might not be readily available to be on ground to monitor or see how things are going. This is one way to minimise risk.

Samuel: so, any other any, apart from having someone on ground?

R2: apart from that, basically just reduce your exposer to the business. Let's say for comes, they say they need $1million of course you have to ask how these funds will be use. Of course, they would not need these $1millor all at once. So, you would be reducing the money in bit depending on what point it is that that need these funds, so you do not just release these funds all at once.

Appendix D Respondent 3

Samuel: so first up, how would you define a start-up, in your opinion, how would you define a start-up?

R3: Alright, I believe a start-up can be said to be a successfully incubated business idea. That's my own definition, this is if you have got an idea and like I need to put this together, you've seen a prospect, a vision and you are able to incubate on it and it becomes a business.

As a matter of fact, most great businesses today started as an idea in the mind of someone. So, you can say a successfully incubated business idea. And also say that a start-up is usually initiated by an entrepreneur. An entrepreneur who believes in his vison and ability to drive his vision towards a path of growth. That is what I believe a start-up is.

Samuel: So, in terms of the years of being in existence, how long would you say or what number of years of existence does a start-up have to be in before you can call it a start-up?

R3: well, I think a start-up can, a company can be a start-up as soon as it starts business, even if it is in its first year. As soon as you start, you're a start-up

Samuel: but then, what I mean is in teams of… like there are companies would you say a company that is above 4 or 5 years would you call it a start up? Or as long as they go past their first year, you're no longer a start-up?

Is there like a minimum number of years that they have to be in existence to still refer to them as a start up?

R3: well, I don't think there is a generally acceptable principle for classification of a start-up. Depending on the visionier's ability to drive the business within maybe 2years. I mean a company can start and after 2 years you're still struggling to put things in order, we can on that basis say that you're still a start-up.

But even after two years, you're able to stabilise and able to find your feet in the market, you've got your customer base and we say you're not a start-up.

It will not be very clear to provide a path on how to classify a start-up based on the number of years.

Even after 2 years, yes, you may still be a start-up.

Samuel: So, what are the biggest challenges start-ups face?

R3: Well, every business on the face of the earth today, even the established companies, the very first on everyone's list will definitely be finance. Access to finance, which is a major issue like we have currently in Nigerian now, the Central bank of Nigeria-CBN is coming up with policies to see that the banks give loans to the real sector, and people in the real sector would basically are these start-ups entrepreneurs, because access to loans is for start-up business is very difficult especially in this part of the world. So, the CBN currently is coming up with programmes to see that the banks lend to entrepreneurs. And there are various intervention programmes too, to see that finance is made available because this is a major issue.

Number two is…. You see many people today, you just see say they have an idea and want to start a business, and do not have the prerequisite skills and knowledge. So, the knowledge gap would also be a challenge. And at the end of the day, you run a business and the statistics that most business, most entrepreneurs, most start-up would likely end up or fold up after their first 2-3 years of operations. And when you look at what caused it, it is the lack of knowledge.

Some of them do not have good accounting systems that's the third one. You see somebody, you have put 500,000 to start up a business and you're making or into products or selling products. At the end of the day, you cannot separate your revenue from your income. So, as the money is coming in, your spending before you know it, you have eaten into your capital. So, if there is no good accounting system in place, it would affect the performance of the start-up.

Another issue would be the issue of competition. There are people or there is nothing you want to do today, there is no business that you want to do today that there is probably someone doing already or is not in another person's mind. So, the problem of competition. The challenge of competition. And pricing, competition also comes from pricing. There are companies that are already in the business and are doing what you want to do at a particular price. And you that is a start-up going into that.

As a matter of fact, start-up and entrepreneurship go hand in hand. As a matter of fact, you as a person starting up and for you to breakeven not even talk of profit, you might not be able to price your goods or your product at the same price as existing company is doing, so that becomes a problem for you. And you would not want to price yourself above the competitive market.

Those are the challenges.

Another point I would also like to bring out here in these challenges is the challenge is the challenge of people. Are you with me?

Samuel: Yes, I am

R3: You need the right people to drive your vision, if not, the vision will die. If you get the wrong people in your team, then you are in for disaster. So, the challenge of getting people and to get people, you need people that believe in your dream. So, how then are you able to be convince people even to go along with what you want to do is another challenge.

Samuel: would you say these challenges, are they a risk to the start-up itself?

R3: Yeah…… we can say it is a risk. These challenges are risky. From my last comment, talking about people. If you do not get the right people into your team, it is just a matter of time before the whole thing you are building will crumble. So, it in that case, it poses a risk to you not getting the right people.

And also, price, like we said the challenge if price can also pose a risk if you under-price to the point that you cannot break even, sooner or later, you will be out of the market. Which is why you see many start-ups struggle. And if you do not do your research very well and you price above what is currently obtainable in the market, then you find people not patronising you.

So, they are really risky to the business.

Samuel: So, now with these, would you say with regards to investments to start-up and with regards to investing in them, are there any other risks involved when you want to invest in a start-up?

R3: Yes, there is also the risk of losing your capital, the money you have put into the business. By the time the business folds up and you need to pay all the money you have put into the business will be gone and you also a risk of inflation.

Interest rates like I mean the market if for example as a start-up, you have gotten a loan to finance the business, and along the line you are servicing the loan at a particular rate say 8% and along the line there is increasing in the interest rate say maybe to 14% then your cost of capital will escalate. That's an additional 6%. So, that would translate into your cost then it will drop down your profit. So, that could also affect performance.

That's that about that.

Samuel: Alright then. Now in terms of all these risks that you have mentioned, would you say these risks, are they measurable and are they defined like ae they certain risk and measurable. Or would you say they are changing risks that you cannot really measure?

R3: There are some of these risks that are define. Whether you like it or not, they will always happen. And these are the risk we refer to as systematic risks. They are inherent in the market. Are you with me?

Samuel: Yes, I am with you.

R3: So, I said these risks, some of them are defined and some of them are not defined. Being that they are inherent in the market. Whether you like it or not, they are always part of the market and these are what we refer to systematic risk in business and we have the unsystematic risk, these are the ones that are not measurable, I mean unmeasurable.

So, for example we talk about market volatility, market volatility for instance they are inherent in the market, hence whether you like it or not, the market will always react. There will always be changes in prices subject to the laws of demand and supply.

And we have government policies, not forgetting about that. The government van come tomorrow and put a ban on importation or even the product you are into, the government might say they want to increase traffic or tax. That is seriously going to affect you. So, all those are there. They are inherent, and you should expect them. Also, interest rates and the likes, they are part of that. They are not within my control.

The other unsystematic risk are the ones that are within my control. If I have good management in place for the start-up, my business is going to be or will walk very far. I put a structure in place. This person is responsible for this aspect, someone else is responsible for procurement, someone is responsible for accounting and someone is responsible for the whole management, that is structure. With that, I can be able to account for everything I am doing and mitigate against my risks. I am able to know the risks that I am exposed to be able to mitigate against it.

Also, proper planning, if there is proper planning in place, it can also help with the risk.

Samuel: Now, all these risks that we have mentioned, are there any difference or similarities with the risks involved compared with companies that are non-start-ups?

R3: there are similarities, being that both are subjected to systematic risk. Both companies that are established and those that are start-ups they are all operation with the same market. Whether you like it or not, when government makes policies, it is going to affect both established companies and start-ups. When market volatility sets in, it is going to affect them. So, they are both exposed to the same socio-economic system.

Their differences being that for start-up, they may not have good management structure, it might be a case of you only running it or a few of your friend. There may not be good management structure, while an established company will have a good management structure.

Another thing is processes. They may not have good process and controls to be able to mitigate against the risks of fraud and other issue that may arise in the business. All these are already in an established company. Whereas in a start-up, you have to start building up trust in the customers you are selling to. But in an established company, you already have a clientele, you clients already know what you're doing, and you have the goodwill.

Samuel: Moving into the start-up itself now, with start-ups as a case in point, what is considered as the right investment in a start-up?

R3: I did not get that

Samuel: With start-ups as a case in point what would you consider as the right investment in a start-up when you look at a start-up and you say that would be a good investment or something to invest in. what basically defines something good to invest in a business. What makes a start-up something good to invest in?

R3: I think a right investment should at least be one that is scalable. The ability the improve the volume of sales, ability to improve the profit margin while sales increase.

If I want to put my money in a business, you must be able to prove to me that you will be profitable, and your sales should continue increasing. That is what constitutes a good investment. A good return.

Samuel: Okay. So, now looking at the start-up itself, we want to invest in it and wanting to make an investment decision, would you say the proximity or your location to the start-up would it influence your investment decision?

Would the location of the start-up and your proximity to the would it influence your investment decision?

R3: Hmmmm…… No, it would not. Because it is a matter of agreement. Wherever the person might be. I might want to invest in euro bonds or invest in the London stock exchange, I would not have to travel to London before I do that. It is a matter of getting the documents in place and signed. It would not be an issue.

Samuel: Looking at the start-up itself. Looking at the management aspect of a start-up. Would you say the experience of the founder or founders, would that drive your investment?

R3: The experience would be a plus but would not be the final nor the ultimate basis for the decision to be made. You might have a good goal, you might have a good prospect without having an experience. As a matter of fact, people that start…… the ventures we see today, many of them are experiences that nobody that you have not done before and they do good.

You may not have the experience but as long as I see your passion and I see your ability to drive the business. Experience would just be a plus. If for example, I may want to invest say 100 million in a business, but when I look at, the founder and see there is no experience, I mean the experience only gives me a kind of level of comfort that can make me increase what I want to do. But with that I might say let me put 80 million, but it would not stop me from investing.

Samuel: Also, looking at the founder, still sticking with the founder, what other factors relating to the founder of a start-up would you consider before investing.

R3: Well for that, I will definitely consider what his passion and conviction. If you come to me and bring your proposal and I see that you don't even have enough passion to drive the business, and I am not convinced. Even you that you want to me to invest, you are not convinced in what you are doing, it is a factor I would have to consider, and I may also have to consider the level of work that you have done so far. And your seriousness, you might be coming to come and invest and you yourself have not out a dime into your business. There is what is called equity contribution. This is what are you yourself bringing into the business, I might have to consider that.

Samuel: As a quick follow up to that, in terms of the founders' social capital, would that be an influencing decision on the business?

R3: Yes, definitely yes. Because, I will be looking at if you start the business now, I will be looking at who are your clients? Who is in your clientele and you would able to tell me that I have these people and maybe these people are my friends? That could be of your reference or referee. Your social capital could be your referee that is the relationship that you have made so far. And that is why even when you want to get a job, they as for your referee. That is a way of getting to know your social capital.

Is that what you mean by social capital?

Samuel: social capital could basically diverge into every aspect of a person's life. It could be the person's contacts, the person's clients, whoever the person has around them.

R3: Exactly.

Samuel: To end up on that, what other non-financial factors would you consider before investing in a start-up?

R3: I would consider the skills and competence. The leadership acumen. Because to be a business person, you must have leadership trait or ability to influence others get people to do things. Ability to motivate people and convince people to work for you.

And I will also have to consider your integrity. Look at your history over time. I might have to do a background check. Is this person credible or is he a person of integrity?

Samuel: Moving to the financial drivers and consideration, what were the financial drivers and consideration you look at in investing in a start-up?

R3: I will have to look at, I don't know if that would be under your initial question of non-financial or that as a financial driver – which a feasibility study is. I would have to consider the feasibility study that has been done. Is this business feasible does it make sense? Financially is it saying it will get 50million today and in one moth is going to make it 80million. Does it make sense? How does he want to make that happen in the next one month? I would consider that.

If you say you need 50 million, what would it be used for? I would have to look at that too. I would look at the business proposal.

I would look at the cashflow projections. These are the financial aspects of it now. I would need to look at the cashflow projections and I would also have to look at the profitability. That is very important. Is this business profitable? What am I going to get out of this business?

And I might also have to look at the scalability. That is does it have the ability to increase its revenue overtime. Not the one that would just grow today and after one year you're out of the market.

Then I may also have to consider if it a going concern. That is ability to continue to perpetuity. It is something that would be around for a short while or as a seasonal period and would cash out or is it going to the future. Then I would begin to look at how to expect my returns.

Samuel: In relation to the financial aspect, would you say the way the accounting or the financial statements are produced, would take also be an influence, say for example the company decide to use the GAAP or the IFRS. Would that influence it?

Or the way they prepare their accounts and the frequency of the preparation, would that matter, or would that be a factor to influencing your decision?

R3: Yes, definitely. Because the major difference between the GAAP and the IFRS is the fact that the IFRS require that there must be a full disclosure of your business activity. So, you are expected to disclose, full disclosure than what the GAAP. Even the GAAP, the disclosure we have in the GAAP is not as much as it is in IFRS.

The IFRS helps me to see the true position of the business. So, if I want to invest in your company, one of the things you must provide is your financial statements. This is about the first thing I am going to ask for. I mean if a start-up that has been in operation for 1 or 2 years has been established earlier on and you are asking for more investment now, that means you have financial statements for at least one year. So, I wold have to look at your financials and see what you are doing.

So that, having a good accounting system in place would also influence my investment decision.

Samuel: Now, we are almost at the last two questions, these are the last two questions.

Firstly, what are the methods you use in evaluating these risks that you have identified in these start-ups? What methods would you use to evaluate them? You want to quantify them, like you did mention earlier, you said some of them were measurable and some were not measurable.

For the ones that are measurable how do you evaluate them, how do you break them down to identify and basically weigh them up against the investment itself?

R3: what we can do is to demand for accountability. You hold the managers accountable. So, it is when you are being accountable then you are careful of how……

At the end of the year, you're expected to give accounts of your income and expenditure, you would be mindful of how you use the funds that have been committed into your hands.

So, another way is through as an investor, you have to take interest in the day-to-day running of the business. You don't just put your money and go to sleep and expect one day you expect to see the profits. You have to take interest in what the managers are doing. By that, they are being careful.

And that is why we have auditors, at the end of the year, you bring in appointed auditors by the board or directors. At the end of the year you, look at what that have done and with that you're able to see if they have done the right thing.

Samuel: on a final note, now of all these risk that we have mentioned and the evaluation process, the major thing this dissertation is looking at is how to minimise them

What are the strategies you use to minimise the risks the you have identified in these start-ups?

R3: we can say, it is basically like this is still almost what I have mentioned earlier that on evaluating the risk and the strategies to minimise the risk is simply one of it is to be part of the business.

And we can also make sure that there is training and development for the people that are running the business. So, by that, they know what they are expected to do. This is a way we can minimise against these risks.

Another way I as an investor can minimise the risk is through diversification, that is not putting the while of my eggs in one basket. With that in case anything goes wrong.

And another thing we could do, there is what we call pilot testing. That is, if you have 100 million you want to invest, why not start small and see if that project is a reliable one. Because if you start small, you lose small, but if you start big, you lose big. So, start small so that you can minimise the risk.

Appendix E Respondent 4

Samuel: Firstly, how would you define a start-up?

R4: How would I define a start-up? A start-up is a new business that generally has a small amount of capital and an idea. And usually a very small team like less than 5. Usually its maybe 2,3 or 4 people at most.

Samuel: In terms of how long it has existed for, for how long would you say a company need to exist before you can say it is still a start-up?

R4: I would say any company that is less than 1year old can be defined as a start-up. After 1year, it is very likely it is no longer a start-up

Samuel: With relations to that, what are the biggest challenges start-ups face?

R4: The first one is vision and goal. So, you have a group of people with an idea, but sometimes they don't have a fleshed-out vision and goal to go with that idea. An example would be if somebody's idea was to sell a new type cell phone case and that idea was unique, but they didn't know who they were going to sell that case to, thy are lacking in their vision and goal for their idea. So, that's one of the first and foremost important challenge.

The second one I would say is generally capital. You have to create a business that fits within the capital you can amass. If you have an idea that involves mining for diamonds generally you don't have the capital to enter into that idea as t requires hundreds of millions of dollars.

Samuel: In relation to these challenges, would you say these challenges are risks to the start-ups?

R4: There are definitely risks and challenges to a start-up. There are dozens and dozens and dozens of troubles. With a start-up, one of the biggest risks is capital loss. If you have two young people starting up a business, that time and energy they are using to start-up that business they could have been spending in working in whatever their respective field. So, they are losing that experience and they are losing any asset or any salary or financial gain that they could have had working for those companies. And on top of that they risk bankruptcy which is very very expensive.

The risk generally associated with start-ups are very high. When it comes to investing though, it is even harder because it feels like gambling and a lot is not known about the people staring up. Generally, when you do a start-up and you are investing, on the investment side, you don't know the people that are starting up or you don't know them very well. So, you are taking a very large risk. And the downside risk of that side is that a 100% of the capital you invested could just disappear. One of the current ones I see that is on a smaller scale for start-ups that is more grand scheming is something like "kick-starter" which funds start-ups with smaller funds. So, it reduces the risk on the investment on the investor side, but there is no capital gain. So, you completely eliminate the capital gain because the investors on kick-starters on those types of start-ups are not so much investors as so much consumers. But that's just an example with a new form of start-up and the risk are in a different field entirely.

Samuel: So, with regards to investments, are there any other risks involved apart from the ones you have mentioned?

R4: it depends on how the start-up is established. If the star-up is established and you become a partnership, you risk bankruptcy of yourself as well. It depends entirely on the structure of the start-up. If the start-up is a corporation, you're simply investing in a corporation. The biggest loss you can incur is financial loss.

The other loss that could be incurred is social loss. Where if it seems that the company is considered socially unethical or socially or morally wrong and it is found that you are investing in that company, you might risk your own social status in many ways. A great example happens to be in the news right now called Facebook. Where people probably would not invest too much money in Mark Zuckerberg after what has been going on whether or not his idea is sound or not, social status has been limited or cracked, I guess. I don't know the proper terminology there, I am sorry, but essentially, you risk that side as well, being affiliated with a start-up.

Samuel: With regards to that, would you say there are any differences or similarities involved in the risks when compared with companies that are non-start-ups?

R4: There are definitely similarities. Start-ups are like a type of trend, like this small business start-up things. There are other types of small business that begin and some of them are created by people that are established, like much more established. A little dated reference, but there is the same as entrepreneur Richard Branson, made virgin mobile and everything, I would not say the business he creates are considered start-ups. Because the capital is already there, he already the capital, he is not looking for capital the same as what is more along the line of new corporations if you want to call them that is those don't have the similar risks, the investors typically take on much less risks because they know the people starting up the business and they know the people starting the business have done more due diligence.

Whereas the start-up has significantly more financial risk for loss and more risk on social curtains as well.

Samuel: Alright. So, with all of these risks that we mentioned, and the challenges has been identified, would we say that these risks are defined, and they are measurable? Or are they changing, and we can't really measure them?

R4: Everything is measurable if you get the right people involved. If we can measure statistics for an entire country, the likelihood is that we can measure that risk.

And you can measure in two different ways that I can think of from the top of my head. One of them is quite simple, it is just figuring out what you think the projected value of a company is. So, let's say you have a start-up and the start-up currently earns no money, they have an idea and you believe that idea is going to be worth $200 million in 10years from now (the number is arbitrary at this time). The $200 million idea that they have is worth that much in 10years. So, if you were to invest in the stock market, you would expect to earn 5 or 6% over those 10years. So, if you had $100,000, reasonably over 10years to have $200,000 you would expect a double return. Considering that we are risking losing that money 100% without even ever having a chance of pulling it out, we are taking on multitude more risk. So, to calculate that risk, you do two things. You first figure out how much you value your money and how much you value that investment. If that investment has no value to you like if it is $20 0r $30, it is easy for you to invest it because you won't feel that loss. And that becomes a matter of scale because very wealthy people are more able to afford to take on that sore o risk. But that risk is one part of a calculation.

So, what is the chance of me losing a 100% of my funds? If that chance is anything above zero, then that needs to be calculated into the calculations or into the formula of what you think or what you reasonable expect as the rate of return. And when you include from there, you include other reasonable types of returns. For example, if you are expecting to make 5-7% in stock market marginal risk like maybe 2% chance to lose everything, whereas with the start-up it is a 40%, then it is a magnitude of 20 times. So, if you can expect to earn double the money in 10 years in the stock market and you expect to do 20times more risk in a new venture then you'd expect to earn 20times more investment returns. So, that same funds if you had that same $100,000 you would expect it to turn into that $200 million idea because you are taking on 20times more risk. That is a pretty rough calculation.

Samuel: So, now with start-ups as a case a case in point, what would be considered as the right investment?

R4: That's entirely, hmmm I don't want to use the word arbitrary, but the right investment is an unfair…. That's a blanket term because there is no sure thing is the right investment. For every single person is going to have a different idea of what the right investment is. It has to be the right investment for you. So, if I go from a completely personal side, if I was to invest in a start-up or again, I would likely find an industry that I am extremely familiar with already. And from being familiar with the industry, I would have to have a reasonably expectation that they would have returns.

I am not looking for extremely high returns like 20 times return, but I am looking for a reasonable return that is above and beyond what I reasonably expect from sat for instance the stock market. And on an aggressive portfolio over the last 40 years in the stock market if averaged slightly above 7% so what I would be expecting is something along the lines of 10 – 15 maybe even 20% on returns year over year. And that's averaged. There is going to be years where I earn more and years when I earn less, but essentially year over year for 10years I would like 10-15% would be a good calculation on that side.

Samuel: Now, moving on would you say the location of a start-up and your proximity to them, would that influence your investment decision?

R4: In reality yes, in my mind no. My brain says a company in California I just easily invest in as a company in Canada. The problem is just because I say that doesn't mean I can handle that right? Like I do not know enough about the US laws to say, to comfortably say that. So, that is where the hiccup basically arises.

If I have an idea in mind but it is not the case, the reality is more along the lines of proximity, physical distance. Like a start-up……… what's the word for it……… Like a collective thinking group………

Samuel: Like think tanks?

R4: Yeah, think tanks and other forms of like community knowledge that those you can actually meet and greet a lot of people from those. And learn about start-ups in other emerging industries from those groups and likely if I would do this, I would start Toronto because it is the nearest to me and it's only like an hour away. As a result, I said proximity doesn't matter but likely proximity would matter simply because that is accessible to me.

Intellectually, proximity should not matter but emotionally proximity matters.

Samuel: so, proximity is more of an emotional decision as opposed to it being a business decision?

R4: yes. A lot of the problems of investments comes from a division between emotional side and the intellectual side, because your emotions would say one thing and your everything else would be screaming in another direction essentially.

Samuel: So, now would you say, is the experience of the founder(s) a driver in your investment decision as well?

R4: Yes, that's what I was talking about previously that it is important for them to have experience in the industry they are about to jump into. Because if they don’t have experience in the industry they are going into, it is going to be very difficult.

Samuel: So that definitely is a driver for the investment decision, the experience of the founders.

R4: Yes, for me yes. Personally, yes, a hundred percent

Samuel: So, what other factors relating to the founder of a start-up would you consider before investing apart from the experience?

Jaime: My knowledge in that industry and my experience in that industry would be a factor. And their own personal sort of capital. How much money have they invested into this idea?

If they have invested no fund of their own and they expect others to do that, then they are in for a world of pain.

Samuel: Alright, I think that then leads us into the next question which basically is what other non-financial looking at completely non-financial factor, what other non-financial factors would you consider before investing in a start-up?

R4: Fit, emotional fit and biases. Essentially, just because somebody has a great idea doesn’t mean that they have the drive or the wherewith hold to get that idea to the location it need to be at. So, it has to be a fit because the person that has the idea has to be willing and able to get the idea to a location it needs to be. That’s a major factor.

And the other one is my own personal connection. It would be very difficult for me to invest a large sum of money into a company if I wasn’t comfortable with the person I was talking to, because if you’re not comfortable, it is much more difficult to communicate with them. And then you feel like you could be losing connection to your own finances.

Samuel: Now, I guess this would be one of the biggest points in the investment side of it. What are the financial drivers and consideration when you’re investing in a start-up? What are the money matters?

R4: When I was talking about before about returns, investment returns, reasonable investment returns for the risk taken. There is a famous calculation called the Monte Carlo analysis.

The monte Carlo analysis talks about how risk works and sometimes taking on more risks doesn’t necessarily mean more returns. But the idea is that the more risks you take on, the more returns you expect to receive for having that risk. The problem is as you reach that peak risk, so, a hundred percent risk, you essentially reach a point where you don’t gain anything, and the risk is the same or gross. and that is where it becomes a different adventure, a different calculator. Essentially, the, it’s like the financial factor, to get idea is to keep it within proper comfortable level for yourself for risk. If you’re not comfortable losing a hundred person, then do not invest. If you think you have a 10% chance of keeping everything or keeping some of your finances or the fluctuations needs to match your comfort levels. That is essentially what it is. And what are you comfortable gaining or losing in the average year, like what are your fluctuations.

Because like from my own personal side, we look at customers’ needs, and we discuss to them about portfolio for instance for stock market investing. We talk to them about the different profiles and what you would be comfortable gaining or losing in the cause of the year. Everybody always focuses on the gaining part. The reason I am focusing on the losing part is that the reality is you’re going to lose money occasionally if not eventually. And you need to know what you’re okay with losing. If you have assets and you are okay with a 50% variation that is a pretty large margin. For $100,000 that could be anywhere from $50,000 to $150,000. So, it is a very large variation in the cause of a single year. And if you are comfortable with those variations then you have taken on more risk. As long as you are okay with the risk involved with possibly gaining or losing, then you’re in the right investment.

If you’re investing in a start-up and you’re are not comfortable with the wild swings that can happen with those start-ups you, I would not recommend investing in that start-up.

That was a little random, I apologise.

Samuel: No worries, that actually helps. With relation to the finances of a start-up itself, would you say the accounting system, the way they prepare their financial statement say for example we know that………

R4: Although, I understand the financial system a little bit, I would err on the side of caution. I am comfortable enough reading financial statements so that is not one thing I would focus on. I know enough about it enough to know when people are using created up accounting. At the same time, I wouldn't be uncomfortable as long as when the company is private, they would have to file their statement however they determine them worthwhile, but it becomes complicated when you have this situation like that you end up………

I don't like accounting and I don't trust magic accounting because that is where you reach very large corporation having great ideas about accounting and then they end up like Enron did, where they were recording assets that hadn't even been created yet. So, they were recording an asset as created to increase the value of the corporation to give out money to shareholders to increase the value of their corporation to use more money to build more assets. So, they were building an asset that was like an oil rig for instance. An oil rig that takes 3years to build, they would say it was completed in the first year and effectively in the second or third year, it was already producing. Whereas, it was not producing but the way that it was done on the accounting side was essentially just switching the future asset's into present value so we know that in three years we know that this thing is going to produce 10,000 barrels of oil at $5 a barrel or $50 or whatever it is worth but compare that down at the current interest rate, this is what it would be like today. So, lets record that as today so we can increase the value of our company today and show assets in the end that we have created, and it creates a very dangerous snowball that will eventually catch up to up, which it did.

Samuel: And now, as a follow up to that, in terms of the financial statement, would you say the kind of way they prepare the accounts say for example we know that in the US for example or for now we know that the most common account preparation methods are the GAAP and IFRS. Would you say that influences the way or the method the start-up uses would influence an investment decision?

R4: it should. If the company is like a small start-up, they don't typically have to follow things. GAAP and IFRS are like not a big deal at the beginning for start-ups. Start-ups are not typically not going to be marketing themselves on the stock market so, they don't need to follow GAAP. That is for domestic public companies, GAAP. For a start-up, that doesn't matter. Now if their end goal is to become publicly listed, then the earlier they start focusing on the more dedicated they appear. Now, IFRS which is the…… I can't remember what it stands for………

Samuel: That's the International Financial Reporting Standards

R4: Yeah, that's what that's what it is. It essentially trying to set up a baseline on a recommendation on how companies should follow things. If a company is following either of those, all it would really show, it would better improve their reliability and their consumer faith and their investor faith. That the companies are aware of those accounting principles and knows how to follow them so that it won't be a financial hurdle in the future. So, as long as if they can tackle it early, it is helpful, but it is not the bill to handle by any means.

Samuel: So, I know earlier, you mentioned the monte Carlo simulation, of accessing risk, now what method would you as are used in evaluating identified in these start-ups?

R4: I can throw you some ways and some calculations. I am biased, I would admit it full on right now. My knowledge comes from school like am education thing and that's what I am going to work on. There are people out there that aren't me that they'd value people and companies based on other factors as well. So, for me you value those companies in like a relative term.

Let's say you have a small tech start-up, everybody in their mind would think that small tech start-up is the next Apple or google. That is how that works. That is how people's brain works. But instead of thinking about it like that, you need to think about it like a true comparable. For instance, let's say we are going to go back to the iPhone case, we have to find a company they produced a case for phones in the past and how they manage that process and a public listed company and then go back to their beginning and see how they grew and compare the start-up that you're looking into with that publicly listed company. So, if that publicly listed company grew by 10 times over 10 years then you can reasonably assume if this company is going to be in a similar field if it is going to grow in a similar way. And then you put a personal bias on it. So instead of multiplying by factor of like 10 by 1 gets 10, you would say well this company doesn't have this, but it has this, so I would say it might do like 20% better than that other one so you multiply that factor by 1.2. So, if you think it is going to do 10 times then this other one weather, you'd say others might do 12 times better then you'd calculate your risk comfort based of on that return.

This is the cerebral side of it, but in the end, the emotional side also plays a major factor and them it just becomes completely irrelevant because your emotions end up winning an you end up making decisions based off those.

Samuel: this would be the last question and it is one of the most important part of it.

What are the strategies used to minimise these risks in general that we have identified over time, what strategies are used to minimise the risk in investing in these start-ups?

R4: Diversification is number one. Instead of investing all of your funds in a single start-up, you diversify through multiple start-ups. And then your chance of successes becomes higher simply by the fact of numbers. Instead of putting all your eggs in one basket as the term is. That's one. There are lots of anachronisms like don't bet the farm and everything else.

The other one is instead not just diversification but only invest funds that you can afford to invest. Do not invest your life savings into a start-up. Instead you can invest a portion of it yes, but not all of it, because the risk involved out weights the gains.

Additionally, on top of that, doing your due diligence, knowing about the people more and knowing about the business and the industry they are in if it is an industry you are comfortable with, will reduce or mitigate some of the risks as well. Because then you would be more aware to the decision and the idea exists or works and how to go forward with it in the future.

Those are the two biggest factors I would say, your own due diligence and diversification which speaks to the similar way stock markets work. The difference, the major difference here is not all of the information is publicly available. Whereas in the stock market everything is available with enough searching. In most cases, you need to go to essentially get the person that's asking for the capital to provide you with some prospectus, like what would their investment goals are and etc. If their plan is to do a small start-up business, they need to show you that they can do that, and they have a road map to get to the goals that you both agree upon.

Samuel: Thank you so very much.

Appendix F Respondent 5

Samuel: We can begin, firstly, how would you define a start-up?

R5: I will call a start-up a company that…… it's a business let me not say a company. It is a business idea that is birthed with a vision. What I am trying to say is that that business may have commenced or my have not commenced. You get my point. I have the vision of somethings and I can, I may commence on that project or on that business and I may have an idea and just have it in the pipeline and not commence on that business, because I feel I need to put all the regulations in place and together.

Now regulations may be one thing that would make a start-up not kick off. So, the business can be existing, but it is not operational, because the person is trying to cover up every other aspect of regulation. For example, if you look at the country we are in right now, the Ireland regulatory system for the financial sector, we have from different objectives of regulation, I think about four of them, one of it is that the start-up company must have all things that has to do with compliance in place for that financial service firm to be in operation. For example, and existing business can be a fintech, a financial technology company, but because they have not met all the compliances, that is a start-up that is an idea birthed but is not operational. So, it is not operational because of regulatory issue. It has to meet all the regulatory issue before it can be existing.

So, I have given you two aspects of a start-up; existing and operational and existing and non-operational.

Samuel: so, with relations to that, would we say for start-ups that are operational, is there a certain number of years that they have to be in existence before we can say yes, this business is still a start-up?

R5: it depends on the model that the business is running. If the business is coming from the capital raising point of start-ups, maybe it wants to raise a debt maybe they don't have the money to fiancé the kick-off. Coming from that angle, to say I want to raise debt, that means it builds it financials based on assumption. That start-up you would say is working based on assumption, so it does not have so many things on ground but is just working based on path of projection, assumption to make projection. Now that forms one start-up.

Another start-up can be a company that has run for about 3,4,5years, 3-5years. Now, they have their financials existing. So, already they have data that they can use to go make decisions to either expand the business. If we are looking at it from the financial aspect, the start-up could either be based on the assumption that it has or that assumption that it has to make projection or the past data that it has to make future projection, so if you are saying the start-ups how do you look at it, I will say from the financial aspect of it, I would say based on assumption we can say yes, it is a start-up. Based on past data we can as well bring it up as a start-up. So, it depends on the angle to which you are looking at it.

Samuel: What would you say are the biggest challenges start-ups face?

R5: one of the greatest challenges a business would face is data collection, data gathering, data build up because the aim of every business is to make sure that the goal is achieved. Every business would not want to remain the way it started. The aim of every business is to expand its horizon either in market share, in share price or profitability. That means a company has a pledged proper value which is in turn will be able to generate good revenue for that company. So, in doing that we find out that they have to put books properly. So, that is one of the major challenges for start-ups. Their books, the next thing you would be looking at is that based on the company size, so you can talk of the mean company size of the start-up. If you want to say to start paying salaries outright heavily, you may not come out too profitable. You may still be in the red for a longer time. So, one of the problems they will face is the mean pack size. That is another aspect of it.

Another issue they will face in a start-up is the investor side. People coming to buy into the business, they may not see the viability of the business because they are not yet part of the business. So, for proper management to outgrow that part, one of the things they should try to do is make sure that whoever is coming into the business either as an agent or a principal, either as management or a director or s shareholder, must have a proper skin in the game of that business. They should have part ownership of the business. The moment you have part ownership of that business, you would want to give in your best to make sure the company runs well.

I have mentioned three issues; data, the mean size and having a skin in the game.

Samuel: With relations to these challenges, would you say these challenges are a risk to the start-up?

R5: Of course, they are challenges, therefore they are risks to the business. And because they are risks does not mean they should not go into it. As the owner of a business, I think you should have thoughts to have done to mitigate those risks. Of course, those risks would be there, they will definitely be there.

Samuel: With regards to investing in start-ups are there still any other risks involved apart from these challenges that they face that are also risks, are there still any other risks involved?

R5: Regulator risk. Regulatory risk is one of them. If you see what's happening in the US right from the past 18years, there has been a heavy challenge in the NYSE. You find out that many of the organisations are delisting from the exchange. When I mean delisting, I mean they are going out, the stop being public and decided to go private. And this alone affects the economy when public companies start delisting from being public into being private. And now you do not have much of the private companies going to the exchange to go list because of regulation.

Why did this regulation come? Of course, you know the history of Sarbanes–Oxley then the Enron case. They now have to bring in the rule-based approach, saying this has to be like that and if it cannot meet this thing, then they cannot get on board. So, that regulatory problem, is a very big risk to start-ups.

We still need to look at other parts of the world which uses the IFRS reporting strategies. It is not just being too flexible, it is either you comply, or you explain. So, even at that, it is still technical. So, if you are not complying, you're explaining. If you don't have anything to explain and you cannot comply, you won't be able to run. Regulation is a very major risk.

Two, technology advancement. Technical advancement is another risk to a start-up we have. Seeing how artificial intelligent, machine learning taking over business, taking over position, taking over seats, and all these things has to do with mind analytics. So, if the employees are not going with the trend of analytics of growing themselves analytically to see how they can make robots do the work they do, then start-ups would end up having issues, because already existing companies have the funds to do the things that robots can do and do away with human effort.

So, the third risk I will be looking at for start-ups is financial capability. If you do not have a lot of finances to match up with your projected peers, you may be out and not be able to scale the time.

Samuel: Looking at that you mentioned something about companies that are already established, now would you say there are any differences or similarities with the risks involved with start-ups and companies that are non-start-ups?

R5: there are no similarities, there are no difference. Just that they are only in different business phases. The business cycles are different. The risks that a start-up would face upon commencement or upon existence is that same an existing company faces. Just that the difference is because I am in the system already, I know how to mitigate the risk. Now, because I do not have an idea of how to run, they I will fall to those risk. It is like a child who is starting to walk and an adult who is already running. The risk of falling is there, the really different is that as a child you are creeping you are learning bus as an adult you have been doing it for long. So, it is just the cycle, the difference is the cycle between the two.

Samuel: With relations to all these risks we have mentioned, would we say they are defined and measurable or they are changing, and we can’t measure them?

R5: These risks are defined, they are measurable. Because if they are not measurable then we don’t know the extent of mitigation we need to put in place. For example, one of the risks we mentioned then was financial risk. If I know that I need part debt and part equity to run my business, that means I will be able to measure what I am going into. Therefore, I can decide into saying I am dropping this part of my equity, therefore let me go raise this part of debt. I will be able to measure it. I have defined it, I have measured it and I have mitigated it.

Same thing goes for technology and the rest. I know that okay, in the next 3years, artificial intelligence is going to go a long way, so maybe some of the things I need to do is get two or three of my staff to go learn about artificial intelligence to prepare myself for the future.

So, they are all defined, they are measurable, they can be mitigated.

Samuel: Now, with regards to start-ups as a case in point, what would be considered or what can be considered as the right investments in start-ups?

R5: For start-ups, one of the things I would look at is one, value proposition. Value proposition is very important. Without that, you cannot generate something. If you look at the proper laying canvas, without proper value, you can’t generate good revenue, you can’t increase your market share, you can’t increase your share price, you can’t get profit in the business. Until you create value for your customers, you would just be in the red.

Now looking at start-ups with customer experience, if I am coming as a start-up and I put in place proper customer experience, there is every tendency that I am going to give an existing business a run for their idea. Now, that means every business now is becoming customer centric. It’s all about the customer. That is actually the talk of business is being agile. You use the agile model to build your business. When I say agile businesses, I mean building your business in bricks and blocks. Don’t wait till you developed the whole thing, start in bits. Throw your survey out to your customer. What do you think is not given to them properly that needs a change, that needs a push, that needs an upgrade? The moment you can point that out, and you fix it, get it back to your customers, you are good to go. Again, in another 6 months run another survey. Do you think we need to upgrade; do you think we need to add to it? That’s why you see there is this touch point on your phone where every dealer is trying to bring a product to your phone. So, they are trying to explore. The strategy is all about bridging the gap between your distance and my distance. How do I convey that to you?

Samuel: it is actually good that you mentioned something distance because that ties into the next question, would you say that the location of a start-up and your proximity to it, would it influence your investment decision?

R5: the location of a start-up and proximity, if it will influence my investment decision? Now I have to go back to the business model. I need to connect the business model.

As an investor. I want to see how my products are getting to my end users. Is it a 50-50 strategy to so okay, I am paying a bit of the delivery, you are bit a of the delivery or you are paying a hundred percent of the delivery of I am paying a hundred percent of the delivery? So, what model is this company I want to invest it, what model are they running? Now, if I decide to take a hundred percent of the delivery, what effect is it going to have on the books? I mean on the profitability, because that is a heavy part of the logistics of the business. So, if I am going to take a hundred percent of that aspect of delivery to my customers, how will it or what impact will it have on my profitability? So, that is enough to care if I am going to invest in that business. Don’t forget, this start-up may end up being retail where you now have volume. The more volume it is into, the more logistics it takes, the more expenses you have on logistics which will affect your profitability. So, I need to look at the model the start-up is using and know if I can decide to invest.

Samuel: So, basically as long as the model is right, your proximity to them would not really matter?

R5: yeah, it doesn’t really matter

Samuel: Would you say that the experience of the founder(s) of a start-up, would that drive your investment decision? Or would that be a driver in your investment decision?

R5: The experience of the founder……… That is one of the things I would call the non-quantitative aspect of a business valuation. There is no number to it. So, it is not quantitative it is qualitative valuation of a business.

I may come with 15 years of experience and it is not enough to drive that business to where it is going. And somebody else may come with 2-3years experience but the fight to have the right set of people around the business that can make it run. So, it is all about management of that company. In equity valuation we call it corporate governance. Who are they people running the business? People who make the decisions for the business? Are they experienced, do they have a skin in the game, have they been in such business before, do they have maybe ideas from other business that they can bring into this one? It is not about the owner having 15-20 experience, it is about management. What facet of life are they from? When you put all their experiences together, can they use that to drive the company. I will look at that.

Samuel: still sticking with the founders, what other founders relating to the founders of the start-up would you look at before investing as well?

R5: As we said, the other factors I will look at is the history of the founder. What is the person's history not even in business, maybe in……… what are the person's issues in managing another business before coming into this business? Does this person have any character default? I wouldn't want to invest in a business where the founder is more politically driven. If you invest in a start-up the founder is politically driven, it is all about politics. What happens when there is a die off in that political party? It affects the business.

So, it is just about taking an issue of the founder and making it correlate with what you are trying to achieve. So, if I look at the history of that founder and I find out that he has some issues or downsides, does these downsides outweigh the upsides? If the downsides outweigh the upsides, then no way. I don't want to start mentioning names………

Samuel: Moving on now, we have looked at the founders, what other non-financial factors would you look at before investing in a start-up?

R5: like I said non-financials I would look at is the history. Is it politically driven? Is he into politics, is that founder into politics?

Samuel: apart from politics, are there other non-financial drivers or would that be the major non-financial driver?

R5: that is the major non-financial driver for me. It is a very major thing to me. Again, the credibility of that person. For example, you look at a person, how is his own life? Is he having issues with others… opposite sex and maybe he is having any legal, criminal issue and maybe he is having issue with finances, poor management of finances and the rest? Those are some things I would look at. But the very major non-financial driver is the question – is this business politically driven?

Samuel: Okay then. Now, we have looked at the non-financial driver, what would be the financial drivers and considerations in investing in a start-up?

R5: The financial drivers, it is still the revenue. What is driving the revenue. That is not even the major driver. What value do they have that is driving that revenue? And before you talk about the financials, you must build properly the non-financials, so what value do they have that is driving the revenue?

Now, what do they have in place again that is building up the expenses. What are they doing that is building up the expenses? The moment you can look at the revenue and take into consideration the overhead, so if you net off both, you will know where your profit before tax stands. If you don't take into consideration properly the overhead, both fixed and variable overhead, if you don't take care of them properly, it is going to bring down the revenue regardless of the value you have created which generated a very high revenue. If you do not manage your overhead which is your expenses properly it will bring down your profit before tax value.

So, for me, I will look at the expenses and the value generating the revenue.

Samuel: So, now I know earlier you mentioned regulations, in terms of regulations with financial statements like using the GAAP the IFRS, would that be a driver with which ever system a start-up uses. Would that be a consideration in investing it?

And also, would the frequency of preparing the financial statement, would it be a condensation when investing in the start-up?

R5: Yes, those things are very very important. If you are conversant with this model of finance, if I remember the name, I'll bring it back. There is this model that you must be looking at for the business. Does this business have a forgoing, is there a foregoing look at the business and okay now the voluntary narrative? This portion you're looking at is the disclosure part of the business. If you look at the model or the framework called the Bill McKinley and Kennedy framework, it can be found in an article written by

Bereita and Bosuland in 2008. That framework single handedly brought out voluntary narrative of a business. That it must meet three things; that the business must be time orientation, must have financial and non-financial and it must be quantitative and non-quantitative.

Now under the time orientation, are their books, do they keep their historical rightly? Then we look at the non-time specific; do they meet the regulator time to file in their accounts? If the regulator says your books must come in in the last day of the first month of the next quarter. If that is what they want, like for example, this quarter end march, your books must come in at worse 30th of April of next quarter of the second quarter. If the regulations say your books must come in on this day, and your books comes in on the last month that it the third month of the second quarter, for crying out loud then there is an issue with time specificity. What has been happening? What were you doing, were you cooking books? Are there lapses? Why were you doing that? If you're doing that, you are already trying to disrupt investors' confidence.

Samuel: With regards to all of these, what methods are used in evaluating these risks that has been identified in these start-ups when we want to invest in them? How do we evaluate? What are the methods used in evaluating these risks identified before investment?

R5: Risk mitigation is not cast on stone. I will tell anybody; risk mitigation is not cast on stone. We have made mention of financial risks and I know I want to go into debt-equity. If I have my own part of the equity I have measured it. And I know the other part is the debt. How do I need to raise that debt? Do I have to still do an IPO, or do I have to do a private placement to get the other part of the money. So, in doing that, I have not cast it in stone, rather I have measured what needs to be measured. And I know that this is what I need to do to get to where I need to be. Like I will tell anybody, finance in paper is not finance practically. They are two different things. So, it's all about the business. What strategy are they using to run? I cannot say these things can be measured or this is the method to be used for the risk mitigation. It is all about the business as an entity. What does the business need to do at that point to run, to exist and to run?

So, I can't tell you this is the measurement for risk or whatever. Different models for different companies. The model that works for A will not be the model that works for B, because business models nay not be the same. They will be differentiated.

Samuel: So, on a final note, with all the fact that evaluating system are different with all these risks involved. Bringing all these factors into consideration, what strategies are used to minimise these risks when investing in start-ups?

R5: the strategies, like I said these questions they are almost the same. The strategies to minimise the risk is to look for existing business. The thing that happened, what did they do? What do I need to put in place not to fall into that pit? In business analysis terms we call it running from ASI, creating a model and going into to be. I don't know if you understand ASI. S is like how business has operated, how it was. Then mitigate something then you now have a to be. So, this is how it was. With this approach, this is how it is going to be. That is the strategy to manage any risk.

Samuel: is the only the risk minimisation strategy?

R5: Yes, that is the best risk prevention. You see what I have just told you now is used for agile business for the recent century business. Gone are the days when business used to run using waterfall methodology. What I mean by waterfall is where they build the whole business, build everything write the while business scheme from the start, kick off the business. When they kick off that is when the start seeing the problems.

But recently what we do is build your business in bit and blocks. Build it gradually. Do not want till you develop the whole business model and you then want to run it. Look at technology business or tech start-ups, have you seen way they develop software in recent times?

There is the customer side, there is the vendor side, there is admin side, there is the payment side. Now they build the customer side throw it out to the public. Customer are these the things you want on this app on in this software. They now get to where they add this don't add this, add this don't add this. Then you come back and build again. Develop the software again. This is why you see a software increase its version. They tell you this is version 1.0. they do an upgrade and tell you it is version 1.1, and you see a change. That is how a business should run, using the agile framework. Building in bits and blocks, that is how a business should run.

Samuel: So, also in relation to that, would we say maybe diversification and doing tout due diligence or investing funds gradually would that also be a minimisation strategy?

R5: Okay, if you look at investing funds gradually in a business, yes that is fine, that is under the proper portfolio management that you invest gradually, and you don’t just throw in the whole chuck of money in the business, because possibly there are downsides. Then if you look at this book, Intelligent investor, by Benjamin Graham, such an investor is called an intelligent investor. All they are looking for is investing in the values of a business. Even if such business at that point is bleeding it’s share price, they know that the value is right. They know that they have met all regulations, they know that everything in existence is right, but they have rather invest in the value of that business.

So, if I see business that is doing well, and even if the value is coming down and the share price is coming down, the share price is coming down, but the value of the business is not coming down. All I need to do is keep investing in bits. I invest €10 today, I invest another €10 maybe in 3days time. Not that when the guy invests the first €10 and the price drops, I invest another €10 it is giving me access to more value in the company.

For example, to make this clear. If I am investing €10 into the business and the share price is at €1 and I am investing €10, that mean I am entitled to how many holdings? That is 10. Now in 3days time or in a months’ time the share price is now at €0.50 and I bring back another €10 to invest, how many holdings will I have now? That is 20. So, if we add up the 10 and 20 holding it will now be 30 holdings of that business. And maybe the company comes down again and I bring in another €10 and the company is valuing at €0.30 I bring in another €10 that means I have access to more holdings. Knowing the value of that business is on the good side, when that company turns positive and takes an upside, my losses grow into the positive side, that means I am going to be in standing if I decide to sell that stock. Taking into consideration that I have been able to mop up more holdings buying same amount, but I have more holdings. So, it is advisable to invest in bits.

Samuel: Thank you so much, that covers everything.

Appendix G Respondent 6

1. How would you define a start-up?
   R6: To me, a start-up is a newly established business especially by one or two persons; small and medium scale enterprises.
2. What is/are the biggest challenge(s) you would say start-ups face?
   R6: Lack of structure: organizational structure, financial structure.
3. Is/Are these challenges a risk to them?
   R6: Yes, it is a big risk because it could mean the business will not stand the test of time.
4. With regards to investments in start-ups, what other risks are involved?
   R6: Unprofitability in the first months/years of starting the business and loss of invested capital.
5. Are these risks defined and measurable or changing and unmeasurable?
   R6: In the early days of a start-up, the risks could be unmeasurable. However, overtime as the business starts to put the required structure in place, the risks could become measurable and mitigants can be put in place to manage them.
6. With start-ups as the case in point, what is considered as the right investment?
   R6: Investment in a business the investor understands.
7. Is the location of a start-up and your proximity to them an influence in your investment decision?
   R6: Definitely! It makes supervisory oversight (if required) easy. That said, if supervisory oversight is not necessary; regular reports facilitated by technology can work in place of proximity.
8. Is the experience of the founder(s) a driver in your investment decisions?
   R6: Yes, it is. You can only give what you have. The experience of the founder(s) will give an assurance of performance.
9. What other factors relating to the founder(s) of a start-up would be considered before investing?

R6: The background of the founders, their technical know-how.

10. What other non-financial factors do you consider before investing in a start-up?

R6: Prevalent macroeconomic and regulatory factors & issues.

11. What are the financial drivers and considerations in investing in a start-up?

R6: High returns.

12. Are there any differences and similarities in the risks involved compared with companies that are non-start-ups?

13. What methods are used in evaluating the risks identified in start-up investments?

14. What are the strategies used to minimise the risks you identified in investing in start-ups?