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Business angel investment decision-making criteria

Finance

Master's thesis

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Abstract of master's thesis

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Abstract

OBJECTIVES OF THE STUDY

The purpose of the thesis is to provide new evidence and address the partially lacking understanding of business angel decision-making. This thesis studies the issue by investigating both the investment criteria and the rejection criteria business angels use to decide whether an opportunity should advance beyond the initial screening stage to the due diligence. The study focuses on the pitch meetings, in which entrepreneurs try to sell their ideas and equity to business angels in exchange for capital.

DATA

The unique hand-coded data on business angels is sourced from a TV show called the Dragons' Den. By analysing the latest two UK production seasons, I was able to observe the decision-making process of seven business angels, of which three were female. The total number of observed pitch meetings amounts to 129, which consists of 27 successful pitches and 102 declined ones. The empirical evidence of business angel rejection criteria is based on 241 rejection reason provided by the investors. The above-average sample size is considered to be reasonable in the area of studying business angel decision-making.

RESULTS

The results suggest that business angels invest primarily in early stage or start-up companies seeking for expansion financing. In their investment decision-making, business angels place emphasis on the entrepreneur, product and financials and intend to add value by taking hands-on roles. On the other hand, the partially contradictory findings to prior literature suggest, that the most important rejection criteria are related to financials, product and market. My findings also suggest that the investor fit criteria and investors' gender is affecting the decision-making of business angels.

Keywords Business angels, Investment decision-making, Investment criteria, Rejection criteria

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TUTKIELMAN TAVOITTEET

Tutkielman tavoitteena on tuottaa uutta tutkimustietoa ja täydentää aikaisempaa bisnesenkeleiden päätöksentekokriteereitä koskevaa tutkimusta. Tutkimus tarkastelee aihetta kahdesta eri näkökulmasta, selvittäen millaisia investointikriteereitä ja hylkäämiskriteereitä bisnesenkelit käyttävät arvioidessaan potentiaalisen investointikohteen viemistä alustavasta päätöksentekovaiheesta eteenpäin Due Diligence -selvitykseen. Tutkielmani kohdentuu bisnesenkeleiden ja yrittäjien välisiin myyntineuvotteluihin, joissa yrittäjät pyrkivät myymään osuuden yritystoiminnastaan bisnesenkeleille.

AINEISTO

Tutkimuksen uniikki aineisto on kerätty havainnoimalla Leijonan luola UK nimistä TV ohjelmaa. Havainnoissa käytettiin sarjan kahta viimeistä tuotantokautta, jonka avulla tutkin seitsemän eri bisnesenkelin päätöksentekoa, joista kolme olivat naisia. Tutkimukseni kohteena oli 129 eri myyntineuvottelua yrittäjien ja rahoittajien kesken, joista 27 hyväksyttiin ja 102 hylättiin. Hylkäämiskriteereitä koskeva empiirinen aineisto perustuu sijoittajien lausumiin 241 eri hylkäämisperusteeseen. Aineiston keskiarvoa suurempi koko on kohtuullinen ottaen huomioon aikaisemmat tutkimukset aihealueelta.

TULOKSET

Tutkimuksen tulokset osoittavat, että bisnesenkelit sijoittavat pääsääntöisesti kasvurahoitusta hakeviin start-up tai alkuvaiheen yrityksiin. Bisnesenkelit painottavat investointikriteereissään yrittäjää, tuotetta ja ylityksen taloudellisia aspekteja, sekä pyrkivät tuottamaan lisäarvoa ottamalla aktiivisen roolin kohdeyrityksissään. Aikaisemmasta tutkimuksesta hieman poiketen, löydän tärkeimpien hylkäämiskriteereiden liittyvän yrityksen taloudellisiin aspekteihin, tuotteisiin ja markkinoihin. Tulokset osoittavat myös sijoittajan henkilökohtaisten kriteereiden ja sukupuolen vaikuttavan heidän päätöstentekoonsa.

Avainsanat Bisnesenkelit, Investointipäätöksenteko, investointikriteerit, hylkäämiskriteerit

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1 INTRODUCTION

1.1. Background and motivation

Since the early 80s, academics have tried to stress the importance of functional *informal* Venture Capital (VC) markets (Wetzel 1983; Short and Riding 1988), because Business Angels (BAs) are the main source of capital for early-stage companies (Feeney et al. 1999), and which indeed create most of the jobs and foster economic growth (Mason and Harrison 1995; Van Osnabrugge 2000; Sudek 2006). In the after math of the financial crisis, the development of the financial markets has been driven by the announcements of new monetary operations by the key central banks. Despite of the increased liquidity in capital markets, small and medium-sized enterprises (SMEs) have encountered difficulties in obtaining loans or other credit facilities from local banks. According to Bank of England, the growth rate in the stock of lending to SMEs has been negative for the past four years in UK.[1] As a result, the media, politics and policy makers have also stressed the importance of business angels to small businesses. For instance, the UK government introduced new tax incentives for business angels under Seed Enterprise Investment Scheme (SEIS) in 2012.[2] The aim of these tax reliefs is to ease the business angel investments in order to provide more capital inflow for start-up and early-stage companies.

In addition to the effects of the recent crisis, there is evidence from a number of countries that small businesses encounter problems acquiring long-term investment finance at start-up and initial growth phase (Mason and Harrison 1995). In addition to entrepreneurs' own savings, start-up companies tend to acquire capital from family and friends. Usually business angels come into the equation when these initial resources are tapped, but companies are yet too small for most of the venture capital funds (Mason 2007). Venture capital funds have shifted their focus away from early staged companies to more mature businesses and are nowadays seeking for larger deals (Mason and Harrison 1997). For instance, in UK they have raised their minimum investment thresholds up to £1 million on average (Sohl 2003), which makes venture capital unreachable for early staged companies. As a result, academics have identified a funding gap from £100,000 up to even £2 million, of which bulk is covered by business angels (Sohl 2003).

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[1] Bank of England (2014) "Trends in Lending", retrieved 16.9.2014.
[2] For further readings on new and old BA tax incentives schemes in UK review: "PwC SEIS Guide" and "PwC EIS Guide", retrieved 16.9.2014.

Business angels' central role in a functioning economy is widely accepted (e.g. Sudek 2006). However, the informal venture capital market is still relatively under studied (e.g. Paul et al. 2006). This is due to the fact, that there are hardly any public data available on business angels or their investments (Mason and Harrison 1997). This group of investors is unique in a way, that they do not need to belong in any public registers and they generally wish to remain anonymous (Mason and Harrison 2002). However, their market is enormous compared to the *formal* Venture Capital market (e.g. Mason and Harrison 1996). There are only estimates available, but it is argued that their market size outnumbers the VC market by two to five times in monetary terms (Wetzel 1987; Mason and Harrison 1993) and at least twenty times larger in terms of the number of ventures financed (Mason and Harrison 1995). For instance, Morrissette (2007) estimated that there are 400,000 business angels in the US, who in aggregate terms invest $50 billion per annum in over 50,000 small businesses. Moreover, several academics have reported that their investment potential is even larger (Short and Riding 1988; Mason and Harrison 1993).

The government interventions to improve small businesses' access to finance are typically aimed for the supply side (Mason 2009; Mason and Kwok 2010), as recently witnessed with new tax incentives in European countries. However, the academics have recognised that the access to capital is usually constrained due to the demand-side weaknesses (Mason and Harrison 2002; Mason and Kwok 2010). Business angels argue that good quality investment opportunities are scarce and introducing potential entrepreneurs to investors is difficult due to the market inefficiencies (Mason and Harrison 2002). As a consequence, in past decades several Business Angel Networks (BANs) have been established around the world to coordinate the efforts of business angels and to ease the matching of entrepreneurs to investors (Mason and Harrison 2002). By utilizing these 'dating agencies' (Mason and Harrison 1996; Mason 2009), business angels and entrepreneurs can contact local partners more easily. That is crucial, as many academics have found that they prefer to invest close to home (Feeney et al. 1999; Landström 1998; Paul et al. 2007).

The recent trend is that BANs invite entrepreneurs to deliver oral pitch presentations at their social events, investor forums and dinner clubs (Mason and Harrison 2003). These meetings usually take place at the initial screening stage (Mason and Harrison 2003), before the business angels have even reviewed their business plan or met the entrepreneurs in person (Clark 2008). Most of the business angel investment opportunities are rejected at this stage. For instance, in Canada only 6 % of the opportunities were considered further (Haines et al.

2003). These pitch presentations typically last only 15 to 30 minutes, but the economic impact of these presentations can be enormous for the success of the entrepreneur's business (Clark 2008). Despite of the growing importance of BANs (e.g. Mason and Harrison 2002), the main source of business angel opportunities is still found from friends, personal networks and business acquaintances (Haar 1988; Stedler and Peters 2003; Morrissette 2007).

Academics have studied business angel markets around the world: in UK, U.S., Sweden, Finland, Germany, Australia, and Japan - just to name a few (Mason and Harrison 1996; Haar et al. 1998; Landström 1998; Lumme et al. 1998; Stedler and Peters 2003; Hindle and Wenban 1999; Tashiro 1999, respectively). Although these studies have provided valuable information on business angels' personal characters and their investment behaviour, there are still understudied parts in the literature. For instance, academics have suggested that further studies should be made to fully understand the business angel decision-making criteria (e.g. Mason and Harrison 1996; Sudek 2006) and emphasised the need of real-time study approaches (e.g. Mason and Harrison 2003; Clark 2008; Maxwell et al. 2011). It is crucial to understand the business angel decision-making criteria properly, in order to secure the funding of future success stories.

1.2. Research questions

This thesis provides new evidence on business angel decision-making from two perspectives. On one hand, I investigate the factors, which generally leads to a successful business angel investment by looking at their investment criteria. On the other hand, I will examine the business angel rejection criteria to study why entrepreneurs fail to acquire capital from business angels. This thesis focuses on the initial screening stage of the business angel decision-making process by studying the pitch meetings. A pitch meeting is a situation where an entrepreneur is trying to sell their ideas and equity to a panel of angel investors in exchange of capital, and sometimes even their expertise and contacts. My aim is to build understanding of what happens during these pitch meetings and examine the factors affecting the decision outcome: whether an opportunity should proceed beyond the initial screening stage to the due diligence. The most central research questions can be summarized in the following way:

Q_1: *What type of investment criteria BAs emphasize in their decision-making?*

Q_2: *What are the most important rejection criteria in BA investment decision-making?*

The main research questions are studied in order to guide the potential entrepreneurs to acquire capital from business angels. I will also examine the effect of investors' gender to business angel decision-making and study the dynamics of business angel syndication. By following the approach of Maxwell et al. (2011), I am using an applied observational interaction method, and utilise both quantitative and qualitative techniques to analyse and interpret the hand-coded observational data.

1.3. Contribution to the literature

This thesis contributes to the prior literature in several ways. First of all, I am able to overcome multiple sources of biases included in the existing business angel decision-making literature by employing a unique real-time data. Both questionnaire and interview studies are typically made either *ex ante* or *ex post* the actual investment decision. Moreover, these studies have purely focused on the supply side of the table by aiming their questions to the investors. Usually the respondents have difficulties to objectively self-evaluate the decisions they have made, especially the ones with poor outcomes. Academia has also recognized that business angels might adjust their answer in ways, which are more socially acceptable. To overcome these self-reporting and recollection biases identified in the previous literature (e.g. Mason and Harrison 2003; Paul et al. 2007; Mitteness et al. 2012), more recent studies have employed real-time study approaches, such as verbal protocol analysis and participant-observer methods (Mason and Stark 2004; Sudek 2006). For instance, in the verbal protocol study of Mason and Stark (2004) business angels were 'thinking out loud' when screening real business proposals. The verbalizations of respondents were recorded, coded and analysed for their research questions. However, the setting was highly artificial, as no money and no real decisions were involved (Mason and Stark 2004). My study will further adapt this real-time methodology approach in a far less artificial setting, which will provide a fresh point of view by observing both the investor (*supply*) and the entrepreneur (*demand*) side of the table at once.

Secondly, my focus is on the actual sales pitch, in which entrepreneurs try to sell their ideas and equity to business angels in exchange for capital. By studying the pitch setting, I am able to examine what business angels are *actually doing* versus what they *tell they are doing*, which is covered in the past. Academics have tried to break down the business angel decision-making process in several stages. For example, Amatucci and Sohl (2004) divided the process in three stages: pre-investment, contract negotiation and post-investment, also more detailed

models are provided, such as eight staged model by Haines et al. (2003). However, most of the academics have studied business angel decision-making either ex ante the actual investment decision by studying the written business proposals/plans or ex post by interviewing the business angels. Therefore, the academia still partly lacks of understanding what happens in the middle of the process in social interactions between the investors and entrepreneurs. My thesis aims to fill this gap in the research by studying *the initial screening stage* (see e.g. Mason and Harrison 2003) of the investment process. This is done by replicating the idea of Maxwell et al. (2011) and studying the pitch meetings in Dragons' Den.

Finally, my study will employ a unique observational data that no one has used before. Most of the past studies have relied on questionnaires (e.g. Feeney et al. 1999; Mason and Harrison 2002) or interviews (e.g. Mason and Harrison 1996b; Van Osnabrugge 2000) aimed at business angels. As business angels usually wish to remain anonymous, previous studies have found it extremely difficult to find and persuade suitable respondents or interviewees to participate in their questionnaire or interview studies. Hence, they have had to rely on sample sizes of convenience (Mason and Harrison 2002). The average sample size is around 90, but most of the time it is much smaller. This thesis employs an above-average sample size of 129, which consists of 27 successful pitch meetings and 102 declined ones. A total of 645 (5 investors × 129 opportunities) individual business angel and entrepreneur interactions/ potential investment opportunities are observed. The empirical evidence of business angel rejection criteria is based on 241 rejection reasons provided by the investors in 129 observed pitch meetings.

1.4. Results

My results on business angel investment criteria are for the most parts well aligned with the earlier research. First of all, I find evidence that business angels tend to predominantly invest in early-staged companies seeking for expansion financing, supporting the prior literature findings (e.g. Landström 1998) and the recent UK market statistics (Deloitte-UKBAA 2013). I also find that investors' gender plays a role in business angel investment decision-making. I find that female business angels are more conservative and risk-averse investors than their male counterparts, aligned with the general finance literature (Jianakoplos and Bernasek 1998; Sunden and Surette 1998). They tend to invest slightly smaller sums in smaller businesses in terms of equity value, acquire larger equity stakes individually and tend to syndicate more compared to men business angels. In addition, female business angels tend to be pickier in

their investments, as they rejected more opportunities than male business angels. These gender findings are fundamental, as women business angels are relatively understudied in the business angel literature. I also find evidence that business angels seek companies with good financial performance or companies with proven profit potential. Although the result is quite obvious, it might be that the importance of financial considerations as an investment criterion is underestimated in the prior literature. Moreover and not surprisingly, I find some evidence that business angels tend to seek companies with a combination of good products and capable entrepreneurs. I also find some support for my hands-on hypothesis, as it seems that business angels are seeking to invest in companies that they can help with their expertise or contacts. The hands-on findings are aligned with the agency theory approach proposed by Van Osnabrugge (2000). Finally, I find my syndicated investment hypothesis to be partially true, as the deal value and the acquired equity stake tend to increase in syndicated investments. However, my results do not support the increase in investment size with syndicated investments. The latter finding calls for further research on the subject, as it contradicts to the earlier research (e.g. Kelly and Hay 2003; Mason 2007).

My results on business angel rejection criteria are only partially aligned to the earlier findings. I find that entrepreneur or management is not as significant rejection criterion as argued in the previous literature (e.g. Haar et al. 1988; Mason and Harrison 1996). However, the criterion is still ranked in the top 5. On the top of my rejection criteria rank are financial considerations, which are typically not found in that spot in the previous studies on business angel decision-making. On the other hand, the market-related issues and concerns about the product or service are also found in the top 3 of my business angel rejection criteria list supporting the earlier research (Mason and Harrison 1996; Mason and Harrison 2003). As of my slightly contradictory results to the prior literature, I argue that past research might underestimate the importance of financial considerations and actually overestimate the entrepreneur or management as business angel rejection criteria. Moreover, I find evidence that the likelihood of rejection increases significantly with outrageous initial valuations. I also find support for my investor fit hypothesis, and hence argue that investors' personal preferences play a significant role in rejecting the opportunities. The finding is well aligned with prior literature (e.g. Clark 2008). Finally, I find some evidence that a business pitch, whether it is good or bad, is not solely a reason for business angels to either accept or reject an investment opportunity. However, I find evidence that a good business pitch might still support building a

more likeable picture of the entrepreneur, and thus increase the odds of receiving capital from the business angels (Mason and Harrison 2003; Clark 2008).

1.5. Limitations of the study

This thesis is subject to four main sources of limitations. First, as typically witnessed in business angel studies, the generalization of the results is questionable to a certain degree due to a relatively small sample size in general. The time-consuming nature of collecting the hand-coded observational data forced to limit the final sample. Second, the agreed deals in the pitch meetings does not necessary imply a successful investment. The actual investments decisions are made ex post the meetings, after the investors have performed their due diligence, and relies on the integrity of the both parties involved. Hence, I can only generalize my results to relate to a business angel decision-making in pitch meetings and only to a certain degree to elsewhere. Third, studying a TV show might create bias to the results, which might not occur with a real-life sample. Although the pitch meetings in Dragons' Den compare to real-life pitch meeting settings of Mason and Harrison (2003) and Clark (2008), the action of the entrepreneurs and investors might be biased by the TV cameras. In addition, the editing of the series might also create bias to the results. The editors' aim is to create a good TV show, and thus they need to balance on the idea of what is important in each pitch and what makes it enjoyable to watch. Thus, they might have excluded some of the crucial elements, which could have had an effect on the findings. Also other editing choices, such as music, lightning etc. might create bias for the observations. However, I am not concerned of these limitations, as there is real money involved and real decisions to be made with real outcomes. Furthermore, numerous papers have previously used television shows in their studies, and have confirmed that they are indeed good platforms to study real-life decision-making (e.g. Maxwell et al. 2011). Finally, as the data gathering is manual labour and done by only one individual, I acknowledge that observation and coding errors might occur and that observations might be subjectively biased. To overcome these problems, I have taken enough time for each episode to take notes with sufficient care and have recorded the observations as objectively as I could.

1.6. Structure of the study

The rest of the thesis is organized as follows. Chapter 2 first provides an introduction to the business angels, then highlights the main difference between venture capital and business

angel investment decision-making in light of the agency theory, and then discusses the evolution of the most relevant literature, and finally summarises the business angel investment criteria and rejection criteria. Chapter 3 motivates and presents the hypotheses tested in the thesis. Chapter 4 briefly introduces the Dragons' Den concept and rules, reviews the methodologies employed and discusses the data collection process, including observations and coding procedures, and presents the final data samples and proxies used to test the hypothesis. Chapter 5 shows and discusses the empirical results. And finally, chapter 6 concludes the thesis and provides suggestions for further research.

2 LITERATURE REVIEW

This chapter highlights the most relevant literature from the area of business angel decision-making. It is crucial to know who business angels are and how they operate in order to understand their investment decision-making properly. Hence, the first section gives a brief introduction to business angels and their investment behaviour. In the second section, I will highlight the main differences between venture capital and business angel decision-making in light of the agency theory. In the third section, I will review the evolution and empirical evidence on business angel decision-making. Finally, in the fourth section, I will provide a summary of the main business angel investment and rejection criteria identified in prior literature.

2.1. Introduction to business angels

Business angels are often defined as high-net-worth individuals who invest their own money in private companies seeking for seed, start-up or early stage capital (Haar et al. 1988; Feeney et al. 1999; Van Osnabrugge 2000; Mason 2007). Usually friends and families, often referred as 'love money', are excluded from this definition (Mason 2007; Riding 2008). Business angels are also referred as *informal* venture capital investors, which contrast to the *formal* venture capital fund managers (Wetzel 1983). However, Freear and Wetzel (1990) found that these groups of investors do not directly compete with each other, but they rather play a complimentary role in the venture capital markets. They complement each other in terms of the stage of the business and the size of the investment (Freear and Wetzel 1990).

Business angels provide risky capital for start-up and early stage companies (e.g. Wetzel 1983; Haar et al. 1988). They also provide seed financing, but that to a lesser extent (Mason and Harrison 2002). This contrasts to venture capitalists that provide funds for more mature businesses at later stages (e.g. Sohl 2003), usually seeking for expansion financing (e.g. Morrissette 2007). Venture capitalists also engage in leveraged transactions such as LBOs and MBOs (Sohl 2003). Due to investing in later stages, the deal sizes are also much larger for venture capitalists (Van Osnabrugge 2000). As a result of their complementary role in the venture capital market, business angels are argued to be filling the 'equity gap' (Mason and Harrison 1995; Mason 2007). The gap emerges when ventures grow and need finances beyond the ability of entrepreneurs' own pockets, friends and family members, and are yet too

small to reach the investment thresholds of professional venture capital funds (Prowse 1998; Sohl 2003). Business angels are indeed the most important source of capital for small entrepreneurial businesses (e.g. Feeney et al. 1999) and provide bulk of the funding under $500,000 category (Haar et al. 1988). This is crucial, as these small growth businesses create most of the jobs and contribute significantly to economic growth (e.g. Sudek 2006).

Business angels are typically profiled as well-educated, middle-aged men with significant net worth, which is usually acquired via entrepreneurial activities (Feeney et al. 1999; Mason and Harrison 2002; Mason 2007). The average age of business angel varies depending on the study and usually lies in a range of 40 to 65 years (Haar et al. 1988; Stedler and Peters 2003; Mason 2007). Moreover, business angels are predominantly male (Haar et al. 1988; Mason and Harrison 2002; Sudek 2006). The female proportion of the angel population is very marginal, typically being only 5 % or less in a country (Stedler and Peters 2003; Harrison and Mason 2007). In order to be able to invest in private companies, business angels tend to be very wealthy: typically cashed-out serial entrepreneurs (Mason and Harrison 2002; Mason 2007; Riding 2008) and mostly millionaires (Mason and Harrison 2002; Stedler and Peters 2003). However, the most unifying finding of business angels is that they are or used to be entrepreneurs themselves (Morrissette 2007). They also tend to have managerial experience from small businesses (Landström 1998; Stedler and Peters 2003) or have experience from senior positions in larger companies (Prowse 1998; Mason 2007). Their business experience does not generally limit in to a certain field of business, as they come from diverse backgrounds (e.g. Prowse 1998). Finally, most business angels are well-educated and tend to have a university degree (Haar et al. 1988; Landström 1998; Sudek 2006; Mason 2007; Morrissette 2007).

A typical business angel investment in UK is £100,000 or less (Mason and Harrison 2002). Academics have found that business angels allocate only 5 % to 20 % of their total portfolio to private investments (Mason and Harrison 2002; Stedler and Peters 2003; Mason 2007). Hence, it has been argued that they are not dependent on the success of their private investments (Mason and Harrison 1996; Prowse 1998). Most business angels have only three private investments in their portfolio and they tend to do deals about every 18-24 months (Morrissette 2007). Also more frequent deal flows and larger portfolios are found. For instance, business angels in Germany held on average one to five investments in their portfolio and made one to two deals in a year (Stedler and Peters 2003). As a result, it can be

argued that investing in private companies is not a one-off thing for most of the business angels (Riding 2008).

Many academics have found that business angels prefer investments close to home (Prowse 1998; Paul et al. 2007). For instance, majority of Swedish angel investments are made inside an 80 km range from the investor (Landström 1998) and business angles in UK are not interested to invest in businesses beyond 2 hours of travelling time (Mason and Harrison 2002). This is argued to be due to two reasons: sourcing and monitoring (Mason 2007). First, business angel opportunities are usually found from personal networks and business acquaintances (Haar et al. 1988; Landström 1998; Prowse 1998). As these contacts are usually geographic in nature, the deals are often found from their own area (Prowse 1998; Mason 2007). Second, due to agency conflicts and asymmetrical information, business angels prefer hands-on roles when monitoring their investments (Van Osnabrugge 2000). Monitoring businesses close to home tend to be easier and less costly (Mason and Harrison 2002). Although business angels typically invest in a wide range of industries (e.g. Landström 1998), they usually prefer to invest in business sectors, technologies and products where they have previous knowledge or experience (Feeney et al. 1999).

Nowadays, business angel networks play a central role in matching the entrepreneurs and financiers (e.g. Mason and Harrison 2002). Business angels prefer co-investing with other business angels (Prowse 1998; Feeney et al. 1999; Paul et al. 2007), as these syndicates make more and larger investments available for individual investors (Mason 2007). For instance, a business angel network in California typically provides capital from $250,000 to $1 million per venture (Sudek 2006). Syndication also makes investments less risky, as the due diligence and evaluation improves (Mason 2007). The improved deal flow also makes the portfolios of the individual business angels more diversified (Mason 2007). Compared to venture capitalists, the due diligence process of business angels is found to be less analytical, less extensive, less time consuming and more personal (Van Osnabrugge 2000; Morrissette 2007). When screening proposals, business angels typically review target company's finances, but due to lack of resources they also need to rely heavily on their gut feeling (Van Osnabrugge 2000). For instance, in a UK study only one third of the business angels calculated the expected rates of returns before investing (Van Osnabrugge 2000). Moreover, academics argue that business angels focus primarily on the entrepreneur and not the business plan (Mason and Stark 2004), and that entrepreneur matters most when BAs are deciding whether a deal should proceed to due diligence (Mitteness et al. 2012).

Business angels are highly critical in which they invest, as they reject most of the business opportunities they review (Mason and Harrison 1995; Feeney et al. 1999; Stedler and Peters 2003). For instance, only 6 % of the opportunities were accepted in Canada (Haines et al. 2003), 8 % in UK (Mason and Harrison 1994) and 16 % in Germany (Stedler and Peters 2003). Despite of these minimal acceptance rates, venture capitalists are found to be even more critical in their judgment (Van Osnabrugge 2000). One crucial barrier to invest for business angels is to agree on the investment terms and conditions with the entrepreneur (Mason and Harrison 2002). As business angels typically make simple common stock investments, the equity stake and the price tag need to satisfy both parties in order to make an agreement (Mason 2007; Paul et al. 2007). However, the valuation of these start-up companies tends to be very difficult and highly subjective, as they usually have limited trading history and little tangible assets (Mason 2007). Accordingly, business angels prefer rough rules of thumb valuations or their gut feeling over formal valuation models (Prowse 1998).

One of the most noteworthy characteristics of business angels is that they consider themselves as hands-on investors (Van Osnabrugge 2000; Mason and Harrison 2002; Mason and Stark 2004; Paul et al. 2007). In other words, business angels tend to actively engage in their investee businesses. Business angels are reported to provide their time and expertise in addition to the capital injection (Mason 2007). Business angels might also take board seats or have some other sort of employment relationships with their investee businesses (Prowse 1998). However, they have only limited time to participate in the day-to-day management due to investments in several private businesses (Mason and Harrison 2002; Paul et al. 2007). Thus, they usually play advisory or monitoring roles (Stedler and Peters 2003; Mason 2007). By taking hands-on roles, they try to mitigate the information asymmetry between the entrepreneur and the investor (Van Osnabrugge 2000). They also seek to influence the business and are willing to exploit their commercial skills, entrepreneurial experience, business know-how and contacts (Mason and Harrison 1995). Due to the hands-on roles, business angels are considered as value-added investors (Mason and Harrison 1997; Mason 2007; Politis 2008). For instance, Kerr et al. (2014) found that capital is not the central input of business angels. They found that companies funded by business angels have improved survival, exits, employment, patenting, Web traffic, and financing (Kerr et al. 2014).

Business angels are primarily motivated to invest due to financial reasons (Haar et al. 1988; Mason and Harrison 2002; Mason 2007; Riding 2008). Although return on investment is the

main source of motivation for angel investments, non-financial considerations are also seen influential (Van Osnabrugge 2000; Mason 2007; Morrissette 2007). Business angels typically expect to gain an annualized rate of return in a range of 30 % to 40 % (Feeney et al. 1999). However, as they invest in private companies business angels cannot just simply sell their shares in an exchange. Therefore, business angels expect to realize their return via a trade sale or an Initial Public Offering (IPO) (Prowse 1998; Feeney et al. 1999; Stedler and Peters 2003; Sudek 2006; Paul et al. 2007) after holding the investment usually for 5 to 8 years (Feeney et al. 1999). Although the return on the investment is of great importance, it is not the top investment criterion for business angels (e.g. Sudek 2006). Usually the top investment criteria relate to entrepreneur or management team (e.g. Haar et al. 1988; Clark 2008).

The significance of non-financial motivations is argued to be the most distinctive characteristic of business angels compared to venture capitalists and most of the other types of investors (Morrissette 2007). For instance, many academics have found that business angels tend to seek fun and exciting companies to work with (Van Osnabrugge 2000; Mason and Stark 2004) and gain physical compensation from their private investments in the form of interest and fun (Mason and Harrison 2002; Mason and Stark 2004). They also get satisfaction from creating jobs and helping other entrepreneurs to establish and grow their companies (Stedler and Peters 2003). As a result of the prior literature findings, many academics have concluded that business angels are indeed a quite heterogeneous group of investors (Mason and Harrison 2002; Paul et al. 2007).

2.2. Theoretical background – the agency theory

There has been considerable research on institutional venture capital fund manager decision-making (e.g. Sudek 2006). However, academics still lack understanding of their informal counterparts (e.g. Paul et al. 2007). Although both venture capitalists and business angels provide risky capital for private companies, the knowledge on venture capitalists cannot be fully applied to business angels. Van Osnabrugge (2000) used *the agency theory* from finance literature to explain the differences between venture capital and business angel decision-making. As far as the author acknowledges, this is the only theoretical framework applied to business angel decision-making.

According to Jensen and Meckling (1976) an agency relationship is defined as a contract between two parties, in which *the principal* engages *the agent* to work on their behalf and

delegates some of the decision-making authority to the agent. The theory assumes that both of the parties are maximizing their own utilities, with potential self-interests (Jensen and Meckling 1976). Due to the separation of ownership and control, there is a high probability that the agent will not always act in the best interests of the principal (Fama and Jensen 1983). The agency theory is therefore primarily concerned with two problems: adverse selection and moral hazard, which both arise in the presence of asymmetric information (Jensen and Meckling 1976). The first problem, *adverse selection*, occurs when the principal needs to rely on the incomplete information when selecting the agent (e.g. Van Osnabrugge 2000; Mason 2007; Lahti 2011). In these selection situations, the agent might claim to have certain abilities that he does not actually possess (e.g. Van Osnabrugge 2000) and the agent is naturally the only one who knows about his true abilities (e.g. Mason 2007). The second problem is *moral hazard*, which occurs when the agent does not act as they originally agreed upon in the contract (e.g. Van Osnabrugge 2000; Mason 2007; Lahti 2011). Moral hazard might occur when it is too difficult or expensive to monitor the actual performance the agent, or when there are conflicts of interest between the parties (e.g. Mason 2007; Lahti 2011).

According to Van Osnabrugge (2000) there is two ways to mitigate the potential agency conflicts between the principal and the agent. Both approaches advocate risk reduction at all stages of the investment process, but place more weight on different stages. The first one, *the principal agent approach*, is concerned with determining the optimal contract between the two parties (Jensen and Meckling 1976). To formulate an optimal contract, Van Osnabrugge (2000) argue that emphasis should be placed on ex ante the investment decision through screening and due diligence of the company. A careful evaluation reduces the asymmetries of information between the parties and supports writing a comprehensive contract. The second, *the incomplete contracts approach*, states that no perfect contracts exist. Therefore, it advocates the post investment allocation of control, which is found more important than ex ante screening and contract writing suggested by the first approach. Van Osnabrugge (2000) found that both business angels and venture capitalists indeed reduce agency risks at all stages of the investment process. However, business angels place more emphasis on doing so ex post the investment, while venture capitalists stress actions ex ante the investment. Accordingly, he argued that business angels follow the incomplete contracts approach and venture capitalists follow the principal-agent approach. (Van Osnabrugge 2000)

Van Osnabrugge (2000) stated that venture capital fund managers are typically paid employees who act as agents of the fund owners by investing their money. Thus, they play an

intermediary role between the fund owners and entrepreneurs. These fund managers are often required to meet short-term return targets and investment management. Their remuneration is typically based on the performance of the fund and they are seldom penalized for the losses of their individual decisions. Therefore, it can be argued that venture capitalists are, at least partially, isolated from both the actual risks and rewards of their decisions. Venture capitalists follow the principal-agent approach, as they need to behave competently for their fund owners. They spend more effort on ex ante the investment decision through screening, due diligence and writing comprehensive contracts. On the other hand, business angels tend to act as principals in the governance of their investee companies. As business angels invest their own money, they also bear the consequences personally. They are not as professional investors as their formal counterparts with research and contracting skills. Thus, they usually try to mitigate the potential agency conflicts, between them and the entrepreneur, by their own active involvement. They often take hands-on approaches to the companies, prefer to be consulted regarding any major decisions and frequently take managerial positions. As a result, they place more weight on the ex post risk mitigation tactics. (Van Osnabrugge 2000)

Due to the different roles, principal vs. agent, Van Osnabrugge (2000) argued that the investment decision-making of venture capitalists and business angels differs. For instance, the two most important investment criteria found in his study, the entrepreneur and the product or market, business angels placed more emphasis on the former and venture capitalists on the latter. In addition, venture capitalists measured financial profits before the investment and were foremost motivated by financial gains. However, business angels found financial motivations to be less relevant, as they were also motivated by non-financial reasons. They wanted to be involved in the entrepreneurial process and also to invest just for fun. As a result of the agency theory findings, we cannot fully apply the existing venture capital decision-making literature on business angels. (Van Osnabrugge 2000)

Academics have also raised concerns about the applicability of the agency theory to business angel decision-making (Landström 1992; Kelly and Hay 2003). First, the agency theory is built around an assumption of distrust between the investor and entrepreneur (Kelly and Hay 2003). However, trust between the parties is a necessary ingredient for business angel investments to be executed (Prowse 1998; Sudek 2006). Second, the agency theory assumes that principals and agents are motivated solely by economic reasons (Kelly and Hay 2003). However, many studies have concluded that also non-financial motivations matter for the business angels (Van Osnabrugge 2000; Mason 2007; Morrissette 2007). Third, the agency

theory is based on large public companies, in which the management holds relatively small equity stakes (Kelly and Hay 2003). Thus, it is questioned if the agency theory is an appropriate theory for small businesses, where the management usually owns significant proportions of the equity. As a result, academics have identified the need to apply also other theories to business angel decision-making (Kelly and Hay 2003; Mason 2007). Hence, future studies might for instance try to apply behavioural finance theories to business angels.

2.3. The evolution of the business angel decision-making research

As already explained in the brief introduction to business angels, their rejection rates of new investment proposals are high (e.g. Stedler and Peters 2003; Mason and Harrison 1995). Thus, it is critical to understand comprehensively both the investment and rejection criteria that business angels use in their decision-making. This knowledge can help business owners to increase their chances of attracting capital from business angels. In this section, I will concentrate on the evolution of the business angel decision-making research, focusing on both the investment criteria and the rejection criteria. I will first discuss the findings of the questionnaire and interview studies dated from late 80s to early 2000s. Thereafter, I will focus on the more current studies, which have shifted their focus towards more real-time studies concentrating mainly on the business pitch.

2.3.1. A review of questionnaire and interview studies

As far as the author acknowledges, Haar et al. (1988) were the first ones to study the investment criteria of business angels. Their study was based on a questionnaire addressed to U.S. East Coast angels with a low response rate of 4.3 %. Their final sample consisted of 121 business angels of which roughly one third were from New York. The questionnaire asked respondents to rank the importance of their investment criteria. They also asked to rank the crucial flaws in the funding proposals, which would disqualify their investment.

The most important investment criteria were identified from the group of respondents who ranked each criterion in the top two. The results suggest that actually very few of the criteria were ranked in the top two by the bulk of the respondents. Only two criteria were widely supported by business angels: management clearly demonstrates ability to manage the venture and the demonstrated market need for the product or service. Other less significant criteria were entrepreneur's track record and vast market potential for the product. Geographic

location was considered to be one of the least important investment criteria, which contrast to more current studies (e.g. Landström 1998). The results suggest that the decision-making criteria of business angels contrast to venture capitalists. Unlike venture capitalists, business angels are not interested in a thorough business plan and they tend to have little interest in the proprietary rights, or knowing the industry in which they invest. In addition, business angels are not interested in competitive isolation. However, they do agree with venture capitalists on the core disqualifiers: the management's inability to succeed and insufficient market potential. The authors also found that a crucial disqualifier is an entrepreneur who overestimates the value of the venture. (Haar et al. 1988)

Mason and Harrison (1996) were first to study on a deal-specific basis the reasons why business angels reject investment opportunities. The subject of their case study was a UK based business angel syndicate called Metrogroup. A random sample of the propositions that were considered but rejected by the syndicate was examined. The information was gathered from taped interviews, in which the lead angel discussed a total of 35 rejected investment opportunities. The aim of the study was to address the issue of why business angels say no. The majority of the investment proposals were rejected at the initial review stage. Altogether they rejected 32 propositions due to 61 identified reasons. Most of the opportunities were rejected for one or two key reasons. In fact, half of the propositions were rejected due to a single deal killer.

Mason and Harrison (1996) found that three types of deal killers dominate. The most dominant being the entrepreneur or management team. This result contrast to VCs, as they consider the management to be easily replaced and therefore do not consider it as such a significant deal killer. The second most cited reason was a split between market or marketing related reasons and financial considerations. However, if the results are analysed in terms of the opportunities, the number one rejection criteria is market and marketing-related issues. For instance, factors such as incomplete or flawed marketing strategy, barriers to distribution and highly competed markets were major turnoffs for business angels. Finance-related reasons accounted for slightly over one third of the rejected propositions in whole or partly. The primarily deal killer in this category was unrealistic or flawed financial projections. Issues such as pricing and deal structuring were of minor importance. The remaining deal killers were a diverse set of factors, of which product attributes was the most frequently cited.

They also identified differences in rejection criteria at different stages of the evaluations. For instance, they found that opportunities which were rejected at the initial stage usually had more than one deficiency and propositions rejected at later stages were usually dominated by a single deal killer. In fact, entrepreneur or management team was the most cited deal killer at initial review stage and was never the sole reason. On the other hand, marketing factors were the most common sole deal killer at initial review stage. They also found that if the business angel had prior experience on the field, the deals were rejected due to accumulation of several deficiencies rather than just one single factor. Due to several limitations, the authors suggested that their study should be replicated with different types of business angels and a larger set of investment opportunities. (Mason and Harrison 1996)

Landström (1998) studied Swedish business angels in order to describe and explain the decision-making criteria used when assessing new investment proposals. He used a conjoint method to measure quantitatively the relative importance of one decision-making criterion in relation to another. His sample consisted of 44 Swedish business angels who answered either a questionnaire relating to general decision-making criteria or one relating to leadership criteria. A total of 34 general decision-making criteria and 35 leadership criteria were identified. The author viewed the business angels not only as financiers of small businesses but also as entrepreneurs. Furthermore, he viewed business angels' investments as subjects, in contrast to earlier studies, in which investments have been treated as objects. By doing this, he wanted to emphasize the business angels' willingness to participate in the creation process and viewed the relationship between the investor and the entrepreneur using concepts such as 'business creator' and 'co-creator'.

The results suggest that business angels feel much more dependent on the people they invest in than other types of investors. Business angels indeed place considerable weight on the entrepreneur or management team in their decision-making and focus especially on the relationship between themselves and the entrepreneur. He found that the second most important investment criterion is the business potential of the firm. Business angels tend to examine both the market and technical potential of the investment and focus on concepts such as market growth and attractiveness, and uniqueness of the product. Usually business angels want to be able to develop the firm together with the entrepreneur. However, as they might not have the opportunity to take on managerial roles in their investments or they lack time and energy, they need to rely heavily on the entrepreneur's own ability to develop the business. Thus, they need to evaluate critically the correspondence between the investment proposal

and the investors' experience and familiarity within the field. The results also indicate that the decision-making criteria of business angels seem to be greatly dependent on the individual preferences of the investor. He did not find any individual criteria which could stand out as important for a large group of investors. (Landström 1998)

Feeney et al. (1999) analysed the acceptance and rejection criteria of business angels using formal qualitative analysis. They conducted telephone interviews about investment patterns by using open-ended questions. Their sample consisted of 153 Canadian business angels, of which 115 was classified as active and rest as occasional investors. By their categorizing, active investors invested in one or more opportunity per year and occasional investors less frequently. Their findings indicate that business angels view the overall business opportunity and the principals of the company as key criteria in the decision-making process. They found that desirable attributes of the owners are their track record, realism, integrity and openness. On the other hand, the desirable attributes of the opportunity are potential for high profit, a reasonable exit plan, security and the involvement of the investor.

The business angels emphasized more on the growth potential of the opportunity and the owner’s capability to realize the potential of the business. However, they also found out that active and occasional investors differ somewhat in the emphases that they place on particular criteria. For example, active investors more frequently than occasional ones, identify attributes of the owners as problematic, while occasional investors see it the other way around and consider attributes of the business as weakness. Moreover, business angels seldom identified the criteria of business concept as an important one, although it is important for venture capitalists. Practically in all cases the owner attributes out valued the business attributes as investment criteria, especially in face-to-face meetings in early staged deals. At seed stage, it is clearly the case that investor is investing more in the people behind business than in the business itself. (Feeney et al. 1999)

Feeney et al. (1999) also found that business angels return on investment (ROI) expectations were in line with venture capitalists, although it seems that they take more risk when they invest in earlier staged deals. However, it is typical that business angels invest in businesses, which they are familiar with and thus they do not perceive to be carrying excess risks compared to venture capitalists. They tend to seek for potentially high profits, a reasonable exit plan, security and involvement in their investment. On the other hand, they find that business angels rejected deals because of typical shortfalls, such as under-capitalization,

personal qualities of owners, weak management and for valuation reasons: either they asked for too much capital or the price tag could not be agreed on. Nevertheless, the most typical reason for rejection was still incapable management. Their single most important finding is that the reasons why investors reject opportunities are not simply the converse of reasons what makes them to invest. For instance, poor management was the primary deal killer; however management ability is not the primary deal maker, although it is an important one.

Mason and Harrison (2002) studied the barriers to invest in informal venture capital markets. In other words, they studied why business angels do not make as many investments as they could. Their study was based on a postal survey addressed to the investors in National Business Angels Network (NBAN), which operates in England and Wales. They received a total of 84 responses, which represents a 20 % response rate. However, only the 74 responses by business angels were used, of which 9 % were female. They found that there is no shortage of finance available for private investments. They found that business angels are seeking for new investments and would like to allocate a higher proportion of their wealth to private investments. However, the business angels argue that companies, which suit their personal investment criteria, are scarce. The bulk of the proposals they receive are indeed of poor quality. In addition, business angels often find themselves in a situation, where they cannot agree on the investment terms and conditions with the entrepreneurs. Hence, the paper argues that the barrier to invest is actually on the demand side.

According to Mason and Harrison (2002) almost two-thirds of the respondents have clearly defined investment criteria. These criteria include stage of business development, industry, technology and location. The criteria will influence the types of businesses that business angels are willing to invest. The results suggest that business angels prefer investments in established companies seeking expansion financing, early stage expansion and to a much lesser extent start-up financing. Only a minority is interested in seed staged companies. The results also suggest that business angels are critical on the industry they invest in and the preferences of the industry found to be extremely diverse. However, business angels tend to invest in sectors, markets or technologies that they are familiar with. Business angels reject on average 80 % of the investment propositions due to their lack of knowledge of the industry, technology or market. In addition, slightly over half of the respondents argued that they have a certain geographical limit for their investments. They said that they are not interested to invest in businesses beyond 2 hours of travelling time. Only a small minority of the respondents were interested to invest in continental Europe or North America. The authors

also studied the circumstances under which the business angels could relax their investment criteria. The results suggest that they might do this if the entrepreneur or the management team has a high credibility. Also other factors, such as investments close to home or investments of small size encourage easing the criteria. These are due to reduced monitoring costs and the ability to speculate.

Mason and Harrison (2002) argued that the quality of investment propositions is also a major barrier to investment. Majority of the respondents pointed out that their ability to make investments is limited to the quality of the deal flow. The main deal killers found to be business plans with unrealistic assumptions or information that lacks credibility. The second most commonly cited reason is the entrepreneur or management team who is not credible. They also found deficiencies, such as insufficient information provided, the business concept needs further development and limited growth prospects of the business. Moreover, less significant reasons were not demonstrating an obvious exit route, lack of originality in the product or service and lack of long-term vision for the business. In addition, the results suggest that opportunities referred by friends, business associates and other BAs are of best quality. The final barrier to invest is that quite often they cannot make an agreement on the terms and conditions with the entrepreneur that would satisfy both sides. Business angels indeed secure only one investment out of four offers they make. The main reason is that they cannot agree on the price or the shareholding structure. This might be due to unrealistic expectations of one or both parties.

The aim of Stedler and Peters (2003) study was to provide basic information on German business angels. Their central focus was on business angels' motivations and reasons for investing. Their research was based on 232 questionnaires, which represents a 46 % response rate. Their results suggest that business angel investment criteria cover management, product, market, financial and investment aspects. They found that the most important factors are relating to the entrepreneur or management team, market or sales and product or service. Personal impression, persuasive powers and ability to enthuse were critical aspects in the entrepreneur category. Moreover, uniqueness and competitiveness were critical aspects in the product category, and market category highlighted the growth potential. Financial considerations and investments were also found to be important categories, but less significant than the previously mentioned. These categories included profitability, proportion of self-financing, exit options and return on investment. Moreover, their results suggest that business angels have several motives for investing. Their first motive is to exploit and profit

from their professional experience. Second motive, is the chance of a higher return on investment and third, the opportunity to make a positive contribution to a successful business start-up. Additional motives are that they like personal challenges and are willing to promote a product idea. Contradicting to earlier research (Haar et al. 1988), the authors also found that having a business plan is necessary for business angels. (Stedler and Peters 2003)

2.3.2. A review of real-time studies

One way entrepreneurs can seek capital for their business is by delivering an oral presentation of their investment opportunity to potential investors (Clark 2008). The aim of the sales pitch is to try to sell the entrepreneur's ideas and equity to business angels in exchange for capital, and sometimes even for their expertise and contacts. Nowadays, the trend is that business angel networks and other private investor agencies invite entrepreneurs to deliver these pitch presentations at their social events, investor forums and dinner clubs (Mason and Harrison 2003; Mason 2007; Clark 2008). These meetings usually take place at the initial screening stage (Mason and Harrison 2003), before the business angels have even reviewed their business plan or met the entrepreneurs in person (Clark 2008). These presentations typically last only 10 to 15 minutes (Mason and Harrison 2003), but can also be sort of elevator pitches, which take only couple of minutes (Clark 2008). For instance, in Dragons' Den the entrepreneurs have only 3 minutes time for their initial pitch. Most of pitch meetings include a Q&A session afterwards (Mason and Harrison 2003; Mason 2007; Clark 2008). As the median time that business angels reach their decision is only 6 minutes (Mason and Rogers 1997), there is no need to question the effectiveness of such a short pitch. Despite of the relatively short duration, the economic impact of these presentations can be enormous for the success of the entrepreneur's business (Clark 2008).

Mason and Harrison (2003) studied the role of impression management in business angel decision-making with a real-time case study. A videotaped actual business pitch of an entrepreneur seeking capital for a software venture was shown in a workshop to 30 business angels. Their thoughts, impressions and reactions were captured, and at the end of the presentation they were asked if they were interested to pursue the proposition further. They were also asked to provide a brief reasoning for their decision. They made a total of 198 separate comments on the proposal and on average 6.6 comments per investor. Majority of the respondents would reject the proposal, which was mainly due to following reasons:

incomplete information, lack of understanding, poor presentation and investor fit considerations.

The results suggest that presentation-related issues dominated their reactions. The investors were particular critical of the style, content and structure of the pitch. For instance, the entrepreneur was criticized for not connecting with the audience and losing their attention. Secondly, the pitch was overly technical and assumed understanding which only few possessed. Finally, the structure of the pitch was criticized due to confusing order and not providing a context. The second most important category of the comments was relating to market issues. These comments were also negative due to failure to provide sufficient information. For instance, the entrepreneur failed to provide information on the market size, value, segmentation, competition and potential customers. Product related factors were the third most frequent topic of comments. These comments were quite neutral and mainly posed questions for information. However, the entrepreneur was criticized of not selling the benefits of the product to the investors. Moreover, the failure of the entrepreneur to sell the opportunity to business angels raised doubts concerning the ability of the company to sell their products. In addition, the investors also commented on the following issues: people, financials, business strategy, investor fit, exit, intellectual property rights and deal structure. Results suggest that entrepreneurs need to develop their impression management skills so that they are able to impress the investors in the pitch meetings. (Mason and Harrison 2003)

Mason and Stark (2004) studied the differences between the investment criteria of bankers, venture capitalists and business angels. They used a verbal protocol analysis, in which respondents were ‘thinking out loud’ as they screened potential business opportunities. The verbalizations of respondents were recorded, coded and analysed for their research questions. Their real-time data provided new insight on the decision-making process of different investors, compared to the self-reported and retrospective data used in previous studies. Their total sample consisted of 30 transcripts, in which three bankers, three venture capitalists and four business angels were evaluating three business proposals. As a result, they concluded that different types of investors analyse business proposals differently, have different investment criteria and different weightings of those criteria.

Mason and Stark (2004) found that business angels and venture capitalists are more alike, as they both are equity investors and interested in capital gains. On the other hand, they both contrasted sharply with bankers, which were mostly worried on financials to cover their debt

repayments. However, they also reported two major differences between business angels and venture capitalists. Business angels tend to focus slightly more on the entrepreneur when evaluating business proposals, as they are regarded as hands-on investors. However, the main difference was that business angels regard investor fit as a crucial criterion and venture capitalists does not. Venture capitalists tend to seek only financial returns, but business angels also seek for personal interest and fun. Business angels indeed explained that they prefer exciting investments over boring ones. These differences are due to the fact, that business angels invest their own money and are usually willing to have hands-on approach in their investments. Venture capitalists on the other hand invest with other people's money and do not fully bear the consequences themselves. As a result, business angels place more emphasis on the ability of the entrepreneur and also are willing to use their own expertise and knowledge to minimize the potential agency risks. Moreover, the findings of Mason and Stark (2004) are consistent with the agency theory approach (Van Osnabrugge 2000).

Sudek (2006) studied what U.S. business angels are considering when they review investment opportunities, and how they rank their investment criteria. The study was conducted in two phases. A participant-observer methodology was used in the first phase to collect data. The methodology involved the researcher to personally observe and experience the angel organization as a member. The author gathered the qualitative data by observing the initial meetings between the entrepreneur and the business angels. These meetings, often referred as screenings, consisted of two parts: a public presentation and a private Q&A session. The second phase of the study was quantitative and consisted of surveying business angels on what criteria they use to make an investment and how these criteria are prioritized. The final sample consisted of 72 Southern California business angels, which represents a 42 % response rate. All of the participants were members of Tech Coast Angels (TCA).

Sudek (2006) found that the most important criterion was trustworthiness of the entrepreneur. Usually things such as avoiding the questions, failing to listen to questions, giving sly or contradictory answers to business angels' questions, were deemed to break down the trust. Each interaction between the entrepreneur and the business angels is an opportunity to make or break the trust. Ultimately a lack of trust can cancel out a viable business idea with both growth and ROI potential. Therefore, the entrepreneur needs to be honest and trustworthy in order to attract capital. The second most important criterion was the management quality. Often a central question was whether the management team was appropriate for the project. The entrepreneur was not expected to be able to do everything himself, but was expected to

know the shortcomings of the team and what kind of team members needed to be added. Moreover, management team's prior success was also appreciated. For example, a team that had previous success in building and selling a company was perceived as a winning combination. The third most important criterion was the passion and commitment of the entrepreneur, as those will eventually translate into business success. The fourth most important criterion was the exit strategy. Business angels primarily invest to receive a return on their capital, which is realized through an exit or liquidity event. Therefore, the aim is to find companies that have potential to grow to be attractive to acquirers or have the possibility of an IPO. Business angels were indeed confident that ROI will come, if there is good growth in the company and there is a possibility to exit. Also additional themes emerged during the study, such as revenue potential, domain expertise of the investor, market growth potential, barrier of entry for competitors, intellectual property and profitability. Finally, his findings also suggested that the top three ingredients for the management team are passion, survivability, and openness to mentoring.

Clark (2008) studied the impact of entrepreneurs' oral presentation skills on business angel investment decision-making at initial screening stage. The study was based on three real-life pitch presentations delivered at UK business angel investor forum. The entrepreneurs had roughly 15 minutes to present their investment opportunity to the investors and a five-minute Q&A session followed each presentation. Immediately after each case, 24 business angels completed a questionnaire evaluating the quality and content of that presentation. The questionnaire had a high 80 % response rate and the final sample represented one-third of the investor forum attendants. Business angels were asked to evaluate a total of 32 aspects, of which twelve were regarded as presentational relating to structure, style and delivery of the presentation and the remaining twenty were non-presentational factors relating to the company, market, products and funding requirements. In addition, the business angels were asked to address whether they are interested, undecided or not interested in each proposition and to provide a reason for their decision. An overall presentation score was obtained from each business angel for each pitch by adding the 32 individual factor scores in each presentation together.

The main finding of Clark (2008) suggest, that the higher the entrepreneur's overall presentation score, the greater is the likelihood that the business angel would be interested to pursue the business opportunity further. In other words, business angels' interest found to be significantly related to the quality and content of the presentation. Furthermore, presentational

factors seemed to have the highest influence on the overall score and thus also on business angels' level of interest to invest. Comments about these presentational issues were mainly focused on issues relating to clarity or understand ability of the pitch and the structure of the presentation. The second most commonly cited theme was the level or type of information provided. Business angels also commented on the entrepreneurs' personal characteristics and the entrepreneurs' ability to sell themselves and their investment opportunity. Nevertheless, business angels appeared to be unaware of or were reluctant to acknowledge the influence of these presentational factors in their investment decision-making, as they focused mainly on non-presentational criteria in their post presentation intentions. In fact, four non-presentational themes dominated the comments amongst the business angels who cited to be interested in pursuing the opportunity: the quality of the entrepreneur or management team, the business or market potential, the quality or marketability of the products, and the track record.

On the other hand, Clark (2008) identified five non-presentational themes that emerged amongst the business angels who cited to be not interested in pursuing the opportunity: lack of investor fit, reservations about the competition, problematic or unproven business model, small market or poor sales potential, and poor composition of or weaknesses in the management team. Other identified, but less frequently cited, deal killers included lack of sales, high risk of the investment, and criticism about the financials, sales projections and company valuation. Notably, only one investor was critical about the stage of the business.

2.4. Summary of business angel decision-making criteria

This section pools together the prior literature findings on business angel decision-making criteria presented in the preceding section. I will first discuss the prior literature findings on the business angel investment criteria and then the rejection criteria. The findings on the most significant investment criteria are presented in Table I and the top 3 decision-making criteria are presented in Table II.

2.4.1. Business angel investment criteria

Prior literature findings suggest that the top three investment decision-making criteria of business angels are related to entrepreneur or management team, market or business potential and products, respectively. First of all, as Feeney et al. (1999) put it, in early stages it is

clearly the case that investors are indeed focusing more in the people behind the business than in the business itself. Most of the previous studies have emphasised the characteristics of the entrepreneur or the management to be the most dominant investment criterion (Haar et al. 1988; Landström 1998; Van Osnabrugge 2000; Stedler and Peters 2003; Mason and Stark 2004; Sudek 2006; Clark 2008). This is actually quite obvious result, as in early stages there is usually relatively little evidence of the business performance, thus a capable entrepreneur or management team can indeed make or break the business to be successful. According to academics, business angels place considerable weight on the following characteristics of the entrepreneur or management team in their decision-making: their ability (Haar et al. 1988; Landström 1998; Feeney et al. 1999; Van Osnabrugge 2000; Mason and Stark 2004; Clark 2008), their quality (Sudek 2006; Feeney et al. 1999), their track record (Haar et al. 1988), and their personal characters; such as trustworthiness, passion and commitment (Sudek 2006). Also, the personal impression of entrepreneur (Stedler and Peters 2003) and the relationship between the entrepreneur and business angels are taken into consideration in business angel decision-making (Landström 1998).

The second most commonly emphasised business angel investment criterion is the market or business potential (Haar et al. 1988; Landström 1998; Feeney et al. 1999; Clark 2008). As business angels are predominantly motivated to invest by financial reasons (Haar et al. 1988; Mason and Harrison 2002; Mason 2007; Riding 2008), it is quite obvious that they seek ventures with market or business potential. Business angels evaluate the potential in terms of growth opportunities (Haar et al. 1988; Landström 1998; Feeney et al. 1999; Stedler and Peters 2003; Clark 2008) that usually leads to profit potential (Feeney et al. 1999). Business angels try to reach their high return expectations by finding a successful exit after growing and developing the businesses for several years (Feeney et al. 1999). Hence, they seek companies, which have the potential to be grown to be attractive for acquirers or to be listed via an IPO (Prowse 1998; Feeney et al. 1999; Stedler and Peters 2003; Sudek 2006; Paul et al. 2007).

The third most commonly cited investment criterion, is related to the products or services these business are offering to the markets. However, according to my analysis, the third place is not as clear cut as the top two ones identified. Nevertheless, authors such as Van Osnabrugge (2000), Stedler and Peters (2003) and Clark (2008) found product related reasons in their top three investment criteria. According to these academics, business angels predominantly evaluate product potential (Van Osnabrugge 2000; Clark 2008) and product

uniqueness (Stedler and Peters 2003) in their investment criteria. Product related attributes tend to go hand in hand with the market related reasons, as there must be a desire for these products in the markets, in order to derive the business potential.

Mason and Harrison (2003) argued that business angels have pre-defined investment criteria, which relate to the stage of the business, industry, technology and location. However, other academics did not find these as crucial as the entrepreneur, market and product related criteria. Another significant finding in the prior literature is that even though high capital appreciation is the predominant source of motivation for business angel investing, return on investment is rarely seen as the top investment criteria. Financial considerations reached to the top three criteria only in two papers (Van Osnabrugge 2000; Mason and stark 2004) out of twelve papers analysed. Moreover, despite of the focus on the pitch meetings in the most recent literature (Mason and Harrison 2003; Mason and Stark 2004; Sudek 2006; Clark 2008; Maxwell et al. 2011), the presentational factors are not considered to be that important. Prior literature suggest, that the presentational issues only affect whether business angels are willing to continue listen to your pitch or not, but do not seem to affect the ultimate investment decision (Clark 2008). Finally, it seems that the investment decision-making criteria of business angels seems to change during the investment process and are greatly dependent on the investor's personal preferences and experience (Mason and Harrison 1996; Landström 1998; Mitteness et al. 2011). Table I pools together the prior literature findings on business angel investment criteria.

Table I
Literature on business angel investment criteria

Table presents the most relevant findings on business angel investment criteria in prior literature, and is modified from Maxwell et al. (2011). Table presents the investment criteria categories and each identified criteria (if identified denoted by x) by prior literature. The findings in prior literature are presented in chronical order. In addition, the sample sizes of each study, the country in which the study has been made and the methodology used are presented.

	Haar et al. (1988)	Mason and Harrison (1996)	Landström (1998)	Feeney et al. (1999)	Van Osnabrugge (2000)	Mason and Harrison (2002)	Stedler and Peters (2003)	Mason and Harrison (2003)	Mason and Strak (2004)	Sudek (2006)	Paul et al. (2007)	Clark (2008)
PRODUCT												
Interest/benefits	x	x	x	x	x			x	x	x		
Protectability	x	x	x		x	x	x			x		
Innovation/quality		x			x		x	x	x			x
MARKET												
Market size	x	x	x		x			x	x	x		x
Growth potential		x	x	x	x	x	x	x	x		x	x
Supply/distribution		x	x					x				
Market dynamics	x	x	x	x	x			x		x		x
ENTREPRENEUR												
Industry experience	x	x	x	x		x		x	x	x	x	x
Track record		x	x	x	x			x	x	x		x
Passion/commitment		x		x	x	x	x	x	x	x		x
Integrity/trustworthiness				x	x	x				x		
Technology knowledge			x		x		x		x		x	
FINANCIAL												
Profitable/realistic				x	x	x	x	x		x		x
Capitalization/cash flow		x		x	x	x	x			x		
Size of investment		x		x	x					x		
Plan/presentation	x	x	x	x		x		x	x			x
ROI/valuation		x	x	x	x		x	x	x	x		x
Liquidity		x	x	x	x	x	x	x		x	x	
INVESTMENT												
Team characteristics	x	x	x	x						x	x	x
Business fit	x	x	x	x	x			x	x	x	x	x
Location	x		x		x						x	
Referral source		x					x					
Co-investment		x	x		x					x		
Investor role			x	x	x							
Sample size	**121**	**1**	**73**	**153**	**143**	**74**	**230**	**30**	**10**	**72**	**30**	**3**
Country	**US**	**UK**	**Sweden**	**Canada**	**UK**	**UK**	**Germany**	**UK**	**UK**	**US**	**Scotland**	**UK**
Methodology	**Questionnaire**	**Taped interviews, case study**	**Questionnaire**	**Telephone interview**	**Interviews & questionnaire**	**Questionnaire**	**Interviews**	**Video taped presentation**	**Verbal protocol analysis**	**Participant-observer**	**Interviews**	**Presentations & questionnaire**

2.4.2. Business angel rejection criteria

Feeney et al. (1999) found that the reasons why business angels choose to invest in companies are not in fact the exact opposite that prompts them to reject investments. However, my consensus analysis of the prior literature says the opposite, as they are in fact quite the same. Past literature suggest, that the three most dominant deal killers are related to the entrepreneur or management team (Haar et al. 1988; Mason and Harrison 1996; Feeney et al. 1999; Mason and Harrison 2002; Mason and Harrison 2003; Clark 2008), market potential (Haar et al. 1988; Mason and Harrison 1996; Mason and Harrison 2003; Clark 2008) and financials (Haar et al. 1988; Mason and Harrison 1996), respectively. Hence, compared to the investment criteria findings, only the third place has changed from product related reasons to financial considerations.

Business angels tend to reject most of the opportunities due to deficiencies in the entrepreneur or the management team. They tend to reject opportunities if they feel that the management team is weak or incapable (Haar et al. 1988; Mason and Harrison 1996; Feeney et al. 1999), or if the management team has unrealistic assumptions or lacks credibility (Mason and Harrison 2002). Opportunities are also rejected due to owners' personal qualities (Feeney et al. 1999). As most of the business angels are regarded as hands-on investors, they tend to seek persons they can work with and rely on (Landström 1998; Prowse 1998). The second most significant rejection reason is related to market or marketing. For instance, business angels tend to be predominantly turned off due to opportunities with weak market potential (Haar et al. 1988; Mason and Harrison 1996; Mason and Harrison 2003), marketing deficiencies (Mason and Harrison 1996) and competition reasons (Clark 2008). Although it is not a clear cut, my analysis suggests that, finance related reasons could be the third most important reason why business angels reject their opportunities. For instance, unrealistic or flawed financial projections (Mason and Harrison 1996), valuation (Haar et al. 1988; Mason and Harrison 1996; Mason and Harrison 2003) and under-capitalization (Feeney et al. 1999) are commonly cited financial deficiencies. Financial reasons are quite obvious rejection reasons, as business angels are predominantly motivated to invest by them (Haar et al. 1988; Mason and Harrison 2002; Mason 2007; Riding 2008). Business angels reject opportunities, in which they do not see the potential for high capital appreciation (Feeney et al. 1999) or if they are not able to agree on the price of the company with the entrepreneurs (Feeney et al. 1999;

Mason and Harrison 2002). Both of these ultimately affect to business angels' return on investment.

Other significant deal killers included factors, such as presentational flaws (Mason and Harrison 2003) and not providing sufficient information to business angels (Mason and Harrison 2002). Hence, it seems that presentational issues may reject the deals between the business angels and entrepreneurs, but do not seem to be of great importance when accepting them. Business angels also tend to evaluate investor fit considerations when choosing whether to invest or not (Clark 2008). Thus, it can be argued that business angels tend to reject opportunities, which do not fit to their own specific investment criteria. Other less significant rejection criteria were related to product, exit plan, lack of long-term vision and high risk of the investment (e.g. Mason and Harrison 1996, 2002, 2003; Clark 2008). Mason and Harrison (1996) found that the opportunities are usually rejected due to one or two deal killers and most of the opportunities face rejection at the initial screening stage. Table II presents the Top 3 decision-making criteria of business angels in the prior literature.

Table II
Literature on top 3 decision-making criteria of business angels

The table pools together my analysis on the top 3 business angel investment and rejection criteria findings in the prior literature by each author. The literature column presents the papers used to perform the analysis.

Literature	Business angel investment criteria	Business angel rejection criteria
Haar et al. (1988)	Management ability, Market, Track record	Management's inability, Market potential, Valuation
Mason and Harrison (1996)	-	Entrepreneur/management, Market/marketing, Financials
Landström (1998)	Relationship, Market potential, Entrepreneur's ability	-
Feeney et al. (1999)	Growth potential, Profit potential, Owners capabilities	Under-capitalized, Owners personal qualities, Weak management
Van Osnabrugge (2000)	Entrepreneur, Market/Product, Financials	-
Mason and Harrison (2002)	Stage of the business, Industry or technology, Location	Unrealistic assumptions, Credibility, Insufficient information
Stedler and Peters (2003)	Personal impression, Product uniqueness, Growth potential	-
Mason and Harrison (2003)	-	Presentation, Market, Product
Mason and Stark (2004)	Entrepreneur/management, Investor fit, Financials	-
Sudek (2006)	Trustworthiness, Management quality, Passion and commitment	-
Clark (2008)	Entrepreneur/management, Market potential, Product	Investor fit, Competition, Unproven business model

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3 HYPOTHESES

This chapter presents the hypotheses that are tested in this study. The hypotheses are mainly based on the existing literature presented in Chapter 2. First, I will motivate and posit the hypotheses on the business angel investment criteria and business angel syndication. Secondly, I will posit the hypotheses on the business angel rejection criteria and business pitch. Finally, all the hypotheses are pooled into Table III at the end of the chapter.

3.1. Hypotheses on business angel investment criteria and syndication

One of the pre-defined investment criteria of business angels relate to the stage of the business (Mason and Harrison 2003). By definition, business angels are high-net-worth individuals who invest their own money in private companies seeking for start-up or early stage capital (Haar et al. 1988; Feeney et al. 1999; Van Osnabrugge 2000; Mason 2007). They also provide seed financing, but that to a lesser extent (Mason and Harrison 2002). Business angels prefer to invest in companies seeking for early stage expansion and expansion financing (Mason and Harrison 2002). As a result, I posit the 'Stage of the company' hypothesis as follows:

H_1: *BAs invests primarily in start-ups or early staged companies seeking for expansion financing*

Due to their small population and the general difficulties of studying business angels, female business angels remain fairly unstudied. Numerous studies have shown that typically only 5 % or less of the business angel population studied in different countries are female (Haar et al. 1988; Mason and Harrison 1994; Lumme et al. 1998; Hindle and Wenban 1999). Harrison and Mason (2007) provided the seminal study of women's role in the business angel market. Their study concluded that women investors who are active in the market differ from their male counterparts in only limited respects (Harrison and Mason 2007). On the other hand, gender-specific differences in investment behaviour are widely studied in general finance literature. A wide spread view in the literature is that female investors tend to be more conservative than male investors (Schubert et al. 1999). For instance, Jianakoplos and Bernasek (1998) argue that single women exhibit relatively more risk aversion in financial decision-making than single men. Sunden and Surette (1998) reports similar findings in their

asset allocation study by concluding that single male investors allocate more of their pensions in stocks compared to single women and married men. Academia has also found that due to overconfidence single men tend to trade more than their female counterparts, which ultimately hurt their returns (Barber and Odean 2001). However, also contradictory results are found, Schubert et al. (1999) argue that women do not generally make less risky financial choices than men under controlled economic conditions. Moreover, they suggest that gender-specific risk behaviour may be due to differences in male and female opportunity sets rather than in stereotypic risk attitudes (Schubert et al. 1999). Despite of the mixed findings, I posit the 'Gender differences' hypothesis as follows:

H_2: *Female BAs are more conservative in their investment decision-making than male BAs*

Business angels prefer co-investing with other business angels (Prowse 1998; Feeney et al. 1999; Paul et al. 2007). There are typically two to three business angels in syndicated deals (Morrissette 2007). Syndication tends to improve the deal flow and makes investments less risky for the individual business angels, as the due diligence and evaluation improves (Mason 2007). Hence, also the agency risks are perceived to be lower compared to single investments (Kelly and Hay 2003). Business angels might even relax their investment criteria, if they invest within a syndicate (Mason and Harrison 2002). However, one of the main reasons of syndication is that it makes more and larger investments available for individual investors (e.g. Kelly and Hay 2003; Mason 2007). Academics have argued that more studies are needed in order to better understand the dynamics of syndication (Kelly and Hay 2003). Therefore, I posit the 'Syndicated investments' hypothesis as follows:

H_3: *Investment size, equity stake and deal valuation increase in syndicated investments*

Business angels are primarily motivated to invest due to financial reasons (Haar et al. 1988; Mason and Harrison 2002; Mason 2007; Riding 2008). Although return on investment is the main source of motivation for angel investments, non-financial considerations are also seen as influential (Van Osnabrugge 2000; Mason 2007; Morrissette 2007). Moreover, the return on investment is heavily dependent on the financial performance of the company and is ultimately realized in the exit process (Feeney et al. 1999; Sudek 2006). Despite being the top motivation for business angels, financial considerations are only seldom found in the top of their investment criteria in prior literature. However, it has been emphasized that business

angels are not philanthropists, and are indeed interested on company's financials and return on investment considerations (Landström 1998). Moreover, as most early staged companies tend to have limited trading history (Mason 2007), I expect that business angels seek companies that can clearly demonstrate their profit potential. Accordingly, I posit the 'Financial performance' hypothesis as follows:

H_4: *BAs invest in companies with good financial performance or companies with proven profit potential*

Business angels feel much more dependent on the people they invest in than other types of investors (Landström 1998; Van Osnabrugge 2000; Mason and Stark 2004). They indeed place considerable weight on the entrepreneur or management team in their decision-making and focus especially on the relationship between themselves and the entrepreneur (Landström 1998). Most of the previous studies have emphasized the characteristics of the entrepreneur or the management to be the most dominant investment criterion of business angels (Haar et al. 1988; Van Osnabrugge 2000; Stedler and Peters 2003; Mason and Stark 2004; Sudek 2006; Clark 2008; Mitteness et al. 2012). This is actually quite obvious result, as in early stages there is usually relatively little evidence of the business performance, thus a capable entrepreneur or management team can make the difference. On the other hand, investment criteria relating to products or services are also found very significant for business angels (Van Osnabrugge 2000; Stedler and Peters 2003; Clark 2008). Academics argue that they predominantly evaluate the product potential (Van Osnabrugge 2000; Clark 2008) and product uniqueness (Stedler and Peters 2003) in their investment decision-making. Accordingly, I posit the 'Product and entrepreneur' hypothesis as follows:

H_5: *BAs invest in companies with a combination of a good product and capable entrepreneur*

One of the most noteworthy characteristics of business angels is that they consider themselves as hands-on investors (Van Osnabrugge 2000; Mason and Harrison 2002; Mason and Stark 2004; Paul et al. 2007). In addition to the capital injection, in many cases business angels are reported to provide also their time and expertise (Mason 2007). Business angels might also take board seats or have some other sort of employment relationships with their investee businesses (e.g. Prowse 1998). As they only have limited time to participate in the day-to-day management due to investments in several private businesses (Mason and Harrison 2002; Paul

et al. 2007), they usually play advisory or monitoring roles (Stedler and Peters 2003; Mason 2007). With these hands-on roles, BAs try to mitigate the agency conflicts between themselves and entrepreneurs (Van Osnabrugge 2000). They also seek to influence the business and are willing to exploit their commercial skills, entrepreneurial experience, business know-how and contacts (Mason and Harrison 1995). Thus, I posit the 'Hands-on contribution' hypothesis as follows:

H_6: *BAs invest in companies where they have ability to contribute with their expertise or contacts*

3.2. Hypotheses on business angel rejection criteria and business pitch

Prior literature suggests that business angels reject most of the investment opportunities due to deficiencies in the entrepreneur or the management team. Business angels tend to reject opportunities if they feel that the management team is weak or in capable (Haar et al. 1988; Mason and Harrison 1996; Feeney et al. 1999), or if the management team has unrealistic assumptions or lacks credibility (Mason and Harrison 2002). Opportunities are also rejected due to owners' personal qualities (Feeney et al. 1999). As most of the business angels are hands-on investors, they need to seek persons they can work with and rely on (Landström 1998; Prowse 1998). According to the prior literature, I should find entrepreneur or management in top of my rejection reason list. Therefore, I posit the 'Entrepreneur or management' hypothesis as follows:

H_7: *BAs reject opportunities primarily due to entrepreneur or management related reasons*

The second most commonly cited reason for rejection in prior literature is related to market or marketing. For instance, business angels are predominantly turned off due to opportunities with weak market potential (Haar et al. 1988; Mason and Harrison 1996; Mason and Harrison 2003; Sudek 2006), marketing deficiencies (Mason and Harrison 1996), poor market size and competition (Clark 2008). Moreover, Mason and Harrison (2003) also found that the second most important rejection reason category was related to market issues. In their study, business angels commented negatively on the failure to provide sufficient information in pitch meeting relating to the market size, market value, segmentation, competition and potential customers

(Mason and Harrison 2003). Therefore, I assume that market related reasons are also found in my top three rejection criteria rank and posit the 'Market' hypothesis as follows:

H_8: *Market related issues is one of the most dominant rejection reason why BAs reject opportunities*

The prior literature findings on the third most common rejection reason for business angels is not as clear cut as the first two. Hence, I posit hypothesis for investment criteria relating to product or service, financials, valuation and investor fit. First of all, the importance of product or service as an investment criterion is widely accepted (Van Osnabrugge 2000; Stedler and Peters 2003; Clark 2008). However, it is not as widely accepted as a rejection criterion. Nevertheless, Mason and Harrison (1996 and 2003) have already twice concluded that product related issues are indeed significant deal killers. As a result, I posit the 'Product or service' hypothesis as follows:

H_9: *Product or service related issues is one of the most dominant reasons why BAs reject opportunities*

Moreover, my analysis on the prior literature suggests that, finance related reasons could actually be the third most important reason why business angels reject their opportunities. For instance, unrealistic or flawed financial projections (Mason and Harrison 1996; Clark 2008), valuation (Haar et al. 1988; Mason and Harrison 1996; Clark 2008) and under-capitalization (Feeney et al. 1999) are commonly cited deficiencies in financials. As business angels are predominantly motivated to invest by financial reasons (Haar et al. 1988; Mason and Harrison 2002; Mason 2007; Riding 2008), business angels reject opportunities, in which they do not see the potential for high capital appreciation, or if they are not able to agree on the price of the company with the entrepreneurs (Feeney et al. 1999; Mason and Harrison 2002). Both of these ultimately affect to the return on investment of business angels. Therefore, I posit the hypotheses 'Financials' and 'Valuation' as follows:

H_{10}: *Financial considerations are one of the most dominant reasons why BAs reject opportunities*

H_{11}: *The likelihood of rejecting an opportunity increases with outrageous valuations*

As fund managers need to consider whether the investment suits the investment criteria of the fund, business angels need to consider does the investment meet their own personal investment criteria (Mason and Harrison 2003). Although business angels invest in a wide range of industries (Landström 1998; Mason and Harrison 2002), they usually prefer to invest in business sectors, technologies and products where they have previous knowledge or experience (Feeney et al. 1999). Business angels reject on average 80 % of the investment propositions due to their lack of knowledge of the industry, technology or market (Mason and Harrison 2002). Investor fit issues include the relationship between the investor's background, skills and knowledge of the industry, market, technology, and the investment opportunity (Mason and Stark 2004). It also includes the investor's personal preferences: whether the investor likes to invest in this specific sector or market (Mason and Stark 2004). The relationship between the entrepreneur and investor is also found crucial (Landström 1998; Prowse 1998). Moreover, as the investment criteria are always investor-specific: one business angel may reject an opportunity while another may find it very appealing (Landström 1998). As a result, I posit the 'Investor fit' hypothesis as follows:

H_{12}: *Although BAs invest in broad range of industries, investor fit issues might lead to rejection*

The economic outcome of the pitch meeting can be enormous for the success of a company (Clark 2008). Thus, the recent business angel literature has focused on the pitch meetings (Mason and Harrison 2003; Sudek 2006; Maxwell et al. 2011). However, the investment criteria relating to presentational factors are not found to be that significant. For instance, Clark (2008) found that business angels commented presentational issues, such as the clarity or understand ability of the entrepreneur, the structure of the pitch presentation, the level of information provided, the entrepreneurs' personal characteristics, and their ability to sell themselves and their investment opportunity. Nevertheless, the these issues only affect whether the business angels are willing to continue listen to your pitch, but do not seem to affect the ultimate investment decision (Clark 2008). On the other hand, rejection criteria relating to presentational flaws (Mason and Harrison 2003) and not providing sufficient information to business angels (Mason and Harrison 2002) are viewed as more critical. As a result, I posit my final hypothesis the 'Business pitch' as follows:

H_{13}: *Although a business pitch is not purely a reason to invest, it might give a rejection reason for BAs*

Table III
Summary of hypotheses

Table pools together all the hypotheses employed in this study. Hypothesis H_1 _ H_6 relate to the business angel investment criteria and syndication, and hypothesis H_7 - H_{13} relate to the rejection criteria and business pitch.

Business angel investment criteria and syndication	
H_1:	BAs invests primarily in start-ups or early staged companies seeking for expansion financing
H_2:	Female BAs are more conservative in their investment decision-making than male BAs
H_3:	Investment size, equity stake and deal valuation increase in syndicated investments
H_4:	BAs invest in companies with good financial performance or companies with proven profit potential
H_5:	BAs invest in companies with a combination of a good product and capable entrepreneur
H_6:	BAs invest in companies where they have ability to contribute with their expertise or contacts
Business angel rejection criteria and business pitch	
H_7:	BAs reject opportunities primarily due to entrepreneur or management related reasons
H_8:	Market related issues is one of the most dominant reasons why BAs reject opportunities
H_9:	Product or service related issues is one of the most dominant reasons why BAs reject opportunities
H_{10}:	Financial considerations are one of the most dominant reasons why BAs reject opportunities
H_{11}:	The likelihood of rejecting an opportunity increases with outrageous valuations
H_{12}:	Although BAs invest in broad range of industries, investor fit issues might lead to rejection
H_{13}:	Although a business pitch is not purely a reason to invest, it might give a rejection reason for BAs

4 METHODOLOGY AND DATA

This chapter introduces the method and the data employed in my study. The unique data on business angels employed is sourced from a TV show called the Dragons' Den. In the first section, I will briefly introduce the concept and rules of the Dragons' Den. In the second section, I will introduce the methodologies employed. In the third section, I will introduce the data employed including the sample collection and coding process, and finally I outline the final samples and proxies used to test my hypothesis.

4.1. Introduction to Dragons' Den

Dragons' Den is a global real-life TV show produced and presented in several countries. The basic idea of the show is very simple. In each episode, there are a handful of entrepreneurs, who come to the Den to pitch for an investment in their businesses from a panel of Dragons. These Dragons are business angels, who are willing to invest their own money in these entrepreneurial businesses in exchange for equity. There are always five investors present at the Den to review the investment opportunities and two of them are female. In the following paragraphs, I will go briefly through the rules of the Dragons' Den. [3]

First of all, the entrepreneurs must start the initial pitch up to three minutes, by stating their name, the name of the business, the amount of money they are pitching for and the percentage of equity they are willing to give in exchange. After the initial pitch there is always a Q&A session. However, the entrepreneurs do not have to answer all the questions asked by the Dragons, but it may affect the outcome, if they for instance refuse to reveal the company's financials. Entrepreneurs may also ask the Dragons any questions that help them determine whether they are suitable investors for their business. It is important to note that anything that is discussed in the Den can be potentially broadcasted. The entrepreneurs' time in the Den is over after all five Dragons have declared themselves "out".

The entrepreneur must secure at least the total amount they have asked for at the beginning of the pitch or they exit empty-handed. If a Dragon offers less than the full amount, the entrepreneur needs to secure an investment from one or more of the remaining Dragons to make up the total. A full investment may involve a maximum of five parties. The entrepreneur can also negotiate more money than was originally requested, as this is usually

[3] BBC (2013) "About Dragon's Den", retrieved 12.5.2013.

to redress the sticking point of an entrepreneur giving up more equity than was initially offered. Each Dragon acts as individual investors and can invest as little or as much of their own money as they want. An entrepreneur can also reject an investment from a Dragon if they think they are not suitable investor for them or if they cannot agree on the terms.

The deal agreed on the Den is an unwritten agreement that depends on due diligence checks, and relies on the integrity of both parties to freely enter the transaction and be fully committed to seeing it through. However, the deal is solely between the Dragon and the entrepreneur and after additional meetings, if an agreement cannot be reached, neither party is legally obliged to complete the deal. The production company (BBC) remains impartial, as they cannot be involved in the business contract between the two parties. The entrepreneurs are allowed to have an advocate on standby in the Den, to help them answer some of the Dragons' questions. They can ask the Dragons to meet their advocate at any point after the three-minute pitch. However, this advocate must usually be someone who is directly involved in the business, and be pre-approved, screen-tested and have gone through the same personal checks as the entrepreneurs.

4.2. Methodology

This thesis employs an applied observational interaction method to study the research questions. The usability of questionnaire and interview studies has been widely criticized in business angel literature (e.g. Mason and Harrison 2003; Mason and Stark 2004). Hence, the recent literature has employed more real-time studies to overcome the problems present in the prior studies. Verbal protocol analysis [4] is one of the successfully used real-time methodologies employed to examine both venture capital (e.g. Hall and Hofer 1993) and business angel decision-making (e.g. Mason and Rogers 1997; Mason and Stark 2004). In this thesis, I chose to employ an observational interaction method, which is an improved version of the verbal protocol analysis, previously used by Maxwell et al. (2011). Observational interaction technique is designed to record interactions between parties, which then allow extracting patterns for further analysis (Maxwell et al. 2011). The method usually involves first videotaping the interactions that are subject to observations, and then coding and analysing them to interpret behaviours and information exchanges during these interactions (Maxwell et al. 2011).

[4] For further readings on Verbal protocol analysis review Ericsson and Herbert (1984).

The aim of my study was to observe the interactions between the entrepreneurs and business angels during initial screening stage, in order to draw conclusions regarding the business angel investment decision-making criteria. As my observations were based on Dragons' Den, I had no need to record the interactions myself. Hence, my *applied* observational interaction approach consists of four phases. The first phase consisted of positing and motivating the hypothesis based on the prior literature. The second phase consisted of building an Excel spreadsheet for the observations and coding the rejection criteria. The third phase consisted of observing Dragons' Den and collecting both quantitative and qualitative notes in the observation spreadsheet. Finally, the last phase consisted of both quantitative and qualitative analysis to test my hypothesis. As of the quantitative phase, I selected to use frequencies, and other descriptive tables to show my results, which are commonly used in the area of business angel decision-making literature. For the qualitative phase, I selected three case companies from my final sample to provide further evidence and additional depth to my findings. In the next section, I will familiarize the data employed including the sample collection and coding processes, and finally present the samples and proxies used to test my hypothesis in Table VII.

4.3. Data

The unique data on business angels employed in my thesis is sourced from a TV show called the Dragons' Den. Due to the criticism of poor quality contestants and ideas seen in the first seasons of the TV show, I focused on the most recent ones by analysing the latest two production seasons of the UK version of Dragons' Den. Hence, my sample is sourced from episodes 1-12 in season 10 and from episodes 1-6 in season 11, which were available at that point in time. These seasons were originally aired on TV in 2012 and in latter part of 2013, respectively. Although each episode lasts only 44 minutes, it took me roughly one and half hours per each episode to watch and record the observations. By analysing these seasons, I was able to observe a total of seven business angels, of which three were female, in their decision-making process whether to invest in potential businesses opportunities. By investing, I mean whether the business angels select these companies past the initial screening stage to the due diligence. The total number of pitch meetings observed amounts to 129, which consists of 27 successful and 102 declined opportunities. The above-average sample size is reasonable in the area of studying business angel decision-making, as usually the sample size is far less than 100. Nevertheless, I consider my thesis as a large case study due to the relatively low small sample size in general.

Prior literature suggests that business angels are typically well-educated, middle-aged men with significant net worth, which is usually acquired via entrepreneurial activities (Feeney et al. 1999; Mason and Harrison 2002; Mason 2007). The seven business angels observed in my sample fit well in this classification, as they are mostly men, their average age is 54 ranging from 43 to 65, and most of them are serial entrepreneurs and hence self-made millionaires. However, most of the Dragons have acquired their entrepreneurial and management skills by building and selling companies rather than attending higher education facilities. Only two of the Dragons had a college or university degree. On the other hand, I am not aware of the criteria the production company has used in selecting these Dragons. Due to the small population of female business angels, I could guess, that selecting suitable women Dragons might have been much more difficult than finding their male counterparts. Hence, these female Dragons might be sort of pushed into to the format creating potential bias. However, due to the similar characteristics compared to the 'normal' BAs, I am confident, that that the Dragons are good in representing the business angel population in general. Table IV provides a brief introduction to the observed business angels.

Table IV
Introduction to the Dragons

Table introduces the background of each Dragon observed: their birth year, net worth, entrepreneurial background, education, industry experience and also the production seasons in which they are being observed. The data is retrieved from the official pages of the Dragons and from TV show. [5] Net worth figures are based on Wikipedia and are presented only for illustrative purposes.*

Name	Birth year	Net worth*	Entrepreneur	Higher education	Industry experience	Present in season(s)
Theo Paphitis	1959	£210m	Serial	-	Retail	10
Peter Jones	1966	£475m	Serial	-	Telecommunications	10-11
Duncan Bannatyne	1949	£175m	Serial	-	Hotel and health club	10-11
Deborah Meaden	1959	£40m	Serial	College	Pleasure industry	10-11
Hilary Devey	1957	£75m	yes	-	Logistics	10
Kelly Hoppen	1959	n/a	yes	-	Interior design	10
Piers Linney	1971	£100m	Serial	University	Computing pioneer	10

The central focus of this thesis is on the pitch meetings, which generally take place at the initial screening stage (Mason and Harrison 2003; Maxwell et al. 2011), before the investors have even reviewed their business plan or met the entrepreneurs in person (Clark 2008). The

[5] Official internet pages of the Dragons: Theo Paphitis, Peter Jones, Duncan Bannatyne, Deborah Meaden, Hilary Devey, Kelly Hoppen and Piers Linney, retrieved 17.9.2014.

pitch meetings seen on the Dragons' Den are very similar in nature to the real-life pitch meeting settings described by Mason and Harrison (2003) and Clark (2008). In addition, Dragons' Den provides an exciting case study to observe the interaction of the entrepreneurs and the business angels, because the Dragons are indeed making real decisions with real outcomes by investing their own money and time in these businesses. Hence, the setting is far less artificial than for instance the real-time study of Mason and Stark (2004). Moreover, numerous academics have previously used television shows in their studies, and have confirmed that they are indeed good platforms to study real-life decision-making (e.g. Maxwell et al. 2011).

Table V
Illustration of the observation spreadsheet categories

Table illustrates the broad categories and observed aspects used to take notes on the observations in the Excel spreadsheet. Each of the observed aspects in different categories had their own columns in the spreadsheet to write down the corresponding observations.

Category	Observed aspects
1. Initial offer	The amount of capital requested, equity stake offered and the implied valuation calculated from the previous two.
2. Business	Name, founding year, description of the products/services, patents and opportunities. Do Dragons like the business or Product/service?
3. Entrepreneur/Management	Experience and track-record of the entrepreneur, and comments on the business pitch. Do Dragons like the entrepreneur and are they willing to work with the entrepreneur?
4. Market	Comments of the market by the entrepreneurs and investors.
4. Financials and valuations	Sales, costs, margins, pricing, profits and cash flow, also ROI, exit opportunities, and valuation: invested capital and equity given up.
5. Negotiations and offers	Offers, comments on the offers and investing Dragons and their expertise.
6. Rejection criteria	10 sub-categories. See classification of business angel rejection criteria in Table VI.
7. Other	Other interesting comments and observations.

Table V illustrates the observation spreadsheet and the aspects observed with each opportunity. The spreadsheet had seven upper categories including the initial offer, business, entrepreneur or management, market, financials and valuation, negotiations and offers, rejection criteria and other. Moreover, these seven categories were divided into multiple sub-categories to collect the specific observations. For instance, under business category I collected the data regarding the basic info of the company, such as name, founding year, description of the product or services, and information regarding patents and opportunities. In addition, I also collected a simple 'yes' or 'no' data regarding questions such as do the Dragons like the business model and do they like the product or service.

Table VI presents the classifications of business angel rejection criteria, which are based on the investment criteria classifications of Mason and Stark (2004). My aim was to observe 10 different rejection criteria and how those criteria accumulate during the observations in order to find out the rank of those criteria. My rejection criteria categories included: product or service, market and competition, financial considerations, entrepreneur or management, business and strategy, investor fit, patents and protection, and other. Moreover, financial considerations category was divided into three sub-categories: financial performance, return on investment and valuation. For instance, entrepreneur or management category included: background, experience and track-record of the entrepreneur or the management team, their personal qualities, their preparedness and attitude in the pitch meeting, and the range of skills and business know how they possess. It also included investors' personal preferences whether they like the entrepreneur and are they willing to work with the entrepreneur. The rejection criteria observations were coded as dummy variables in the spreadsheet. For example, if a Dragon rejected an opportunity due to "lack of managerial knowhow", then a '1' was coded in entrepreneur or management category. If no other reason was provided, a '0' was coded in all the other rejection reason categories.

Table VI
Classification of business angel rejection criteria

Table able represents the classification of the rejection reason categories. These categories were used in observations by coding the rejection criteria reasons as dummy variables according to the classifications. If a rejection reason was identified in one of these categories that category received a value of '1', otherwise the category had a value of '0'.

Rejection criteria	Description
1. Product or service	The nature of the product or service, in terms of its concept, uniqueness, distinctiveness, and innovativeness. It also includes aspects such as the quality, technology, brand, customer focus, and life cycle of the product. In addition, it includes investors' perceptions of the product potential and their personal preferences i.e. whether they like the product or service.
2. Market and competition	The size, potential and growth of the market, demonstrated market need, level or nature of competition and barriers to entry (e.g. needs more money to enter the market and compete within the field)
Financial considerations 3. Financial performance 4. Return on investment (ROI) 5. Valuation	This includes three aspects: (3.) the financial performance of the business e.g. sales, costs, margins, pricing, profits and cash flow, (4.) the return on investment from investors' point of view and exit opportunities, and (5.) the valuation i.e. implied value of the equity/business worth in respect to the pitched investment size and equity stake.
6. Entrepreneur or management	The background, experience and track-record of the entrepreneur or management team, their personal qualities (e.g. commitment, reliability), their preparedness and attitude in pitch meeting, and the range of skills and business know how they possess (e.g. essential managerial and business skills). In addition, it includes investors' personal preferences whether they like the entrepreneur and are they willing to work with the entrepreneur.
7. Business and strategy	The overall concept and strategy of the business including business potential and growth opportunities of the business.
8. Investor fit	This includes three elements: (I) the relationship between the investment opportunity and investor's own background, skills and knowledge of the industry, market, technology, etc., (II) the investor's preferences i.e. is this an industry, market, etc. that the investor wants to invest in, (III) and time considerations e.g. do they have enough time for hands-on approach.
9. Patents and protection	This category includes issues relating to patents and overall protection in terms of how easily the business or product can or could be copied.
10. Other	This category represents the comments on any aspects of the business which cannot be coded in any other category.

**Classification of rejection criteria are modified from business angel investment criteria classifications of Mason and Stark (2004)*

Table VII presents the final samples and proxies used to test hypothesis. Hypothesis H_1–H_6 relates to the business angel investment criteria and syndication, and hypothesis H_7–H_{13} relate to the rejection criteria and business pitch. The proxies used in the hypothesis testing are formed based on the existing literature on business angels or formed in accordance with the data I was able to gather. The final sample sizes on business angel investment criteria relate to

either to the total number of business pitches observed (129) or to the number of the accepted companies (27). On the other hand, the business angel rejection criteria samples are based on the number of rejection reason comments (241) provided by the investors in all of the business opportunities observed (129).

I also selected three case companies from my sample to provide additional depth and support for my results. The first case company was called ‘Skinny Tan’, a business selling fake tanning and cellulite reducing creams; the second company was ‘Shampooheads’ offering a clinically approved character based shampoo range for children; and the third company was ‘YUUbag’, which makes back bags and accessories for children. I selected these companies, as all of the business angels were interested to pursue a deal with these entrepreneurs and they indeed received multiple offers. Opportunities in which all of the investors were interested to make a deal were present in less than 1 % of all opportunities observed. Hence, these companies make an ideal case study, as they clearly had everything in place to get all the Dragons to fight for an investment.

Table VII
Final samples and proxies employed for hypothesis testing

Table presents the final samples and proxies used to test each hypothesis presented in Chapter 3. Hypothesis H_1 - H_6 relates to the business angel investment criteria and syndication, and hypothesis H_7 - H_{13} relate to the rejection criteria and business pitch. The sample sizes relate to either to the total number of business pitches observed (129) or to the number of the accepted business pitches observed (27). The business angel rejection criteria samples are based on 241 rejection reason comments made in 129 business opportunities. In addition, case companies presented in this chapter are used to provide additional support and depth to my analysis. In addition, proxies Top 1 and Top 3 expects that the criteria are ranked accordingly in order to accept the hypothesis.

Hypotheses (short name)		Proxies	Sample size
H_1:	Stage of the company	Founding year and intended use of funds	27/129
H_2:	Gender differences	Investor behaviour comparison between genders	27/129
H_3:	Syndicated investments	Comparison of investments by gender	27/129
H_4:	Financial performance	Company financials of accepted companies	27/129
H_5:	Product and entrepreneur	Positive comments from investors	129/241
H_6:	Hands-on contribution	Comments from investors relating to their expertise	129/241
H_7:	Entrepreneur or management	Comments from investors when opting "out" (Top 1)	129/241
H_8:	Market	Comments from investors when opting "out" (Top 3)	129/241
H_9:	Product or service	Comments from investors when opting "out" (Top 3)	129/241
H_{10}:	Financials	Comments from investors when opting "out" (Top 3)	129/241
H_{11}:	Valuation	Comparison of valuations between opportunities	129/241
H_{12}:	Investor fit	Comments from investors when opting "out"	129/241
H_{13}:	Business pitch	Comments from investors when opting "out"	129/241

5 RESULTS

5.1 Results on business angel investment criteria

This chapter presents and discusses the results based on my observations and analyses that I performed to address the key research questions of the thesis. The first section elaborates the findings on business angel investment criteria and syndication. The second section concentrates on the business angel rejection criteria results. The third section covers the findings on business pitch. The result sections are organized to follow the order of the hypothesis posited in Chapter 3.

H_1: *BAs invests primarily in start-ups or early staged companies seeking for expansion financing*

Prior literature suggests that business angels invest primarily in start-up companies or early staged companies seeking for expansion financing (e.g. Mason and Harrison 2002). In my sample out of 129 observed pitch meetings 27 companies were able to secure a deal with the business angels. From the Table VIII, we can see that business angels made most of their investments (63 %) in companies with two years or less of operating experience. Only two of these accepted companies had not "gone live" yet and both of them were classified as online or technology companies. Furthermore, a clear majority of the deals (89 %) agreed on the Den was made into companies with four years or less of operating experience representing early-stage investments. Moreover, these 24 companies averaged with 1.8 years of operating history. The intended use of funds of 11 out of these 24 companies were revealed in the TV show. These entrepreneurs argued that they were seeking capital for marketing, research and development, production and warehousing. Moreover, the common theme amongst the entrepreneurs was that they were willing to expand their businesses with the requested capital. According to a recent UK market research of Deloitte and UK Business Angels Association (UKBAA), 83 % of business angel capital was allocated into early-staged business, with 29 % going to seed, and start-up companies.[6]Although my findings place more emphasis on earlier staged deals, the actual market statistics are pretty well aligned with my findings and supporting the early stage investment habit in general.

[6] Deloitte-UKBAA (2013) "Taking the Pulse of the Angel Market", retrieved 17.9.2014.

My case companies were also established on average 1.9 years ago. From Dragons' perspective, they were also seeking capital for the right purpose, as they were willing to expand their businesses. For instance, Skinny Tan was willing to expand to UK by replicating their huge success in Australia and YUUbag was willing to buy stock, as they were sold out on a TV shopping channel in only six weeks. Unfortunately, the TV show did not clearly reveal the intended use of funds of the Shampooheads. However, their vision was to build world's most successful hair care brand for children, which implies significant expansions in the future, and they already held patents for their characters in UK, EU and US. Thus, my case companies were also all classified as early stage companies seeking for expansion financing.

Table VIII
Accepted deals by operating years

Table presents the operating years of the business in accepted deals (n=27). Table shows the average operating years of accepted companies, frequencies as how many investments were made within a category, and percentages of all accepted deals in each category.

Operating	Average	Frequency	Percent
0-2 years	1,1	17	63.0 %
2-4 years	3,4	7	25.9 %
4-6 years	-	-	-
6-8 years	7,0	1	3.7 %
8-10 years	-	-	-
> 10 years	11,0	2	7.4 %
Total	**2,6**	**27**	**100 %**

On the other hand, it seems that business angels are not that critical of operating years in their investment criteria, as they invest in more mature companies as well. Clark (2008) also argues that the stage of the business is not that important as investment criteria. For instance, in my sample business angels also agreed to finance companies with 7, 10 and 12 years of operating history. Nevertheless, those later staged deals represents only a small minority (11 %) of the total accepted deals in my sample. As a result, I fail to reject the hypothesis H_1, and conclude that business angels look primarily for start-ups and early staged companies seeking for expansion financing.

H_2: *Female BAs are more conservative in their investment decision-making than male BAs*

According to my findings in Table IX, women business angels are more critical in their investments, as they accepted only 9 % of the opportunities they saw compared to 19 % acceptance rate of their male counterparts. Taking both genders into account, business angels accepted 21 % of the opportunities they saw. However, I believe that the total rejection rate would be even higher, as the pitch meetings shown on TV are most likely or can be manipulated by the editing of the series. Moreover, my guess is that the editors have shown all of the successful pitches on TV, but due to making the format more interesting, they have left out some of the unsuccessful ones to keep the ratio of accepted and rejected opportunities at a certain level. For instance, on average there were 1.5 successful pitch meetings against 5.7 failed ones per one TV show. Thus, no generalization should be drawn out of the total rejection or acceptance rates of my sample. However, the gender specific rejection rates are still useful in highlighting the differences in investment behaviour of male and female business angels. As the investors had an equal opportunity to invest in each of the businesses, I argue that women business angels are more critical in their investments, as they invested in fewer opportunities than men.

Table IX
Deals accepted vs. rejected by gender

Table presents the acceptance and rejection rates of business angels as percentages of all opportunities (n=129) by gender.

	Accepted	Rejected	Total
Women	8.5 %	91.5 %	100 %
Men	19.4 %	80.6 %	100 %
Total	20.9 %	79.1 %	100 %
n	27	102	129

Table X presents the cumulative investments by gender, and Table XI shows the frequencies of accepted deals by each gender. Business angels agreed to invest[7] a total of £2.195 million in the two observed seasons. Female investors agreed to invest a total of £475,000 in 11 businesses and male investors agreed to invest £1.720 million in 25 businesses out of 27 accepted opportunities. The smallest single investment made in the Den amounted to £40,000, the median investment was £75,000 and the largest amounted to £250,000. These findings are in line with the prior findings, as a typical business angel investment in UK is £100,000 or

[7] According to the rules of the Dragons' Den they make unwritten agreements to invest. Thus, neither party is legally obliged to complete the deal made in the Den. The actual investment decision depends on the meetings and agreements made after the TV show, when the investors have performed their due diligence analysis.

less (Mason and Harrison 2002). However, it is less than the median business angel investment of £160,000 found in a recent UK market research (Deloitte-UKBAA 2013).

Relating to the gender differences, I conclude that male business angels tend to invest in greater volume, with larger amounts of capital and tend to syndicate less than female business angels. However, we still need to bear in mind that there were always 3 men and 2 women investors present at the den and of course they all invested within their own budgets. Although these facts may skew the results, I am confident in the general direction of my findings. One possible explanation for these above mentioned gender differences is that women are generally seen as more conservative investors than men and tend to take fewer risks (Jianakoplos and Bernasek 1998; Sunden and Surette 1998). In light of my gender hypothesis H_2, I also argue, that women business angels can actually be more critical in their investments or have stricter investment criteria when they evaluate business opportunities.

Table X
Cumulative investments by gender

Table presents the cumulative investments made by business angels in my sample (n=27) classified by gender and type of investment. Single investments are investments made by only one investor and syndicated investments are made within two or more people. Investors agreed to invest a total of £2.195m.

£	Single investments	Syndicated investments	Total
Women	145 000	330 000	475 000
Men	1 250 000	470 000	1 720 000
Total	1 395 000	800 000	2 195 000

Table XI
Frequencies of accepted deals by gender

Table presents the volume of all accepted deals (n=27) classified by gender and type of investment. Single investments are made with one investor and syndicated investments with two or more investors. Female investors were present in a total of 11 investment and male investors in 25 investments.

	Single investments	Syndication with men	Syndication with women
Women	2	9	0
Men	14	2	9
Total	16	11	9

H_3: *Investment size, equity stake and deal valuation increase in syndicated investments*

Prior literature has found that business angels tend to syndicate with other business angels (Prowse 1998; Feeney et al. 1999; Paul et al. 2007). A recent market research also found that almost three quarters (73 %) of UK business angels usually or always invest within a syndicate and the trend is increasing (Deloitte-UKBAA 2013). My results also suggest that business angel syndication is actually quite common, as business angels made syndicated investments 11 (41 %) times out of a total of 27 accepted deals. Although these business angels had the option to invest with maximum of five people, only two people syndicates were formed. The finding is in line with the prior literature, as there are typically two to three business angels per each deal (Morrissette 2007).

Table XII
Investment size in accepted deals by gender

Table presents the investment size in the accepted deals (n=27) classified by gender and investment type. Single investments are made with one investor and syndicated investments with two or more investors. Table presents the median, average, minimum and maximum values, as well as the standard deviation (Stdev). Student's t-statistics are presented in Appendix I&II.

£	Single investments	Syndicated investments
Women		
Median	**72 500**	**75 000**
Average	72 500	73 333
Min	60 000	50 000
Max	85 000	100 000
Stdev	17 678	19 843
Men		
Median	**75 000**	**75 000**
Average	89 286	72 727
Min	40 000	50 000
Max	250 000	100 000
Stdev	55 082	18 353
Total		
Median	**75 000**	**75 000**
Average	87 188	72 727
Min	40 000	50 000
Max	250 000	100 000
Stdev	51 800	18 353

Table XII presents the investment size in accepted deals classified by gender and the type of investment. My findings suggest that syndication does no lead to larger investments. The

average investment made in the den was £87,188 and average total syndicated deal amounted to £72,727. Thus, by first look it seems that syndication can actually lead to a smaller investment size. However, due to small sample size, the statistical significance of the mean differences between groups is questionable according to t-statistics shown in Appendix I. On the other hand, if we look at the median values of total investments, both single and syndicated investments amounted to £75,000. Moreover, the median individual contribution in syndicated investments amounts to £37,500, as all of the syndicated investments included only two investors. The difference of the average and median values in my sample can be explained by two large single investment made by male investors. As the median takes out these outliers, we find that syndication does not lead to either smaller or larger investment size for men and when combining both genders. However, syndicated investments seem to slightly increase the median investment size of women business angels from £72,500 to £75,000. As the investment size does not increase in syndicated investments compared to single investments, at least part of my syndicated investments hypothesis H_3 is rejected.

Table XIII
Valuation in accepted deals by gender

Table presents the valuation in the accepted deals (n=27) classified by gender and investment type. Single investments are made with one investor and syndicated investments with two or more investors. Table presents the median, average, minimum and maximum values, as well as the standard deviation (Stdev). Student's t-statistics are presented in Appendix I&II.

£	Single investments	Syndicated investments
Women		
Median	**181 250**	**225 000**
Average	181 250	267 854
Min	150 000	125 000
Max	212 500	600 000
Stdev	44 194	146 579
Men		
Median	**204 167**	**222 222**
Average	289 664	250 971
Min	120 000	125 000
Max	833 333	600 000
Stdev	202 273	136 836
Total		
Median	**204 167**	**222 222**
Average	276 112	250 971
Min	120 000	125 000
Max	833 333	600 000
Stdev	192 251	136 836

Table XIII presents the valuation in accepted deals classified by gender and type of investment. If we look at the syndication results at gender level, we find similar results than with investment size: the average valuation decreases for men but increases for women. By taking both genders into account, my findings suggest that the average valuation decreases if business angels syndicate. The average valuation in single investments was £276,112 compared to £250,971 in syndicated deals. However, the statistical significance of mean differences is again questionable according to t-statistics shown in Appendix I&II. By analysing the median values, syndication leads to increased valuations for both men and women business angels. Similar results are found when taking both genders into account, as the median valuation actually increases from £204,167 to £222,222 due to syndication. As the median values are better in representing the total population in my case, I conclude that deal value increases with syndicated investments. Furthermore, I argue that with syndicated investments individual investors can take part in larger deals in terms of equity value, but with significantly smaller individual capital contributions. These findings provide partial support for my syndicated investments hypothesis H_3.

Table XIV presents the equity stakes acquired in accepted deals classified by gender and type of investment. According to my sample, when women business angels make single investments they typically acquire larger equity stakes than men. The average acquired equity stake is 40 % with females and only 33 % with male investors. The mean difference (t = -3.15) is statistically significant at the 1 % level (see Appendix II). Moreover, the median acquired equity stake is 40 % with females and only 30 % with male investors. For women the median equity stake remains stagnant whether the deal is a single investment or done within a syndicate. On the other hand, for male business angels and when taking both genders into account, the median acquired equity stake actually increases in syndicated investments by 10 % and 8 %, respectively. Hence, the above presented increase in deal valuation in syndicated investments can be explained by the larger equity stakes acquired, as the investment size remains fairly stagnant between single and syndicated investments.

Table XIV
Equity stake in accepted deals by gender

Table presents the equity stake in the accepted deals (n=27) classified by gender and investment type. Single investments are made with one investor and syndicated investments with two or more investors. Table presents the median, average, minimum and maximum values, as well as the standard deviation (Stdev). Student's t-statistics are presented in Appendix I&II.

%	Single investments	Syndicated investments
Women		
Median	**40.0 %**	**40.0 %**
Average	40.0 %	32.3 %
Min	40.0 %	10.0 %
Max	40.0 %	45.0 %
Stdev	0.0 %	11.7 %
Men		
Median	**30.0 %**	**40.0 %**
Average	33.0 %	33.7 %
Min	24.0 %	10.0 %
Max	50.0 %	45.0 %
Stdev	8.4 %	10.9 %
Total		
Median	**31.7 %**	**40.0 %**
Average	33.8 %	33.7 %
Min	24.0 %	10.0 %
Max	50.0 %	45.0 %
Stdev	8.2 %	10.9 %

As a result of the findings in Tables XII-XIV, it seems that my syndication hypothesis H_3 is partially true, as the deal value and acquired equity stake increases in syndicated investments. However, my results do not support the increase in investment size with syndicated investments, which contradicts to the prior literature (e.g. Kelly and Hay 2003; Mason 2007). The investment size increases in syndicated investments only with female business angels and the difference is only marginal. Nevertheless, the individual capital contribution of business angels in syndicated investments is still only half compared to single investments. These slightly contradictory results to prior literature suggest that further studies should be made regarding the dynamics of syndication. In addition, my results supports the idea of women being more conservative and risk-averse investors than men, as they reject more opportunities, tend to invest with slightly smaller sums, in smaller businesses in terms of equity value, acquire larger equity stakes individually, and tend to syndicate more compared to men business angels. As a result, I fail to reject my gender hypothesis H_2.

An additional finding from my sample was that syndication is not always investors' choice. Out of 11 syndicated investments, four times (36 %) the entrepreneur(s) asked for investment from certain investors, and three times (27 %) the investors made originally an offer for half of the amount requested by the entrepreneur and left the negotiation table open for syndication. Most interestingly, four times (36 %) the syndication happened in a competitive bidding situation, in which multiple individual offers were on the table at first and then investors who were willing to syndicate with each other ended up winning. Thus, I argue that syndication might also be a strategic choice in order to win the investment in a competitive bidding situation.

Table XV
Sectors invested by type of investment

Table presents the investments made in each identified sector by the type of investment. Single investments are made with one investor and syndicated investments with two or more investors. A total of 27 investments were made in to 12 different sectors.

	Single investments	Syndicated investments	Total investments
Food and drinks	4	2	6
Technology and online	3	1	4
Cosmetics	1	2	3
Sports	1	2	3
Advertising	1	1	2
Clothing and accessories	1	1	2
Tech accessories	2	0	2
Camping	0	1	1
Home and garden	1	0	1
Packaging	1	0	1
Pets	1	0	1
Social care	0	1	1
Total	**16**	**11**	**27**

The analysis of Table XV does not provide any evidence that syndication is prone to happen more frequently with certain types sectors. However, the result might be different with larger set of accepted deals. Hence, future studies might try to find evidence whether sector has an effect on forming the syndications. For instance, do business angels tend to syndicate more in competitive sectors where the risks of achieving success are greater, or do they tend to syndicate with people who have more experience from certain sectors? For instance, in UK the business angels tend to syndicate due to risk sharing purposes and leveraging larger pools of capital, contacts and skills (Deloitte-UKBAA 2013).

H_4: *BAs invest in companies with good financial performance or companies with proven profit potential*

The data collected from observations was unfortunately not very rich in numbers. For instance, I was only able to record the revenues of 18 companies out of 27 accepted ones due to editing of the show. Similar poor statistics followed with profits and pro forma figures as well. On average, the accepted companies had revenues of £363,500. However, the revenues varied a lot depending on the opportunity, as the minimum revenues were £3,000 and maximum of £885,000 with a standard deviation of £295,894. Nevertheless, by observing the show, it was clear that the investors were more interested in opportunities, which already had significant revenues or if they were able to show a clear potential in making cash flows in the future due to growth opportunities.

If we look at my case companies, they all had either trading history or pre-orders, as a sign of existing or future cash flows. Two of these companies had already significant revenues and had turned to positive. Skinny Tan had turned over £600,000 in only six months in Australia, and YUUbag made £525,000 in last fiscal. Both of the companies were also profitable, as Skinny Tan had £450,000 in profits, and YUUbag argued that they can increase their profits from current level of £6,000 to £130,000 in one year after margin improvements. On the contrary, Shampooheads did not have any sales yet. However, they had received a huge order (41 000 units) from a large domestic distributor with nearly 500 stores. The chain expected that they could sell 1 000 units per week supporting the revenue potential of that opportunity. Thus they clearly had the potential, as they had significant pre-orders and the distribution in place. As a result and not surprisingly, I argue that business angels seek companies with good financial performance or opportunities with proven business potential in terms of revenue, profits or cash flow. Hence, I conclude, finding weak evidence for my financial performance hypothesis H_4.

H_5: *BAs invest in companies with a combination of a good product and capable entrepreneur*

Prior literature has found that management or entrepreneur related reasons dominate the business angel investment criteria (Haar et al. 1988; Van Osnabrugge 2000; Stedler and Peters 2003; Mason and Stark 2004; Sudek 2006; Clark 2008; Mitteness et al. 2012), and product related reasons are also found near the top (Van Osnabrugge 2000; Stedler and Peters 2003;

Clark 2008). As those criteria are found so frequently, I posited hypothesis that business angels are seeking for a combination of those two. I try to proxy the business angel investment criteria with positive comments relating to these criteria in the observed pitch meetings.

According to my findings in Table XVI, investors made positive comments relating to the product or service that the entrepreneur was offering in nearly all (93 %) of the accepted deals. On the contrary, these same investors made similar comments only slightly over half of the time (53 %) with a total of 102 rejected opportunities. Furthermore, positive comments relating to the entrepreneur and his or her qualities, or the investors willingness to work with the entrepreneur, were made in nearly half (48 %) of the accepted deals, and only in a small proportion (12 %) of the rejected opportunities. Moreover, a combination of a good product or service and a capable and/or likeable entrepreneur was found in nearly half (48 %) of the accepted deals and only in small minority (10 %) of the rejected opportunities. Thus, I argue that it is crucial that a business angel needs to like the product or service in order to make an investment. It is also crucial that the investor finds the entrepreneur capable and that they can work with each other.

Table XVI
Positive comments about people or product

Table presents business angels' positive comments relating to the people or product, or a combination of them. All the figures are presented as a percentages of all opportunities (n=129). A total of 27 opportunities were accepted and 102 were rejected.

	Product	People	Combination
Accepted	92.6 %	48.1 %	48.1 %
Rejected	52.9 %	11.8 %	9.8 %

Although in slightly over half (52 %) of the accepted deals investors did not make any positive comments about the entrepreneur, it does not necessarily imply that the investors did not like the entrepreneur or do not like to work with them. For instance, after an agreed deal with one of my case companies, an investor said that: "Every time on DD I'm investing in people. A person who's not competent or who I don't like with a good idea is not going to get an investment. I like both of them, I think they are passionate, focused, they knew where they are going, they have done their homework, they have planned, and they were exactly my sort of people." Thus and not surprisingly, a good product is solely not enough, but the

entrepreneur needs to be capable as well. Also other similar comments were made in the TV show, such as "I invest in people first and product secondly" or "I first look at the people, then the product." Thus, the percentage of liking or willing to work with an entrepreneur in accepted deals might actually be much higher than my data reveals, as investors tend to look both the product and the entrepreneur. These findings support the fact that business angels are indeed seeking a combination of good products and capable people, which provides modest support for my hypothesis H_5. Although the findings on Table XVI places greater weight on the product, the comments made by the investors emphasises more on the entrepreneur as an investment criteria.

If we take a closer look at my case companies, we can definitely argue that these businesses are quite unlike to each other in terms of what they are offering. However I find many similarities as well, in all of these opportunities the investors said that they liked the product, liked the business model and would like to work with the entrepreneurs. All of these three companies were managed with an entrepreneurial duo. In two of the cases the owners included two friends and in one case the owners were a married couple with children. Moreover, in all of the cases the owners or management showed clear commitment to their businesses, as they had left their day jobs and were focusing on their entrepreneurial businesses. In addition, the management team in all of these cases either had a successful track record, or they had relevant experience from the field, or they had gained some general skills in previous vacancies that were seen as helpful. When investors were asking questions from the entrepreneurs about the market or the company financials, they proved that they had done their homework by showing good market knowledge and ability to know and discuss their numbers including their financial projections. A clear feeling was built, that these entrepreneurs had prepared well and had a clear vision of where they were going, which most definitely built trust between the investors and entrepreneurs. The findings from my case companies provide additional support for hypothesis H_5.

H_6: *BAs invest in companies where they have ability to contribute with their expertise or contacts*

Many academics have argued that business angels are value-added investors who seek for hands-on contribution in their investee businesses (Van Osnabrugge 2000; Mason and Harrison 2002; Mason and Stark 2004; Paul et al. 2007). Hence, I investigated how many

times in the accepted deals the investors argued, that they can bring more than money to the table. Table XVII highlights the findings on business angels' hands-on contribution.

Table XVII
Positive attributes or experience in accepted deals

Table presents positive comments that investors made regarding the people or product, or if an investor argued having experience that could help the entrepreneurs. In addition, four combination categories are provided as well. All of the categories are presented as a percentage of accepted opportunities (n=27).

	Percent
Product or service	92.6 %
Investors' expertise	51.9 %
People	48.1 %
Combination of people and product	48.1 %
Combination of product and expertise	44.4 %
Combination of people and expertise	25.9 %
Combination of all three	25.9 %

According to my findings, in slightly over half (52 %) of the accepted deals the investors indeed had some kind of expertise, which could benefit the entrepreneurial business seeking for financing. For instance, the investors argued that they are willing to provide sector knowledge, production or distribution experience/channels/facilities, or they claimed to have local or global contacts that could help the entrepreneurs. Moreover, in many of these cases the investor used their experience or contacts as a negotiation point to secure an investment in a competitive bidding situation. On the other hand, in some of the cases the entrepreneurs themselves pitched that they do not only need the capital, but also the investors' expertise and contacts. Hence, there seems to be a mutual understanding of business angels' hands-on role between the entrepreneurs and the investors. Moreover, a combination of product and expertise was found in a significant proportion (44 %) of the accepted deals and a combination of product, people and expertise was found approximately in a quarter (26 %) of the accepted deals. Thus, it might be the case that business angels can relax their investment criteria relating to the people, if they are able to contribute something to the business, that the entrepreneurs' lack and is essential to the business success. Therefore, I argue that business angels indeed seek companies that they can help with their expertise or contacts, providing modest support for my hypothesis $H_{6.}$ The finding is well aligned with the agency theory approach proposed by Van Osnabrugge (2000).

Table XVIII
Summary of findings on business angel investment criteria and syndication

Table pools together the hypotheses on business angel investment criteria and syndication, the proxy variables employed in the tests and the empirical findings on the hypotheses. The final column on the right indicates whether the hypothesis ought to be accepted based on the empirical findings of my study.

Hypotheses (short name)	Proxies	Accepted/Rejected
H_1: Stage of the company	Founding year and intended use of funds	Accepted
H_2: Gender differences	Investor behaviour comparison between genders	Accepted
H_3: Syndicated investments	Comparison of investments by gender	Partially Accepted
H_4: Financial performance	Company financials of accepted companies	Weak support
H_5: Product and entrepreneur	Positive comments from investors	Modest support
H_6: Hands-on contribution	Comments from investors relating to their expertise	Modest support

Table XVIII summarizes the findings on business angel investment criteria presented in this section. First of all, I find evidence that business angels tend to invest in early-staged companies seeking for expansion financing, which is well aligned with the earlier results found in the academia (e.g. Landström 1998). I also find that gender plays a role in business angel investing. Finding is fundamental as women BAs are understudied in the literature. For instance, my results supports the idea of women being more conservative and risk-averse investors than men, as they tend to invest with slightly smaller sums, in smaller businesses in terms of equity value, acquire larger equity stakes individually, and tend to syndicate more compared to men business angels. Female business angels also tend to be pickier in their investments, as they rejected more opportunities than their male counterparts. I also find my syndication hypothesis to be partially true, as deal value and acquired equity stake tend to increase in syndicated investments. However, my results do not support the increase in investment size in syndicated investments. The latter finding calls for further research on the subject, as it contradicts to the earlier research (e.g. Kelly and Hay 2003; Mason 2007). I also find evidence that business angels seek companies with good financial performance or companies with proven profit potential. Although this evidence is quite obvious, it might be that financial considerations are underestimated in the prior literature, as discussed later on. In addition, I find some evidence that business angels seek companies with a combination of good products and capable entrepreneurs. Supporting the agency theory view (Van Osnabrugge 2000) and my hands-on hypothesis, I find evidence that that business angels are seeking to invest in companies that they can help with their expertise or contacts.

5.2 Results on business angel rejection criteria

Business angel rejection reasons were significantly easier to proxy and observe, than the investment criteria of business angels. According to the rules of the Dragons' Den, each investor needed to either declare themselves "out" or try to negotiate a deal with the entrepreneur(s) with each investment opportunity. When investors were opting "out" they also needed to provide reasoning for their decision. Thus, it was easy to keep track on how these rejection reasons accumulate during my observations. In my sample, the observed business angels provided a total of 241 rejection reasons in 129 business opportunities they were presented. On average 1.8 different rejection reasons were provided per each opportunity with minimum of zero and maximum of five reasons. Each rejection reason was calculated only once per each opportunity. For instance, if three investors argued that the valuation was too high, the reason 'valuation' was recorded only once. Only seven times of all of the opportunities the business angels did not provide any reason for rejection. In these seven cases, either all of the investors where interested to pursue a deal with the entrepreneur, or there was already a good deal on the table and some or rest of the investors were not willing to compete with the prevailing offer.

Table XIX
Reasons for rejecting opportunities in all deals – full list

Table presents the findings on business angel rejection criteria. A total of 241 rejection reasons were recorded in 129 separate business opportunities. The rejection reason criteria classifications are presented in Table VI. The first column provides the rank of the rejection reason criteria. A letter 'T' in front of a number represents a tied place in the ranking. Table also presents the frequency, percentage of all reasons, and cumulative percentage of each rejection criteria category.

#	Cited reason	Frequency	Percentage	Cumulative
1.	Product or service	47	19.5 %	19.5 %
2.	Market and competition	31	12.9 %	32.4 %
3.	Return on investment (ROI)	30	12.4 %	44.8 %
4.	Valuation	24	10.0 %	54.8 %
T5.	Financial performance	22	9.1 %	63.9 %
T5.	Entrepreneur or management	22	9.1 %	73.0 %
6.	Business potential & strategy	21	8.7 %	81.7 %
7.	Investor fit	16	6.6 %	88.4 %
8.	Patents and protection	13	5.4 %	93.8 %
9.	Other	8	3.3 %	97.1 %
10.	No reason or can't compete	7	2.9 %	100.0 %
Total		**241**	**100.0 %**	

H_7: *BAs reject opportunities primarily due to entrepreneur or management related reasons*
H_8: *Market related issues is one of the most dominant reasons why BAs reject opportunities*
H_9: *Product or service related issues is one of the most dominant reasons why BAs reject opportunities*

The full list of rejection reason results is shown in the Table XIX. As I explained in the methodology chapter, I categorized the rejection reasons in to 10 different categories. No reason or can't compete category was added to the rejection reason tables in order to address the fact, that only a marginal fraction of the opportunities (3 %) are either perfect or good enough to not to give any solid reasoning for investors to opt "out". According to my full list of rejection reasons, business angels seem to reject opportunities primarily due to product or service related reasons (20 %), market and competition related reasons (13 %), return on investment related reasons (12 %), and due to valuation related reasons (10 %). These four categories cover over half (55 %) of the total rejection reasons in my sample. By taking into consideration the tied fifth place, financial performance and entrepreneur or management related reasons, these reasons cover nearly three quarters (73 %) of the rejection reasons in combined.

However, for additional analysis I created a shortlist of rejection reasons where I combined following categories: ROI, valuation, and financial performance to represent the financial considerations in total. As Mason and Stark (2004) used those categories together in their business angel study, it makes the comparison more reliable. Moreover, it is reasonable to combine these categories as a company's financials are directly linked to the valuation and both ultimately affects to the return on investment, when investors are exiting their investment. According to my shortlist of rejection reasons, two of the categories clearly dominate the rejection reasons of business angels: financial considerations (32 %) and product or service related reasons (20 %). Other significant rejection reasons were relating to: market and competition (13 %), entrepreneur or management (9 %) and reasons relating to business potential and strategy (9%). In combined, the top five categories represent a majority (82 %) of the total rejection reasons. Other less significant rejection reason categories were: investor fit (7 %), patents and protection (5 %) and other reasons (3 %). The shortlist of rejection reason categories are presented in Table XX.

Table XX
Reasons for rejecting opportunities in all deals – short list

Table presents the findings on business angel rejection criteria. A total of 241 rejection reasons were recorded in 129 separate business opportunities. The rejection criteria classifications are presented in Table VI. The first column provides the rank of the rejection reason criteria. Table also presents the frequency, percentage of all reasons, and cumulative percentage of each rejection criteria category. In this short list, the financial performance, return on investment and valuation are pooled in to Financial considerations category.

#	Cited reason	Frequency	Percentage	Cumulative
1.	Financial considerations	76	31.5 %	31.5 %
2.	Product or service	47	19.5 %	51.0 %
3.	Market and competition	31	12.9 %	63.9 %
4.	Entrepreneur or management	22	9.1 %	73.0 %
5.	Business potential and strategy	21	8.7 %	81.7 %
6.	Investor fit	16	6.6 %	88.4 %
7.	Patents and protection	13	5.4 %	93.8 %
8.	Other	8	3.3 %	97.1 %
9.	No reason or can't compete	7	2.9 %	100.0 %
Total		**241**	**100.0 %**	

As discussed earlier, past literature suggest, that the three most dominant deal killers are found to be related to the entrepreneur or management team (Haar et al. 1988; Mason and Harrison 1996; Feeney et al. 1999; Mason and Harrison 2002; Mason and Harrison 2003; Clark 2008), market potential (Haar et al. 1988; Mason and Harrison 1996; Mason and Harrison 2003; Clark 2008) and financials (Haar et al. 1988; Mason and Harrison 1996). Thus, my findings are only partially aligned to the earlier studies discussed, as similar categories are found in top five - although at different weightings. As in earlier studies, my results supports the idea that market related reasons and financials are indeed found in the top three most common rejection reasons. However, financials are seen as more significant in my study than in earlier studies, as they clearly dominate the rejection criteria list. On the other hand, I find entrepreneur or management related reasons to be less significant as argued in previous studies. Entrepreneur or management team is ranked in fourth place after product or service related reasons. As I do not find the entrepreneur or management as the most dominant (Top 1) rejection criteria of business angels, I reject the hypothesis H_7. On the other hand, as I find both market related and product or service related issues to be very significant rejection reasons for business angels (in Top 3), I conclude finding evidence for hypothesis H_8 and H_9.

The reason that my results deviate from the earlier research, as they are not dominated by the entrepreneur or management related reasons, might be due to following reasons. Most of the

prior literature studies on business angels have been conducted either *ex ante* or *ex post* the decision-making via interviews or questionnaires, which might bias the action of business angels. On one hand, it is much easier to criticize the people before or after the pitch rather than during the actual pitch meeting. On the other hand, it is much easier to criticize the product or business rather than the people behind the business when discussed face to face. Thus, my real-time sample might underestimate the reason entrepreneur or management and overestimate the product category. However, I am not very concerned about that, as the investors were actually quite harsh on some of the entrepreneurs and thus clearly showed that they can give criticism if needed and not only to blame the product. I am aware of the biases that might affect my real-time study and the ones that have affected the prior studies. However, as the gap between financial (32 %) and entrepreneur or management (9 %) related reasons is so wide, it is hard to believe that the latter reason could exceed the first one, even if the potential biases could be omitted. As a result, I argue that prior literature might actually overestimate the importance of entrepreneur or management as a business angel rejection criterion.

H_{10}: *Financial considerations are one of the most dominant reasons why BAs reject opportunities*

As the financial considerations are on top of my business angel rejection criteria list, I find strong evidence for my hypothesis H_{10}. The dominance of financial considerations in my study compared to the earlier research could be explained by two reasons. First, business angels are commonly studied in entrepreneurial or entrepreneurial finance journals, which are linked to management studies, rather than in top rated finance journals such as *Journal of Finance*. These entrepreneurial journals and also most of these prior studies on business angels have concentrated on qualitative research. Therefore, I argue that the prior literature might have placed more emphasis on the qualitative aspects in business angels' investment opportunities, rather than relied on quantitative aspects such as company financials. Thus, the prior literature on business angels might be biased towards more qualitative investment and rejection reasons in general. Second, prior literature has found that business angels are not philanthropists and are indeed investing their own money to private businesses in order to achieve high capital appreciation and expect high rate of returns on their investments (Landström 1998). For instance, Feeney et al. (1999) found that business angels typically expect to gain an annualized rate of return in a range of 30 % to 40 %. In order to the business

to succeed, the whole package needs to be in good shape, meaning the entrepreneur, product, strategy, operations and financial performance. However, the business valuation and ultimately the return on investment rely for the most part on quantitative aspects such as historical and pro forma: sales, profit margins and cash flows. Thus, in order to live to the high return expectations of business angels, they need to find companies with solid financial performance. As a result, it is convenient to argue that financials are or can actually be the most dominant reason for rejection for business angels. In addition, I argue that the prior literature could actually underestimate the dominance of financial considerations in business angel decision-making.

The dominance of product or service category in rejection reasons deviates from earlier rejection reason studies as well, but on the other hand, it is in line with the investment criteria studies. In previous studies, product or service category has been in the top three investment criteria, but has not been able to secure that spot in the rejection criteria studies. However, by the dominance of product related reasons in my full list of rejection reasons, it is hard to believe that it should not be in the top rejection criteria as well. A company cannot generate sales in the long-term without great products. Moreover, by my intuition, I could also argue that a business angel will more likely see more bad products than incapable or unmotivated people during their careers. Typically the most successful entrepreneurs, who are also able to secure financing at some point, start a couple of businesses before they hit the home run. That is also something that has happened for some of the observed Dragons in the beginning of their entrepreneurial careers. As a result, I feel confident in arguing that product or service category indeed belongs to the top three rejection criteria list.

H_{11}: *The likelihood of rejecting an opportunity increases with outrageous valuations*

Table XXI presents the rejection reason categories classified by initial valuation. The initial valuation is calculated from the entrepreneurs' initial offer. For instance, if an entrepreneur offers a 10 % stake in his company in exchange of £100,000, he implicitly argues that his company is worth £1 million (= £100,000/10 %). By analysing the valuation row, we can see that valuation was only once a rejection reason under £500,000 equity valuation category out of 34 opportunities observed in that category. On the other hand, a total of eight times the entrepreneurs argued that their company is worth more than £1.5 million, and each of these opportunities got rejected primarily due to valuation reasons. Thus, the likelihood of rejection

seems to increase with outrageous valuations. Business angels made following statements or comments to entrepreneurs, who valued their companies too high: "How did you derive a £15 million valuation with £300,000 revenues and £40,000 profits?", "What investigation have you made to justify the most ridiculous, ludicrous, stupid, insane valuation?", "Your valuation killed it" and "I wish you would have asked less money, the valuation is wrong. I'm out." In all of these cases, the entrepreneurs were simply too greedy or not sophisticated enough to understand the concept of business valuation. They either asked for too much capital, were willing to give too small equity stakes in return or sometimes even both.

Table XXI
Rejection reasons in all deals by initial valuation

Table presents the accumulation of rejection reason categories by initial valuation. The initial valuation refers to the equity value calculated from the initial offer made by the entrepreneur. The initial valuation is classified into five different categories, which are presented in £'000. The category n/a refers to a situation where either the initial amount of capital requested or the offered equity stake was not disclosed in the TV show. A total of 241 rejection reasons were recorded in 129 business opportunities.

Cited reason	<500K	500K-1000K	1000-1500K	>1500K	n/a	**Total**
Product or service	14	10	1	0	22	47
Market and competition	14	11	3	0	3	31
Return on investment (ROI)	12	4	1	1	12	30
Valuation	1	11	1	8	3	24
Financials	5	5	2	2	8	22
Entrepreneur or management	7	9	1	2	3	22
Business potential and strategy	11	1	2	2	5	21
Investor fit	6	8	1	0	1	16
Patents and protection	5	4	0	0	4	13
Other	2	1	1	0	4	8
No reason	1	3	2	0	1	7
Total	78	67	15	15	66	**241**

The data regarding the equity valuation and investment size are presented in Figure I. These tables also support the idea that outrageous valuations and asking for too much capital is clearly not the best option for entrepreneurs seeking capital from business angels. For instance, the Dragons never agreed on business valuations over £1 million, and made only once an investment where entrepreneur asked for more than £150,000. The rejection rate table d) is also supporting this view, as the largest investments and the largest valuations proposed by the entrepreneurs tend to have higher rejection rates than the average of 79 %. Moreover, if we compare Figures I a) and e), we can see that the Dragons are very good at negotiating lower valuations than initially pitched by the entrepreneurs. Although in Figure a) the proposed investments are spread to all initial equity value categories, majority of the accepted

deal values in Figure I e) are negotiated in the under £500,000 categories (89 %) and only a small minority to the £500,000 - £1.000,000 category (11 %). In general, it is a very bold and sometimes even outrageous statement to argue that your start-up or early staged company should be worth over £1.5 million, especially if it is not generating significant cash flows already. Therefore, it might not be the best strategy to seek capital with huge revenue multiples or seek for £250,000 and willing to give up only 7.5 % equity stake in return - especially if you cannot justify the valuation. As a result of these findings, I argue that one of the easiest ways to destroy your changes of acquiring capital from business angels is to value your company too high. Accordingly, I fail to reject the hypothesis $H_{11.}$

Figure I
Valuation categories in observed business opportunities

Figures a) – f) presents the valuation categories in observed business opportunities (n=129), of which 27 was accepted and 102 was rejected. Valuations are recorded either as frequencies in each category, or as percentages of all deals presenting either acceptance or rejection rates. Initial investments and initial equity values refers to the values, which are initially pitched by the entrepreneurs. On the other hand, investments and acquired equity values, refers to the values, which are agreed upon the meeting after negotiations between the entrepreneurs and the investors. Abbreviation n/a refers to a situation where either the size of the investment or the equity stake was not disclosed.

a) Accepted deals by initial investment vs. equity value

Initial Equity value (£'000) \ Size of the initial investment (£'000)	<50	50-100	100-150	>150	n/a	Total
<500	5	6	0	0	0	11
500-1000	1	8	1	0	0	10
1000-1500	0	3	1	0	0	4
>1500	0	0	0	1	0	1
n/a	0	1	0	0	0	1
Total	6	18	2	1	0	**27**

b) Acception rates by initial investment vs. equity value

Initial Equity value (£'000) \ Size of the initial investment (£'000)	<50	50-100	100-150	>150	n/a	Total
<500	31 %	38 %	-	-	-	32 %
500-1000	20 %	42 %	25 %	-	-	34 %
1000-1500	-	43 %	100 %	-	-	50 %
>1500	-	-	-	20 %	-	13 %
n/a	-	8 %	-	-	-	2 %
Total	21 %	32 %	18 %	13 %	0 %	**21 %**

c) Rejected deals by initial investment vs. equity value

Initial Equity value (£'000) \ Size of the initial investment (£'000)	<50	50-100	100-150	>150	n/a	Total
<500	11	10	2	0	0	23
500-1000	4	11	3	1	0	19
1000-1500	0	4	0	0	0	4
>1500	0	2	1	4	0	7
n/a	7	11	3	2	26	49
Total	22	38	9	7	26	**102**

d) Rejection rates by initial investment vs. equity value

Initial Equity value (£'000) \ Size of the initial investment (£'000)	<50	50-100	100-150	>150	n/a	Total
<500	69 %	63 %	100 %	-	-	68 %
500-1000	80 %	58 %	75 %	100 %	-	66 %
1000-1500	-	57 %	0 %	-	-	50 %
>1500	-	100 %	100 %	80 %	-	88 %
n/a	100 %	92 %	100 %	100 %	100 %	98 %
Total	79 %	68 %	82 %	88 %	100 %	**79 %**

e) Accepted deals by investment vs. acquired equity value

Equity value (£'000) \ Size of the investment (£'000)	<50	50-100	100-150	>150	n/a	Total
<500	6	17	1	0	0	24
500-1000	0	1	1	1	0	3
1000-1500	0	0	0	0	0	0
>1500	0	0	0	0	0	0
n/a	0	0	0	0	0	0
Total	6	18	2	1	0	**27**

f) All deals by initial investment vs. equity value

Initial Equity value (£'000) \ Size of the initial investment (£'000)	<50	50-100	100-150	>150	n/a	Total
<500	16	16	2	0	0	34
500-1000	5	19	4	1	0	29
1000-1500	0	7	1	0	0	8
>1500	0	2	1	5	0	8
n/a	7	12	3	2	26	50
Total	28	56	11	8	26	**129**

Table XXII presents my additional findings on valuation discount in accepted deals. In this context, the valuation discount is the difference between the initial valuation and the accepted valuation, which is the result of the negotiations between the entrepreneurs and business angels. Sometimes an outrageous valuation might not necessarily be a solid reason to reject an opportunity, if the entrepreneur is willing to negotiate on the valuation and there is room for negotiations in general. For instance, the highest single valuation discount in my sample was £2.5 million for an online company. Despite of the high initial valuation, the experienced entrepreneur was able to secure financing after giving up substantially more equity than initially offered. However, I still suggest that entrepreneurs should rely on justifiable and reasonable valuations, rather than over the top or arrogant ones in order to increase their odds of securing capital from business angels.

Table XXII
Valuation discount in accepted deals

Table presents the valuation discount in the accepted deals (n=27). Initial offer category represents the offers made by the entrepreneur, accepted deals represent the actual investment, and negotiation results represent the difference of the previous two. The valuation discount is the difference between the initial valuation and the accepted valuation, which is result of the negotiations. Table presents the median, average, minimum and maximum values, as well as the standard deviation (Stdev). T-statistics for equal means between groups initial offers and accepted deals are also presented, where * and ** denote to statistical significance of the relationship between variables at 5 % and 1 % levels respectively.

£/%	Investment	Equity stake	Valuation
Initial offers			
Median	**75 000**	**12.5 %**	**500 000**
Average	80 741	15.8 %	677 284
Min	37 500	5.0 %	200 000
Max	250 000	40.0 %	3 333 333
Stdev	42 118	8.3 %	622 133
Accepted deals			
Median	**75 000**	**35.0 %**	**208 333**
Average	81 296	33.8 %	265 869
Min	40 000	10.0 %	120 000
Max	250 000	50.0 %	833 333
Stdev	41 593	9.2 %	169 362
Negotiation result			
Median	**0**	**20.0 %**	**-263 750**
Average	577	17.3 %	-405 804
t-stat	*0.05*	*-3.27***	*7.62***
Min	0	0.0 %	-2 500 000
Max	12 500	32.0 %	0
Stdev	2 481	8.4 %	496 279

The average valuation discount was £405,804 in the accepted deals. Hence, on average business angels swipe roughly 60 % off from the entrepreneurs' initial valuation during the deal negotiations. Moreover, Student's t-statistics for the mean difference shows statistical significance at 1 % level (t = 7.62). Investment size does not significantly affect to the valuation, as it is usually sold at par or at very modest premium. Thus, the valuation discount is explained by the fact that investors are willing to have on average 17 % more equity than initially pitched by the entrepreneurs. The finding is significant at 1 % level (t = -3.27). The high valuation discounts experienced in my sample support the view that business angels have usually a very good standing point in the negotiations and are usually able to leverage it. Moreover, only in two cases out of 27 accepted investments the entrepreneurs were able to negotiate a deal at par to their initial valuation request. As an additional finding, I conclude that business angels usually have much greater negotiation power than the entrepreneurs, as they tend to acquire equity at very high discounts.

H_{12}: *Although BAs invest in broad range of industries, investor fit issues might lead to rejection*

Table XXIII presents the sector preferences of business angels classified by accepted and rejected investments. A total of 27 investments were made in 12 different sectors out of 22 identified sectors present in the observed investment opportunities. Hence, my findings support the idea that business angels invest in broad range of industries, and therefore are in line with previous studies (e.g. Landström 1998; Mason and Harrison 2002). Food and drinks, with a total of six investments, was the single most dominant sector where business angels agreed to invest in my sample. Technology and online was the second most dominant sectors with four investments; and third place was a tie between sports and cosmetics with three investments in both. However, in a recent market study 50 % of the business angel investments in UK were allocated to digital and internet businesses (Deloitte-UKBAA 2013), highlighting the investment trend in online businesses. On the other hand, despite of the numerous opportunities seen in sectors such as construction equipment (8), events and training (7), and toys and games (7), these sectors gained zero interest from business angels in terms of invested capital.

Table XXIII
Sector preferences by accepted vs. rejected deals

Table presents all of the opportunities (n=129) in each identified sector classified into accepted and rejected investments. A total of 27 investments were made in to 12 different sectors out of 22 sectors present.

	Accepted	Rejected	Total
Food and drinks	6	7	13
Technology and online	4	10	14
Sports	3	6	9
Cosmetics	3	3	6
Clothing and accessories	2	5	7
Tech accessories	2	2	4
Advertising	2	1	3
Home and garden	1	13	14
Camping	1	5	6
Pets	1	4	5
Social care	1	1	2
Packaging	1	0	1
Construction equipment	0	8	8
Events and training	0	7	7
Toys and games	0	7	7
Car equipment	0	4	4
Music	0	3	3
Travelling	0	2	2
Waste management	0	2	2
Media and TV	0	2	2
Paper	0	1	1
Solar power	0	1	1
Other	0	8	8
Total	**27**	**102**	**129**

Table XXIV presents the investor breakdown of accepted deals classified by each season observed. Table breaks down the business angel investment behaviour in terms of cumulative investments, investing frequency, average investment, average equity stake, average valuation, and by the sector preferences. Moreover, all of the observed business angels come from different industries, possessing combined knowledge in retail, telecommunications, hotel and health club, pleasure industry, interior design and IT sector. Due to their prior business angel investments, they have of course diversified their investments and knowledge into several other industries as well. Taking their diverse backgrounds into consideration, it seems obvious that they invest in variety of sectors. For instance, in the first observed season business angels made investments in 11 different sectors and the single most diversified business angel made investments in six different industries. As there is variation in each of the observed categories amongst the observed business angels, I can conclude that sector preferences, as well as other investment behaviour is highly dependent on the investing individual.

Table XXIV
Investor breakdown of accepted deals by production season

Table presents the investor breakdown of accepted deals (n=27) by each season observed. Table presents the cumulative investment, number of single investments and syndicated investments made, average investment, average equity stake acquired, average valuation and number of industries invested per each business angel.

£	Cumulative investment	# of single inv.	# of syndicated inv.	Average investment	Average equity stake	Average valuation	# of industries invested
Season 10							
Theo Paphitis	462 500	2	4	77 083	21.7 %	333 333	5
Peter Jones	735 000	7	3	73 500	25.8 %	278 333	6
Duncan Bannatyne	182 500	1	3	45 625	25.5 %	194 182	2
Deborah Meaden	185 000	1	3	46 250	18.8 %	206 250	4
Hillary Devey	185 000	1	3	46 250	15.8 %	250 240	3
Total	**1 750 000**	**12**	**16**	**72 750**	**24.5 %**	**278 628**	**11**
Season 11							
Peter Jones	160 000	2	1	53 333	28.2 %	183 519	2
Duncan Bannatyne	125 000	2	0	62 500	37.5 %	165 179	2
Deborah Meaden	75 000	0	2	37 500	21.3 %	173 611	2
Kelly Hoppen	55 000	0	2	27 500	12.5 %	362 500	2
Piers Linney	30 000	0	1	30 000	5.0 %	600 000	1
Total	**445 000**	**4**	**6**	**48 571**	**26.4 %**	**229 416**	**5**

Although business angels invest in all kinds of products in variety of sectors, investor fit issues represents the sixth largest rejection reason category in my sample. In nearly third of the accepted opportunities (30 %), at least one business angel rejected the opportunity due to investor fit concerns, while at least one other agreed to make an investment. Therefore, some investors may clearly choose to not to invest in specific opportunities, if they do not fit their own specific investment criteria or preferences. Investors opting out due to investor fit issues claimed that they don't have experience on the industry, field or market, or that they are not familiar with the technology, or they argued that the business would take more time than they could give. Some investors even said that the concept was boring, or that they did not find either the product or the people exciting to work with. Hence, my findings support the prior literature findings (e.g. Landström 1998; Mason and Harrison 2002) and my investor fit hypothesis H_{12}. Therefore, I conclude, that although business angels invest in broad range of industries, investors' personal preferences might lead to rejecting an otherwise good investment opportunity.

5.3. Results on the business pitch

H_{13}: *Although a business pitch is not purely a reason to invest, it might give a rejection reason for BAs*

A business pitch might give business angels a reason to reject an opportunity. In a handful of opportunities, the investors argued that they reject the opportunity due to a business pitch. However, only twice the reason was purely related to a pitch: "Due to a disorganized pitch, I do not understand the plan. I am out." Another case was that the investors argued that the entrepreneur "does not have sales skills", as his initial business pitch was so poor. The investor continued that if the entrepreneur is not able to "sell the product to a business angel", he sure "cannot sell it to the public" either. In rest of the cases, the rejection reason was only loosely linked to the pitch. These other examples relate to being prepared for the pitch, which seem to be highly crucial when for instance the investors are asking questions about the company's financials or the market during the pitch. As some of these entrepreneurs either stumbled with their numbers or did not know enough about the market their opportunities of acquiring capital vanished due to lack of preparation in the pitch meeting. As a result, I find only weak evidence that a pitch could actually lead to rejecting an opportunity.

On the other hand, no investor expressed that the business pitch was a reason to invest in an opportunity. However, I must say that entrepreneurs with good initial presentations were seen as more likeable or investable candidates, than the ones who pitched poorly. For instance, if we look at the initial sales pitches in my case companies, the investors commented that the entrepreneurs of the Skinny Tan were "confident" in presenting their business case and entrepreneurs of the YUUbag was seen "as highly professional". On the other hand, the entrepreneurs of the Shampooheads were pretty nervous in the beginning of their sales pitch, but after a while they began to look and feel more confident. Therefore, a good and well prepared pitch can be potentially seen as a favourable element in the entrepreneur, but it is most likely not a sole criteria to invest in an opportunity. These findings on business pitch provide only weak evidence for the hypothesis H_{13}. Despite of the weak evidence, my findings are consistent with the earlier findings on business pitch (Mason and Harrison 2003; Clark 2008).

Table XXV
Summary of findings on business angel rejection criteria and business pitch

Table pools together the hypotheses on business angel rejection criteria and business pitch, the proxy variables employed in the tests and the empirical findings on the hypotheses. The final column on the right indicates whether the hypothesis ought to be accepted based on the empirical findings of my study.

Hypotheses (short name)	Proxies	Accepted/Rejected
H_7: Entrepreneur or management	Comments from investors when opting "out" (Top 1)	Rejected
H_8: Market	Comments from investors when opting "out" (Top 3)	Accepted
H_9: Product or service	Comments from investors when opting "out" (Top 3)	Accepted
H_{10}: Financials	Comments from investors when opting "out" (Top 3)	Accepted
H_{11}: Valuation	Comparison of valuations between opportunities	Accepted
H_{12}: Investor fit	Comments from investors when opting "out"	Accepted
H_{13}: Business pitch	Comments from investors when opting "out"	Weak support

Table XXV summarizes the findings on business angel rejection criteria and business pitch. My findings suggest that business angel rejection reasons are dominated by two categories: financial considerations and product or service related reasons. Market and competition, entrepreneur or management and reasons relating to business potential and strategy were also seen as significant rejection reasons. Therefore, my finding suggest that entrepreneur or management as a rejection criterion is not as significant, as argued in the previous literature (Haar et al. 1988; Mason and Harrison 1996). I also find the financial considerations to be much more dominant than argued previously. On the other hand, the market-related issues and concerns about the product or service are ranked in the top of my business angel rejection criteria list supporting the earlier research (Mason and Harrison 1996; Mason and Harrison 2003). As of my slightly contradictory results to the prior literature, I argue that past research might underestimate the importance of financial considerations and actually overestimate the entrepreneur or management as business angel rejection criteria. Moreover, I find evidence that high initial valuations of entrepreneurial businesses increase the probability that the opportunity will be rejected by the investors. I also find that investors' personal preferences play a significant role in rejecting the opportunities, providing support to my investor fit hypothesis and the prior literature (Clark 2008). Finally, I find some evidence that a business pitch, whether it is good or bad, is not solely a reason to either accept or reject an investment opportunity. However, a good business pitch might still support building a more likeable picture of the entrepreneur, and thus increase the odds of receiving capital from the business angels (Mason and Harrison 2003; Clark 2008).

6 CONCLUSION

The aim of the thesis was to observe the interactions between the entrepreneurs and business angels during the initial screening stage. By studying the pitch meetings, in which entrepreneurs are trying to sell their ideas and equity to a panel of business angels, I was able to observe what kind of investment criteria and rejection criteria business angels use in their investment decision-making. An applied observational interaction method and a unique hand-coded observational data was used to study the research questions. By analysing the latest two UK production seasons of the Dragons' Den, I was able to observe the decision-making process of seven business angels, of which three were female. The total number of observed pitch meetings amounts to 129, which consists of 27 successful pitches and 102 declined ones. The empirical evidence on business angel rejection criteria is based on 241 rejection reasons provided by the investors in 129 observed pitch meetings. The findings of my study are pooled into Table XXVI.

Relating to the business angel investment criteria, I find that business angels tend to invest in early-staged companies seeking for expansion financing, which is aligned with the prior literature (e.g. Landström 1998). I also find that gender plays a role in business angel investing. For instance, my results supports the idea of women being more conservative and risk-averse investors than men, as they tend to invest with slightly smaller sums, in smaller businesses in terms of equity value, acquire larger equity stakes individually and tend to syndicate more compared to men business angels. Female business angels also tend to be more selective in their investments, as they rejected more opportunities than their male counterparts. These gender findings are fundamental, as women business angels are understudied in the literature. I also find my syndication hypothesis to be partially true, as the deal value and acquired equity stake tend to increase in syndicated investments. However, my results do not support the increase in investment size with syndicated investments. The latter finding calls for further research on the subject, as it contradicts to the earlier research (e.g. Kelly and Hay 2003; Mason 2007). Not surprisingly, I find some evidence that business angels seek companies with good financial performance or companies with proven profit potential, and that they prefer companies with a combination of good products and capable entrepreneurs. Finally, supporting the agency theory view (Van Osnabrugge 2000) and my hands-on hypothesis, I find evidence that that business angels are investing in companies that they can help with their expertise or contacts.

Table XXVI
Summary of findings

Table pools together the hypotheses on business angel rejection criteria, the proxy variables employed in the tests and the empirical findings on the hypotheses. Hypothesis H_1 _ H_6 relate to the business angel investment criteria and syndication, and hypothesis H_7 - H_{13} relate to the rejection criteria and business pitch. The sample sizes on business angel investment criteria relate to either to the total number of business pitches observed (129) or to the number of the accepted business pitches observed (27). The business angel rejection criteria samples are based on 241 rejection reason comments made in 129 business opportunities. The column empirical evidence highlights the supporting evidence, and the final column on the right indicates whether the hypothesis ought to be accepted based on the empirical findings of my study.

Hypotheses (short name)		Empirical evidence	Sample size	Accepted/rejected
H_1:	Stage of the company	Table VII	27/129	Accepted
H_2:	Gender differences	Tables VIII-XIII	27/129	Accepted
H_3:	Syndicated investments	Tables IX-XIV	27/129	Partially Accepted
H_4:	Financial performance	Case companies	27/129	Weak support
H_5:	Product and entrepreneur	Table XV	129/241	Modest support
H_6:	Hands-on contribution	Table XVI	129/241	Modest support
H_7:	Entrepreneur or management	Tables XVIII-XIX	129/241	Rejected
H_8:	Market	Tables XVIII-XIX	129/241	Accepted
H_9:	Product or service	Tables XVIII-XIX	129/241	Accepted
H_{10}:	Financials	Tables XVIII-XIX	129/241	Accepted
H_{11}:	Valuation	Tables XX-XXI, Figure 1	129/241	Accepted
H_{12}:	Investor fit	Tables XXII-XXIII	129/241	Accepted
H_{13}:	Business pitch	Case companies	129/241	Weak support

Relating to the business angel rejection criteria, I find that entrepreneur or management is not as significant rejection criterion as argued in the previous literature (e.g. Haar et al. 1988; Mason and Harrison 1996). However, the criterion is still ranked in the top 5. On the top of my rank are financial considerations, which are typically not found in that spot in the previous studies on business angel decision-making. On the other hand, market-related issues and concerns about the product or service are found in the top 3 of my business angel rejection criteria list supporting the earlier research (Mason and Harrison 1996; Mason and Harrison 2003). As of my slightly contradictory results to the prior literature, I argue that past research might underestimate the importance of financial considerations and actually overestimate the entrepreneur or management in business angel rejection criteria. Moreover, I find evidence that the likelihood of rejection increases significantly with outrageous initial valuations. I also find support for my investor fit hypothesis, and hence argue that investors' personal preferences play a significant role in rejecting the opportunities. The finding is consistent with the prior literature (e.g. Clark 2008). In addition, I find some evidence that a business pitch, whether it is good or bad, is not solely a reason for business angels to either accept or reject

an investment opportunity. Aligned with the existing literature (Mason and Harrison 2003; Clark 2008), I find that a good business pitch might still assist in building a more likeable picture of the entrepreneur, and thus increase the odds of receiving capital from the business angels. Finally, as with most of the business angel studies, the findings must be treated with caution, as the statistical significance is questionable due to relatively low sample size.

One of the reasons to study business angel decision-making was to be able to guide potential entrepreneurs to acquire capital from BAs. In light of my findings, my top 5 advices to these cash-hungry entrepreneurs are as follows. First, have a good business plan and be prepared to tell: where you are going, how you are going to get there and how you are going to use the requested capital. Usually, business angels are willing to hear that the capital is going to expanding the business, as they are ultimately seeking companies that have the potential to be grown attractive to potential buyers or exited via an IPO (e.g. Feeney et al. 1999; Sudek 2006). The entrepreneurs also need to be able to discuss the company's financials, markets, competitors, patents and exit routes etc. Thus, they can show their professionalism in the pitch meeting by doing the needed homework *ex ante*. Second, as business angels tend to be hands-on investors (e.g. Van Osnabrugge 2000; Paul et al. 2007), they seek entrepreneurs that they can work with and rely on (Landström 1998; Prowse 1998). Therefore, the entrepreneurs need to build trust with the investors, as they are both not only seeking for an investment but also a business partner to work with. Third, in order to avoid rejection, the number one rule is that do not overestimate the worth of your entrepreneurial business, or be prepared to justify your valuation and/or negotiate a deal that satisfies both parties. Remember that a start-up valuation tends to be very subjective, as they usually have limited trading history and little tangible assets (Mason 2007). Fourth, when seeking investors for a capital-intense high-risk venture, aim your pitch to a syndicate, as those are especially formed in order to pool capital and spread risks amongst the business angels. Finally, remember that investors' personal preferences affect their investment decision-making. Hence, if you get rejected by one business angel, find another one with a better 'fit' towards your business.

The governments have recently introduced supply side improvements to ease the funding of small businesses (e.g. Mason and Kwok 2010). For instance, UK introduced new business angel tax reliefs in 2012. However, the barriers to invest are typically present on the demand side of the table. Business angels indeed argue that good quality opportunities are scarce and they would like to invest more frequently (Mason and Harrison 2002). This view is also supported by their outrageous rejection rates (e.g. 79 % in this study). Thus, the entrepreneurs

clearly need better guidance in how to acquire capital from the business angels. For instance, in my sample many of the observed entrepreneurs' clearly had limited knowledge of business valuation. In order to secure the financing of small businesses, we need to address and solve the demand side weaknesses as well, and not only concentrate to the supply side enhancements. Therefore, I suggest, that the business angel networks could educate, guide and train potential entrepreneurs in order to receive better quality opportunities in the future. Moreover, BANs or individual business angels could be more involved in universities or other educational facilities by attending as guest lecturers in entrepreneurial programs or invite students (potential entrepreneurs) to their social events. As with all the other dating agencies in the world, BANs also need to market themselves to become more visible and more desired amongst the potential candidates.

Despite of the growing body of literature focusing on business angel decision-making, there are still gaps to fill. As far as the author acknowledges, the agency theory is the only theory applied to business angels in prior literature. Hence, one possible suggestion for further research is to apply *behavioral finance* theories to business angel decision-making. As co-investing is clearly trending at the moment (e.g. Deloitte-UKBAA 2013), it would be interesting to study further the dynamics of business angel syndication. Future studies might, for instance, examine is the increased syndication partly due to a 'bandwagon effect' or 'herding' of inexperienced business angels towards their more seasoned colleagues. Another suggestion is to replicate my study with a larger set of data in order to overcome the small sample limitations and to enhance the statistical significance of my findings. My data could be easily expanded by ten times, if more observers would be available. Dragons' Den format is also available in several other countries, such as U.S., Canada, Australia, Germany, Ireland, Japan, Sweden and Finland. Hence, one might also examine the country specific differences in business angel decision-making. For example, Maxwell et al. (2011) have previously used the Canadian version when applying the elimination-by-aspect model to business angel decision-making.

REFERENCES

Amatucci, F. and Sohl, J., 2004. Women entrepreneurs securing business angel financing: tales from the field. *Venture Capital*, 6 (2–3), 181–196.

Barber, B. and Odean, T., 2001. Boys will be Boys: Gender, Overconfidence, and Common Stock Investment. *The Quarterly Journal of Economics*, 116 (1), 261–292.

Clark, C., 2008. The impact of entrepreneurs' oral 'pitch' presentation skills on business angels' initial screening investment decisions. *Venture Capital*, 10 (3), 257–279.

Ericsson, K. and Herbert A., 1984. *Protocol analysis*, MIT Press, Cambridge, MA.

Fama, E. and Jensen, M., 1983. Separation of Ownership and Control. *Journal of Law and Economics*, 26 (2), 301–325.

Feeney, L., Haines, G. and Riding, A., 1999. Private investors' investment criteria: insights from qualitative data. *Venture Capital: An International Journal of Entrepreneurial Finance* 1 (2), 121–145.

Freear, J. and Wetzel, W., 1990. Who bankrolls high-tech entrepreneurs? *Journal of Business Venturing*, 5 (2), 77–89.

Haar, N., Starr, J. and MacMillan, I., 1988. Informal risk capital investors: investment patterns on the east coast of the USA. *Journal of Business Venturing* 3 (1), 11–29.

Haines, G., Madill, J. and Riding, A., 2003. Informal Investment in Canada: Financing Small Business Growth, *Journal of Small Business and Entrepreneurship*, 16 (3–4), 13–40.

Hall, J. and Hofer, C., 1993. Venture Capitalists' Decision Criteria in New Venture Evaluation, *Journal of Business Venturing*, 8 (1), 25–42.

Harrison, R. and Mason, C., 2007. Does Gender Matter? Women Business Angels and the Supply of Entrepreneurial Finance. *Entrepreneurship Theory and Practice*, 31 (3), 445–472.

Hindle, K. and Wenban, R., 1999. Australia's informal venture capitalists: An exploratory profile *Venture Capital: An International Journal of Entrepreneurial Finance*, 1 (2), 169–186.

Jensen, M. and Meckling, W., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3 (4), 305–360.

Jianakoplos, N. and Bernasek, A., 1998. Are women more risk averse? *Economic Inquiry*, 36 (4), 620–630.

Kelly, P. and Hay, M., 2003. Business angel contracts: the influence of context. *Venture Capital: An International Journal of Entrepreneurial Finance*, 5 (4), 287–312.

Kerr, W., Lerner, J. and Schoar, A., 2014. The Consequences of Entrepreneurial Finance: Evidence from Angel Financings. *Review of Financial Studies*, 27 (1), 20–55.

Lahti, T., 2011. Angel investing: an examination of the evolution of the Finnish market. *Venture Capital: An International Journal of Entrepreneurial Finance*, 13 (2), 147–173.

Landström, H., 1992. The relationship between private investors and small firms: an agency theory approach. *Entrepreneurship & Regional Development: An International Journal*, 4 (3), 199–223.

Landström, H., 1998. Informal investors as entrepreneurs. *Technovation*, 18 (5), 321–333.

Lumme, A., Mason, C. and Suomi, M., 1998. *Informal venture capital: Investors, investments and policy issues in Finland*. Kluwer Academic Publishers, Dordrecht, the Netherlands.

Mason, C. and Harrison, R., 1993. Strategies for Expanding the Informal Venture Capital Market. *International Small Business Journal*, 11 (4), 23–38.

Mason, C. and Harrison, R., 1994. The Informal Venture Capital Market in the UK, in: Hughes, A. and Storey, D. (eds.), *Financing Small Firms*, Routledge, London, 64-111.

Mason, C. and Harrison, R., 1995. Closing the regional equity gap: the role of informal venture capital. *Small Business Economics*, 7 (2), 153–172.

Mason, C. and Harrison, R., 1996. Informal venture capital: a study of the investment process, the post-investment experience and investment performance. *Entrepreneurship & Regional Development: An International Journal*, 8 (2), 105–126.

Mason, C. and Harrison, R., 1996. Why 'Business Angels' Say No: A Case Study of Opportunities Rejected by an Informal Investor Syndicate. *International Small Business Journal*, 14 (35), 35–51.

Mason, C. and Harrison, R., 1997. Business angel networks and the development of the informal venture capital market in the UK: Is there still a role for the public sector. *Small Business Economics*, 9 (2), 111–123.

Mason, C. and Harrison, R., 2002. Barriers to investment in the informal venture capital sector. *Entrepreneurship and Regional Development* 14 (3), 271–287.

Mason, C. and Harrison, R., 2003. 'Auditioning for Money': What Do Technology Investors Look for at the Initial Screening Stage? *The Journal of Private Equity*, 6 (2), 29–42.

Mason, C. and Kwok, J., 2010. Investment Readiness Programmes and Access to Finance: A Critical Review of Design Issues. *Local Economy*, 25 (4), 269–292.

Mason, C. and Rogers, A., 1997. The Business Angel's Investment Decision: An Exploratory Analysis, in: Deakins, D., Jennings, P. and Mason, C. (eds.), *Entrepreneurship in the 1990s*, Paul Chapman Publishing, London, 29–46.

Mason, C. and Stark, M., 2004. What do investors look for in a business plan? *International Small Business Journal,* 22 (3), 227–248.

Mason, C., 2007. Informal Sources of Venture Finance, in: Parker, S. (ed.), The Life Cycle of Entrepreneurial Ventures, *International Handbook on Entrepreneurship*, Springer, New York, 259-299.

Mason, C., 2009. Public Policy Support for the Informal Venture Capital Market in Europe: A Critical Review. *International Small Business Journal*, 27 (5), 536–556.

Maxwell, A., Jeffrey, S. and Lévesque, M., 2011. Business angel early stage decision making. *Journal of Business Venturing,* 26 (2), 212–225.

Mitteness, C., Baucus, M. and Sudek, R., 2012. Horse vs. Jockey? How stage of funding process and industry experience affect the evaluations of angel investors. *Venture Capital: An International Journal of Entrepreneurial Finance*, 14 (4), 241-267.

Morrissette, S., 2007. A Profile of Angel Investors. *The Journal of Private Equity*, 10 (3), 52–66.

Paul, S., Whittam, G. and Wyper, J., 2007. Towards a model of the business angel investment process. *Venture Capital: an International Journal of Entrepreneurial Finance*, 9 (2), 107–125.

Politis, D., 2008. Business angels and value added: what do we know and where do we go? *Venture Capital: An International Journal of Entrepreneurial Finance*, 10 (2), 127–147.

Prowse, S., 1998. Angel investors and the market for angel investments. *Journal of Banking & Finance*, 22 (6–8), 785–792.

Riding, A., 2008. Business angels and love money investors: segments of the informal market for risk capital, *Venture Capital: An International Journal of Entrepreneurial Finance*, 10 (4), 355–369.

Schubert, R., Brown, M., Gysler, M. and Brachinger, H., 1999. Financial Decision-Making: Are Women Really More Risk-Averse? *The American Economic Review*, 89 (2), 381–385.

Short, D. and Riding, A., 1988. On the estimation of the investment potential of informal investors: a capture-recapture approach. *Journal of Small Business and Entrepreneurship*, 5 (5), 26–40.

Sohl, J., 2003. The Private Equity Market in the U.S.: Lessons from Volatility. *Venture Capital: An International Journal of Entrepreneurial Finance*, 5 (1), 29–46.

Stedler, H. and Peters, H., 2003. Business angels in Germany: An empirical study. *Venture Capital: An International Journal of Entrepreneurial Finance*, 5 (3), 269–276.

Sudek, R., 2006. Angel investment criteria. *Journal of Small Business Strategy*, 17 (2), 89–103.

Sunden, A. and Surette, B., 1998. Gender Differences in the Allocation of Assets in Retirement Savings Plans. *American Economic Review*, 88 (2), 207–11.

Tashiro, Y., 1999. Business angels in Japan. *Venture Capital: An International Journal of Entrepreneurial Finance*, 1 (3), 259–273.

Van Osnabrugge, M., 2000. A comparison of business angel and venture capitalist investment procedures: an agency theory-based analysis. *Venture Capital: an International Journal of Entrepreneurial Finance*, 2 (2), 91–109.

Wetzel, W., 1983. Angels and informal risk capital. *Sloan Management Review*, 24 (4), 23–33.

Wetzel, W., 1987. The informal venture capital market: Aspects of scale and market efficiency. *Journal of Business Venturing*, 2 (4), 299–313.

APPENDICES

Appendix I
T-statistics for single and syndicated investment mean values

Table presents the t-statistics to test the statistical significance of single investments and syndicated investment group averages in Tables XI-XIII. Single – Syndicated diff. represents the difference of group mean values. T-statistics for equal means between groups single investments and syndicated investments are presented below the actual mean differences, where * and ** denote to statistical significance of the relationship between variables at 5 % and 1 % levels respectively.

£/%	Investment size	Equity stake	Valuation
Men			
Single - Syndicated diff.	16 559	-0.8 %	38 692
t-stat	*1.05*	*-0.19*	*0.54*
Women			
Single - Syndicated diff.	-833	7.7 %	-86 604
t-stat	*0.05*	*-1.97*	*0.80*
Total			
Single - Syndicated diff.	14 461	0.1 %	25 141
t-stat	*1.03*	*0.03*	*0.37*

Appendix II
T-statistics for gender group mean values

Table presents the t-statistics to test the statistical significance of gender group averages in Tables XI-XIII. Men – Women diff. represents the difference of the group mean values. T-statistics for equal means between groups men and women are presented below the actual mean differences, where * and ** denote to statistical significance of the relationship between variables at 5 % and 1 % levels respectively.

£/%	Investment size	Equity stake	Valuation
Single investments			
Men - Women diff.	16 786	-7.0 %	108 414
t-stat	*0.42*	*-3.15***	*0.73*
Syndicated investments			
Men - Women diff.	-606	1.39 %	-16 883
t-stat	*-0.07*	*0.27*	*-0.26*