BACKING THE HORSE OR THE JOCKEY? DUE DILIGENCE, AGENCY COSTS, INFORMATION AND THE EVALUATION OF RISK BY BUSINESS ANGEL INVESTORS

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ABSTRACT

This paper explores the argument that business angel investors are more concerned with managing and minimising agency risk than market risk. Based on data on due diligence process from a survey of business angels in the UK, the paper concludes that business angels do view entrepreneur characteristics and experience as having the greatest impact on the perceived riskiness of an investment opportunity. Further, they emphasise personal and informal over formal sources of information in the due diligence process, and seek information on both the entrepreneur and the venture in determining valuation. Indeed, the reliance of business angels on short-term and subjective information to value investment opportunities leads to the conclusion that their approach to valuation is not a function of the conventional protocols of financial analysis, but of personal relations and assessment.

Key words risk, investment decision-making, due diligence; business angel; agency costs

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1. Introduction

Access to informal venture capital, and to non-family business angel investment in particular (characterised by market-based not affinity-based decision-making) plays an important role in economic development (Avdeitchikova and Nyström 2016). Accordingly, understanding the nature of their decision-making process and the factors that influence it can play a role in improving the effectiveness and efficiency of this market, in shaping the evolution of policies to support the development of the market and in informing entrepreneurs of the factors that are most important for them to successfully attract business angel investment.

Studies of investment decision-making by both venture capital fund managers and business angels suggest that investors attach significant importance to the ability of management, in terms of skill, quality, track record and experience, and other characteristics. Although other factors are also taken into account, including the characteristics of the market, industry features, extent of competition, product differentiation, rates of return expectations and external threats (Sweeting, 1991; Fried and Hisrich, 1994; Manigart et al, 1997), management-related factors –

notably the quality of the entrepreneur - appear to play a major part in the investment decision (MacMillan et al, 1985; Muzyka et al, 1996). Specifically, it is becoming clear from a number of so-called ‘third generation’ business angel studies[1] (Maxwell, 2016; White and Dumay, 2017; Sudek, 2006; Pollack et al, 2012) that for the angel investor, there is a sequencing in the evaluation and decision-making process, in that the assessment of the entrepreneur can only take place once the key characteristics of the venture are known (Maxwell, 2011; 2016; Mitteness et al, 2012b). It is also clear that as the research focus shifts from the investor to the deal as the unit of analysis (Kelly, 2007) the reasons for rejecting an opportunity vary across different stages in a multi-stage decision process (Landström, 1996; Jeffrey et al, 2016).

For a number of commentators this has prompted the use of a racing analogy: ‘imagine that your product or service is a horse and that your management team is the jockey. A good horse and a skilful jockey is what the betters (investors) are looking for’ (Robertson, 2002). In similar vein, Richards (2001, 61, quoting Bill Joos of Garage.com) argues that ‘you have to have a valid race-track, and I view

[1] First generation studies (1980s and early 1990s) focused on descriptive profiles of angel capital markets, angel investors and their investments; second generation studies (1990s) shifted the focus to business angel networks, investment decision making and the application of theory; the third generation of studies (after 2000) is characterised by a greater focus on methodological, analytical, theoretical and policy issues, following an agenda set out in Mason and Harrison (1999). Progress against this third generation agenda, and the emergence of a fourth generation of research focused more on the dynamics of market evolution, has been charted by White and Dumay (2017).

that as the market. You have to have a wonderful business idea, which is the horse, and smart bettors bet on jockeys'. One of the first substantive research studies of venture capital investment decision-making concluded that 'there is no question that irrespective of the horse (product), horse race (market), or odds (financial criteria), it is the jockey (entrepreneur) who fundamentally determines whether the venture capitalist will place a bet at all' (Macmillan et al 1985, 119). This is confirmed in more recent research (Mason et al, 2016) that suggests that concern about the entrepreneur is the overwhelming reason why angel investors reject investment opportunities, especially at the early stages of the decision-making process (Mitteness et al, 2012a; 2012b).

The key point of this analogy is to emphasise the role of the entrepreneur in managing risk and generating returns for the investor: 'you would not bet on a race horse that had a four hundred pound gorilla as the jockey' (Weintraub, 2002). However, the argument that the entrepreneur is critical to the decision to invest is not unequivocally supported in the literature. Mitteness et al (2012b) identify a distinction between studies (Haines et al, 2003; Mason and Harrison, 1996; Van Osnabrugge, 2000) arguing that entrepreneur characteristics weigh more heavily than opportunity/venture characteristics and those (Fiet, 1995a; Hall and Hofer, 1993; Kaplan et al, 2009) suggesting that opportunity characteristics take precedence. They attribute these conflicting results to differences in the stage of the decision-making process being considered, and to differences in individual investor characteristics and preferences (Mitteness et al, 2012a), to which we would add that much of this prior literature makes no allowance for the possible existence of differences in the assessment of this factor by different categories of investors, notably venture capitalists and business angels (Fiet, 1995a; 1995b; 1996).

In this paper, therefore, we review the relevant literature on the factors influencing the investment decisions of business angel investors, and highlight the relative paucity of such studies in the business angel market. Based on this review we develop a number of hypotheses concerning the approach of business angels to the evaluation of investment opportunities. These hypotheses are then tested by means of a detailed study of the relative importance of entrepreneur (jockey) and venture (horse) characteristics in business angel investment decision-making in the UK.

2. Risk and Investment Decision-Making

Business angel investing is a multistage decision-making process of interaction between investors and entrepreneurs under condition of incomplete information and risk (Harrison et al, 2015; 2016; Maxwell et al, 2011). Investors in unquoted companies encounter two types of risk: market risk and agency risk (Fiet, 1995a;

1995b). Market risk, or more generally performance risk (Das and Teng, 2001), can be defined as risk that is due to unforeseen external competitive conditions affecting the size, growth and accessibility of the market, to factors affecting the level of market demand, and to operational factors (e.g. implementation failures, technology factors) that might preclude achievement of a venture's goals and objectives. Agency risk, otherwise relationship risk (Maxwell and Lévesque, 2014), is risk that is caused by the separate and possibly divergent interests of principals and agents (Fiet, 1995a; 1995b). It may result from agents acting in bad faith, holding conflicting objectives, misrepresenting their skills and abilities, and inaptitude. Agency risk arises from information asymmetry: agents possess information on the project that is not known to the principals. Information asymmetry, in turn, opens the investor up to the risks of moral hazard, whereby agents may take advantage of information asymmetry to redistribute resources to themselves and therefore to the detriment of the investor, and adverse selection which arises from his/her inability to judge whether the entrepreneur has the capabilities required.

Fiet (1995a; 1995b) suggests that venture capital fund managers and business angels will differ in their attitude to these sources of risk. Specifically, he proposes that venture capital fund managers will be more concerned with market risk – risk due to unforeseen competitive conditions affecting the size, growth and accessibility of the market - whereas business angels will be more concerned with agency risk – that risk arising from the separate interests of the entrepreneur and the investor. This difference in the emphasis that venture capital fund managers and business angels attribute to these sources of risk is related to the types of risk that they believe they are most competent to control (Harrison, et al 2016). Venture capital fund managers can use stringent boilerplate contractual provisions which allow them to replace an entrepreneur who under-performs, is guilty of misconduct or is found to be incompetent, to protect themselves from agency risk (Bruton, Fried and Hisrich, 1997; 2000). CEO replacement has been identified as a key VC investor contribution during or after the investment process and VC-backed companies are significantly more likely than others to experience CEO removal (Hellmann and Puri, 2002). However, market risk is less controllable through *ex post* contracting.

Business angels, in contrast, attach more importance to agency risk (Harrison et al, 2016). First, most angels are information poor, have limited deal flow and lack comparative data to evaluate market risk, and hence have fewer opportunities to learn from experience (Harrison et al, 2015). Second, angels are resource constrained and do not have the same level of resources as venture capital funds to both collect and analyse (costly) market-related information (Fiet, 1995b). Moreover, the generally smaller deals made by business angels do not justify the higher transaction costs associated with extensive due diligence: research suggests that venture capital fund managers do indeed conduct significantly more due diligence than business angels (Van Osnabrugge, 2000). Third, contracts between angels and entrepreneurs tend to be simple and informal, making it harder for them to enforce sanctions, reflecting the importance of trust rather than formal controls in the angel-entrepreneur relationship (Harrison et al, 1997; Kelly and Hay, 2003; Arthurs and Busenitz, 2003). Finally, given the importance of heuristics in their decision making (Harrison et al, 2015), it is clear that many business angels rely on their prior entrepreneurial and industry experience and feel quite capable of assessing the market risks and so view the relational risk associated with the entrepreneur as the most potentially damaging contingency (Fiet, 1995a).

The implication is that venture capital fund managers will seek to reduce risk at the pre-investment stage by careful screening, due diligence and contracting arrangements (Van Osnabrugge, 2000). Business angels, by contrast, will manage risk by placing more emphasis on post-investment relationships, particularly through becoming actively involved in the business. In summary, therefore, Fiet (1995b: 557) suggests that "…business angels may rely on the entrepreneur to evaluate market risk for them. … [This] would allow a business angel to specialise in evaluating whether or not the entrepreneur understands the deal and whether or not the entrepreneur can be relied upon as a venture manager, even if they as investors do not have enough market information to understand it completely. That is, business angels can specialise in evaluating agency risk while relying upon the entrepreneur to manage market risk."

Furthermore, although business angels and venture capital fund managers both emphasise the importance of the entrepreneur/entrepreneurial team, they stress different aspects (Van Osnabrugge and Robinson, 2000). In particular, angel investors place greater importance on the 'chemistry' between themselves and the entrepreneur, and will use their expertise and involvement to close gaps in the management team and contribute to the success of the venture. According to Van Osnabrugge and Robinson (2000: 149): 'their [business angels'] main requirement appears to be that they understand the generic business, rather than the sector. This understanding allows them to assess how they might add their own general business knowledge and experience to the firm.' In other words, the approach of the majority of business angels to minimizing risk is to have a limited investment focus in order to leverage their experience and knowledge to evaluate opportunities and add value to their investments. As such, this is consistent with other evidence that angel investors initially focus on assessing the entrepreneur rather than the business (Morrissette, 2007; Haines et al, 2003; Feeney et al, 1999): 'at the screening stage when angel investors are deciding whether an entrepreneur should proceed to due diligence, the angels place the greatest importance on the strength of the entrepreneur' (Mitteness et al, 2012b, 244), and entrepreneur strength rather than opportunity strength is more important in predicting whether a deal will proceed to due diligence.

Most of the research to date on risk and business angel investment decision making, with the exception of the Mitteness et al (2012a; 2012b) studies, focuses on the initial screening stage, largely reflecting the relative ease of observing the process and collecting data (including the use of real-time methods, Harrison et al, 2015) relative to later stages in the process. To date there have been no studies explicitly of the due diligence stage in the process. Indeed, some have argued that once the investor's assessment of the entrepreneur has proven satisfactory they rely 'on the due diligence team to focus on verifying the information related to the opportunity, such as the new venture's legal position, market prospects and references' (Mitteness et al, 2012b, 244). While this outsourcing of the due diligence process, and its emphasis on matters of market, or performance, risk may be an appropriate description of the process in formally organised angel groups (Sudek, 2006; Gregson et al, 2013) this contradicts the limited knowledge we have of this stage in the investment decision making process (Maxwell, 2016). For example, angels use a wide range of informal sources to confirm the accuracy of the information provided by the entrepreneur (Haines et al, 2003), more experienced angels pay more attention to the entrepreneur than to, for example, financial projections (Harrison et al, 2015), and angel investors undertake less due diligence when the entrepreneur is introduced to them by a trusted intermediary (Harrison et al, 1997).

In this paper we contribute to the angel investment decision making literature by examining the due diligence process in detail. Our starting point is the work of Fiet (1995a; 1995b), who was concerned with the implications of these differences in attitudes to risk for the sources used to acquire risk-reducing information. He notes that business angels have less information reliance than venture capital funds, particularly for agency risk (Fiet, 1996): they are less successful than venture capitalists in consolidating what they know about deals with other informants, and information does not flow efficiently among angels (Gaston, 1989; Krasner and Tymes, 1983; Seymour and Wetzel, 1983). In this paper we test three hypotheses arising from Fiet's work relating to the effects of business angels' attitude toward agency and market risk on their (post-screening) due diligence process. These hypotheses, which follow from the earlier discussion, are:

> *Hypothesis 1*. Business angels view the entrepreneur/team as the greatest source of risk in an investment opportunity.

Hypothesis 2. Business angels will rely much more on themselves rather than others to gather and process agency and market risk information.

Hypothesis 3. The information gathering activities of business angels will concentrate on entrepreneur-related issues.

3. Data Source

This paper is based on 127 usable responses to a mail questionnaire sent to over 1,000 business angels who were registered with UK business angel networks (BANs)[2]. These organisations operate like "dating agencies", providing a communication channel which enables business angels to review investment opportunities while preserving their anonymity and allows entrepreneurs seeking finance to present their investment opportunity to a large number of potential investors (Harrison and Mason, 1996). The managers of several BANs agreed to distribute questionnaires to investors registered with their service. In addition, some questionnaires were sent to investors who were identified through

[2] The survey was undertaken in 1999/2000 and remains the only source of information on the due diligence process of business angels – this topic has not featured in more recent surveys (e.g. Mason and Botelho 2014; Wright et al 2015). Given that in other respects (demographics, investment behaviour) our sample is very similar to these more recent ones we believe that analysis of this data in this context remains justified.

recommendations and informal contacts. Although we know that some 1000 surveys were administered, it was not possible to calculate a meaningful response rate because not all of these will have been sent to our population of interest. For example, the response rate is under-estimated due to double-counting (investors may be members of more than one network) and the inclusion of investors registered with BANs who are not business angels (e.g. financial institutions, companies and intermediaries registering on behalf of their clients). We are not able to control for these factors.

This methodology is open to two potential sources of bias. First, it is a "sample of convenience". However, research on the informal venture capital market is hampered by the difficulties involved in identifying business angels (Mason and Harrison 2008). There are no directories of business angels, their investments are not publicly recorded and most strive to preserve their anonymity. Any attempt to test the representativeness of a sample of business angels, whether drawn from BAN membership lists or from other sources, runs up against the problem that the overall population of business angels is unknown and probably unknowable (Wetzel, 1983). The risk of significant bias is substantially increased if a sample is drawn from just one BAN (Mason and Harrison, 1997), as is the case in a number of studies (e.g. Mitteness et al, 2012a; 2012b). To mitigate this potential problem in the present study, the sample has been drawn from a number of different types of networks (large and small, local and regional, private and public) in various parts of the country. Second, there may be a problem with response bias. This could not be tested because no information was available on the characteristics of non-respondents. Nor could early and late respondents be compared because the various BANs sent out the questionnaires at different times, and the research team did not have control over this process.

The survey instrument was designed to capture a wide range of information on the investment activity of business angels in the UK: investments made, syndication and co-investment, investment appraisal, deal structure, future investment plans, attitude towards support and assistance measures and opinions of business angel networks (Harrison and Mason, 2000; Mason and Harrison, 1999; 2002). This paper is based on questions concerning: (i) factors that influence the riskiness of investment opportunities, (ii) due diligence activities and (iii) information sources used to value an investment opportunity. These questions replicated those included in a survey instrument developed by Wright and Robbie (1995) to examine the investment appraisal approach of UK venture capital fund managers. However, Wright and Robbie (1995) measured the impact of a range of prompted factors on the riskiness of a venture on a scale from 5 'extremely important' to 1 irrelevant', which does not differentiate between those factors increasing risk and those which decrease risk. Accordingly, we asked respondents to assess each factor on a five point scale from –2 'reduces risk' to +2 'increases risk', with 0 representing 'no effect on risk'.

4. Results

4.1 Profile of Respondents

It is important to emphasise that the respondents to this survey conformed to what is the accepted profile of business angels (for a summary, see Van Osnabrugge and Robinson 2000, 106-111) rather than what is described in the USA as 'doctors and dentists money' (i.e. passive investors who invest via intermediaries and have little or no involvement in either the investment decision or post-investment support). They were typically hands on investors who invested on their own or as part of informal investor syndicates, participated in making the investment decision and were involved in supporting their investee businesses. The majority (87%) had made one or more investments (33% had made at least four investments) and the remainder were actively looking to make their first investment (Mason and Harrison, 2002)[3].

[3] While there is some evidence that angel investors learn from doing (Harrison et al, 2015), particularly from making their first investment, robustness tests excluding the 13% of (so far) non-investors makes no material difference to the reported results.

Respondents were overwhelmingly male (124 out of 127, or 97.6%[4]) and middle-aged (44% aged 45-54 and 25% aged 55-64, compared with 6% who were over 65 and 25% who were under 45). They were also well-educated: 60% were university graduates (52% of whom had degrees in science, engineering or mathematics with the remainder having degrees in arts, social sciences and law[5]), 24% had Masters degrees (16% had an MBA) and 6% had PhDs (all in science). Almost two-thirds of respondents had professional qualifications (often more than one); half of these respondents had finance-related professional qualifications. Just 11% reported no post-school educational qualifications.

The economic background of the respondents was overwhelmingly business-oriented, with most holding senior management positions in companies of various sizes. More significantly, the sample was very entrepreneurial: 70% had started one or more businesses (median of two start-ups), 19% had been involved in one or more management buyouts (MBO), 10% had been involved in at least one management buyin (MBI) and 12% had been involved in both MBOs and MBIs. In total, 83% of respondents had gained entrepreneurial experience in at least one start-up, MBO or MBI. Their expertise was multi-faceted, with most respondents

[4] One questionnaire provided information for both husband and wife on the grounds that they invested together.
[5] A curious feature was that 10% of the graduates in the sample had degrees in history.

identifying several functional areas in which they had experience: indeed, 33% described their expertise as being 'general management', 32% gave sales and/or marketing, while 38% had finance-related expertise.[6]

Insert Table 1 about here

Their investment preferences were quite varied (Table 1). There was a strong preference for manufacturing, and technology in particular. In terms of stage, respondents exhibited the greatest preference for early stage investments (typically businesses that were revenue-positive), followed by start-ups and expansion stage deals. MBOs were also popular, although relatively few actual investments were made in such deals (Mason and Harrison, 2002). In contrast, angels had relatively little interest in either seed stage investments or rescue/turnaround situations.

4.2 The Assessment of Risk by Business Angels

Business angel investors were given 35 statements relating to sources of risk in an investment opportunity. They were asked to respond to each statement on a 5-point scale (from +2 to –2) to indicate the degree to which it increased or reduced the risk of the investment. For the purpose of analysis these statements have been

[6] 7% described their expertise was managing director and 4% gave Chairman.

grouped into three categories: (i) those that relate to the characteristics of the entrepreneur (motives, demographics, traits: n=14); (ii) those that relate to the experience of the entrepreneur/management team (track record, reputation, referral sources: n=7); and (iii) those that relate to the characteristics of the venture itself (product/service, market characteristics, location: n=14). The first two categories relate to 'jockey' factors; the third category relates to 'horse' factors. Responses have been analysed separately for factors associated with increased risk in the venture and those associated with a reduction in risk. Rankings are on the basis of mean scores on the 5-point scale, ignoring non-responses, and have been grouped into *very high* (-1.50 to -2.00 for decreased risk; +1.50 to +2.00 for increased risk), *high* (-0.95 to –1.49; +0.95 to +1.49), *medium* (-0.50 to –0.94; +0.50 to +0.94) and *low* (0.00 to –0.49; 0.00 to +0.49) risk factors. These ranges were determined a priori but do correspond well to breaks in the distribution of mean scores (Table 2).

Insert Table 2 about here

From Table 2 it is clear that a combination of entrepreneur and venture characteristics are associated with increased perceived risk in the investment opportunity. In particular, there is a high perceived increase in risk where the entrepreneur has a low financial commitment in the venture and where the entrepreneur is seeking status through new venture ownership, and a moderate increase in risk associated with the age of the entrepreneur (a surrogate for experience and hence competence). In both cases, as sources of agency risk in the form of moral hazard and adverse selection, low financial commitment and status seeking are consistent with the argument that business angel investors will be concerned specifically with agency rather than market risks. Typically, an entrepreneur will seek outside finance only after making significant investment to develop the venture to a point at which, first, outside investors can estimate its value; and second, where disclosure of critical aspects of the venture to investors will not result in the opportunity being appropriated (Smith and Smith 2000, 404-405). However, given that entrepreneurs and investors are rewarded differently (in that entrepreneurs provide largely human capital to and draw salaries from their ventures) there is an incentive for entrepreneurs to pursue negative NPV investments, even where there are no significant sunk assets in place, and seek to attract investors to these. Table 2 clearly indicates that the entrepreneur's financial commitment (or, more precisely, the lack of it) is a major signal to the investor as to the potential agency risk of adverse selection, and that status seeking by the entrepreneur signals a potential lack of commitment and effort by the entrepreneur, generating a moral hazard problem.

Table 2 also highlights a number of venture characteristics that are associated with at least moderate increases in the perceived riskiness of the investment: first, situations where the product will create a new market (i.e., the opportunity goes beyond the knowledge and experience of the investor, and represents a source of market risk which the investor cannot adequately assess or control); and second, where the product is high tech (reflecting the general lack of technology experience and knowledge in this sample of business angels). These represent product/market risks which go beyond the competence of the investor to manage based on their experience and knowledge.

The survey responses also confirm that distance is a significant factor in the perception of risk by business angels. Most previous research on business angel investment preferences and behaviour has demonstrated that business angel investment is a proximity phenomenon (Harrison et al, 2010): business angels variously report that they will invest in businesses which lie within, say, 100km of their home or office, or within a fixed travel time to allow for a working visit plus return travel within a day (e.g. Short and Riding, 1989; Freear, Sohl and Wetzel, 1994; Mason and Harrison, 1994; Paul, Whittam and Johnston, 2001). This preference for proximity reflects, in part, the informal identification of investment opportunities through personal social and business networks which themselves tend to be spatially constrained. In the present context, however, it also reflects the need and desire of investors to be in a position to monitor and become involved in the management and development of their investee ventures, both because this represents "displaced" or vicarious entrepreneurial activity on their part, and also because proximity and involvement provides a mechanism for managing moral hazard. Equity investors will share the benefits of any effort expended by the entrepreneur to make the venture more successful and hence valuable. However, as Smith and Smith (2000: 405) point out, this sharing of the benefits is likely to reduce the efforts of the entrepreneur compared to the situation of being sole owner, as the entrepreneur weighs the overall cost of effort against only the private benefits to the entrepreneur, not against the total benefits to all investors, and therefore may make choices that are not in the best interests of investors (see also Jensen and Meckling, 1976; Myers, 1984; Darrough and Stoughton, 1986; Harris and Raviv, 1991). Interestingly, given its association with role conflicts within the family and between family and non-family members, inheritance/succession issues and differences in attitudes to equity investment (Colli, 2013; Neckebrouck, et al, 2017), family involvement/ownership is seen as a low increase in risk, and this remains a fruitful avenue for further research.

In summary, the results shown in Table 2 confirm that business angel investors are concerned with and do seek to manage agency risks. Entrepreneur characteristics (financial commitment, status seeking and age) are associated with increased perceived risk, representing both adverse selection and moral hazard issues. The venture characteristic most associated with moderately increased risk (distance from home/office) is also associated with efforts to minimise moral hazard problems. *Hypothesis 1, therefore, is broadly supported.*

Insert Table 3 about here

Table 3, which summarises investor responses to factors that decrease the riskiness of an investment opportunity, provides *further, but more equivocal, support for hypothesis 1*. With the exception of the almost tautological importance of investment risk being reduced by an entrepreneur who evaluates and reacts to risk, entrepreneur experience (prior familiarity with the target market, demonstrated prior leadership/management ability and a relevant track record) is associated with very high reductions in investment risk. In other words, investors seek to invest in ventures that are established by knowledgeable experienced entrepreneurs, confirming Fiet's (1995b) conclusion that business angels rely upon the entrepreneur to manage market risk. This is reinforced by the importance attached to effort and financial commitment (as measures of the absence of moral hazard problems) and attention to detail as risk reducing.

A number of venture characteristics are also associated with a high reduction in the risk of the investment. These include issues that lie at the interface between venture characteristics and entrepreneur or investor characteristics, notably a balanced management team, and investor familiarity with the industry which are both associated with reductions in adverse selection problems. They also include product specific issues (demonstrated market acceptability, strong market niche, proprietary or other protection) which lie within the area of the experience and expertise of the investor. The implications of this for the nature of the due diligence process undertaken by business angel investors will be discussed below.

Comparison with the attitudes of venture capital fund managers (Wright and Robbie, 1995), subject to the different measurement scales used in the two studies noted earlier, reveals both similarities and differences. All of the factors that business angels regard as producing a very high reduction in risk (Table 3) are assessed by venture capitalists as having a significant impact on the riskiness of the investment. However, low financial commitment of the entrepreneur and an entrepreneur who seeks status – which business angels regard as increasing risk (Table 2) – appear to be given much less emphasis by venture capitalists: this may in part be an artefact of the different measurement scales being used (which in the case of the Wright and Robbie (1995) study do not separate risk-increasing and risk-reducing factors), but they may also signal a contrast in attitude which can be attributed to the differences in the relative ease that angels and venture capital funds can remove the entrepreneur.

4.3 Due Diligence Activities

Once an opportunity has passed through the investor's initial screening filter, it is subject to a due diligence process of varying degrees of sophistication. From Table 4 it is clear that business angel investors engage in a wide range of information seeking and appraisal procedures before committing to an investment: while the investment decision may indeed be subject to lower degrees of formality than that of, for example, the venture capitalist (Van Osnabrugge, 2000; Van Osnabrugge and Robinson, 2000), business angel investors do nevertheless engage in significant systematic evaluation procedures. Many of these are veracity checks, undertaken by the investor personally: almost all investors will always interview members of the management team, visit company premises and review the financials prepared by the company. This is consistent with a focus on reducing or controlling agency risk. However, the most significant aspect of the approach of business angels to due diligence is their reliance on information that they gathered themselves and limited use of third party sources (e.g. due diligence reports composed by accounting firms). Around half of investors will always seek (informally rather than formally) expert opinion on the product/service and review the valuation of comparable companies, and will extend the veracity checks to include contacting the venture's financial advisors (bank, accountant) and actual and potential customers (market assessment). Library research, formal market research and formal technologies are among the least likely elements to feature in the due diligence process, confirming that business angel investors rely on their own background knowledge and experience to supply these elements. Thus, *supporting hypothesis 2,* the due diligence process of business angels relies for the most part on a personalized approach to information gathering and processing.

Insert Table 4 about here

4.4 Information Gathering To Value An Opportunity

Given that the value of any investment depends on its ability to generate future cash flows (and on investor assessments of, and attitudes to, the riskiness of these future cash flows), valuation of a venture, in this case by a prospective investor, is subject to uncertainty due to the difficulties of determining future cash flows and setting an appropriate discount rate (to reflect risk) to estimate the present value of these future cash flows (Smith and Smith 2000: 228). Two features of the business angel's valuation procedures stand out (Table 5).

Insert Table 5 about here

First, there is a strong focus on the use of current and past information in determining the value of the investment opportunity. This is reflected in the importance given in the rankings to cash flow data, the profit and loss account and, to a lesser extent, the balance sheet and management projections (one year ahead). Management projections more than one year ahead are rather less important. Only in the use of sales and marketing information is there any indication that future cash flows may, even indirectly, enter the valuation process. Consistent with the evidence on due diligence procedures reported above, relatively low attention is given to independent information generation in the form of due diligence by an accounting/consulting firm. This is consistent with Granovetter's (1985, 490) argument on the importance of personal knowledge based information over that acquired from a third party: 'even better is information from one's own past dealings with that person. This is better for four reasons: (1) it is cheap; (2) one trusts one's own information best – it is richer, more detailed, and known to be accurate; (3) individuals with whom one has a continuing relation have an economic motivation to be trustworthy, so as not to discourage future transactions; and (4) departing from pure economic motives, continuing economic relations often become overlaid with social content that carried strong expectations of trust and abstention from opportunism' (see also Harrison et al, 1997).

Second, non-financial measures appear to be important in valuation of investment opportunities. For three-quarters of business angel investors in this study, interviews with entrepreneurs were of “vital importance” in preparing a valuation of the investment opportunity, and the curriculum vitae of the management and interviews with other company personnel also scored highly. This is consistent with the importance given to these sources in the due diligence process (Table 4 above).

Venture capital fund managers rely on a similar range of information sources (Wright and Robbie, 1995). Indeed, venture capitalists place even more emphasis on their own due diligence report. However, consistent with expectations about the formalism of the information collection process, venture capitalists place relatively more emphasis than business angels on due diligence by accountants/consultancy firms and relatively less emphasis on interviews with management and company personnel.

Overall, this evidence provides at least *partial support for hypothesis 3*: business angel investors do gather information on more than just entrepreneur-related issues (four of the top five factors identified in Table 5 relate to the horse not the jockey), but they do so primarily through their own efforts, rather than by using independently generated information by third parties, chief among which is the interview with the entrepreneur and other members of the management team. It therefore appears that business angels do rely on the mediation of information on and from the entrepreneur/management team through the lens of their own experience, and this applies both to the due diligence process (forming a view on the "investability" of the opportunity) and, perhaps rather more surprisingly, to the valuation of the opportunity itself. Indeed, the investment opportunity is, in a sense, worth what the entrepreneur/management team is assessed by the investor to be worth. This analysis is subject to one important caveat. As the investment decision-making process progresses, the investor's attention shifts from valuation (will this venture generate any value?) to price (how much should I be willing to pay for this high potential venture?). Valuation-based due diligence focuses on the jockey, horse and track, as discussed above; subsequent price-oriented due diligence focuses on the more detailed analysis of the findings and factors identified in Table 5. Exploring the type of due diligence done at each stage of the process remains a largely unexplored area for further research.

5. Conclusion

This paper has sought to contribute to the literature on the business angel investment decision making process by examining in detail for the first time their due diligence process in response for calls for more research into the various stages of the investment process to 'establish the impact of additional venture factors and entrepreneur behaviours during each stage of the interaction, the relationship between these factors and how these combine to influence … the investment decision itself' (Maxwell 2016, 139). In so doing, we extend the conclusion reached by Fiet (1995a; 1995b) that business angels give more emphasis to agency risk than to market risk, and in so doing emphasise the assessment of the jockey rather than the horse. First, we show that business angels regard entrepreneur characteristics and experience as more significant influences than venture characteristics on the perceived riskiness of an investment opportunity. Business angels are therefore clearly betting on the "jockey" rather than the "horse" because, as one angel commented, "it's easier to change the horse [business idea] than the jockey [entrepreneur]" (Paul, Whittam and Johnston, 2001: 13). Second, business angels rely for the most part on a personalised approach to information gathering and processing, rather than using third parties, in which the trustworthiness (Harrison et al, 1997) of the entrepreneur becomes crucial. Third, contrary to what might have been expected from the greater emphasis that angels give to agency risk, and from our findings on angels' perception of the main sources of risk, angels do not restrict their information gathering to entrepreneur-related issues.

The wider implication of this study is to highlight the importance for entrepreneurs seeking capital from business angels of understanding the investor's perspective. Entrepreneurs must ensure that they send out the appropriate signals about their capabilities and intentions in all their dealings with the investor. This goes beyond what is written in the business plan and conveyed in investor presentations. The business plan persuades the investor of the attractiveness of the opportunity and can signal some aspects of the fit between the entrepreneur/management team and that opportunity (Collewaert 2012). However, the investor's assessment of the capabilities, intentions, values and motivations of the entrepreneur/ management team are determined at the due diligence stage in a highly personalised and informal process. Accordingly, entrepreneurs must pay attention to the signals they send out, because in the final analysis investors are relying on them to manage the market risk in the investment and thereby exploit the opportunity in a profitable way.

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Table 1 Investment preferences of survey respondents

Type of investment	Mean score*
Seed financing	2.57
Start-up financing	3.25
Early stage expansion financing	3.69
Expansion financing for established firms	3.20
Rescue financing	2.60
Management buyouts	3.12
Technology-based firms	3.41
Manufacturing firms	3.64

Notes.

* Respondents were asked to indicate for each category on a one to five scale, with one denoting ‘no interest’ and five denoting ‘strong interest’.

Table 2 Factors increasing the riskiness of an investment opportunity

Factor	Reduces risk		No effect on risk	Increases risk		Mean score	Standard Deviation
	-2	-1	0	+1	+2		
High increase in risk							
Entrepreneur has low financial commitment in venture (ENTCHAR)	2	3	12	43	64	+1.32	0.867
Entrepreneur seeks status (ENTCHAR)	1	9	27	46	43	+0.96	0.955
Medium increase in risk							
Investment located >2 hours from home/office (VENCHAR)	1	4	44	49	25	+0.76	0.839
Entrepreneur <30 years old (ENTCHAR)	2	5	52	50	17	+0.59	0.828
Venture will create new market (VENCHAR)	6	22	18	51	27	+0.57	1.151
Product is high tech (VENCHAR)	0	14	51	40	19	+0.51	0.884
Low increase in risk							
Market is individual/household (VENCHAR)	0	10	60	40	12	+0.44	0.779
Market is mature (VENCHAR)	6	28	27	44	19	+0.34	1.128

Venture seeking investors through a network (ENTEXP)	1	17	72	24	11	+0.21	0.799
Family involvement/ownership (ENTCHAR)	4	27	49	30	13	+0.17	0.994
Entrepreneur seeks security (ENTCHAR)	6	40	28	31	20	+0.15	1.173
Entrepreneur seeks to be independent (ENTCHAR)	7	28	44	36	9	+0.09	1.011

Notes: ENTCHAR - entrepreneur/management team characteristic

ENTEXP - entrepreneur/management team experience

VENCHAR - venture characteristic (product, market, technology, location)

Table 3 Factors decreasing the riskiness of an investment opportunity

Factor	Reduces risk		No effect on risk	Increases risk		Mean score	Standard Deviation
	-2	-1	0	+1	+2		
Very high reduction in risk							
Entrepreneur familiarity with target market (ENTEXP)	95	26	4	0	0	-1.73	0.512
Entrepreneur demonstrated leadership/ management ability (ENTEXP)	83	39	3	0	0	-1.64	0.528
Entrepreneur evaluates and reacts to risk (ENTCHAR)	84	36	5	0	0	-1.63	0.559
Entrepreneur has a relevant track record (ENTEXP)	86	30	8	1	0	-1.61	0.664
High reduction in risk							
Venture initiated by a team which is a functionally balanced management team (VENCHAR)	66	47	11	0	1	-1.42	0.718
Entrepreneur has major financial commitment to venture (ENTCHAR)	70	39	8	0	4	-1.41	0.878
Product can demonstrate market acceptance (VENCHAR)	57	60	7	0	0	-1.40	0.595
Entrepreneur capable of sustained intense effort (ENTCHAR)	58	58	7	1	0	-1.39	0.633
Entrepreneur gives attention to detail (ENTCHAR)	59	54	7	2	1	-1.37	0.736

Product has strong market niche (VENCHAR)	54	62	5	1	1	-1.36	0.676
Venture in an industry investor is familiar with (VENCHAR)	49	54	21	0	0	-1.23	0.717
Product is proprietary or can be otherwise protected (VENCHAR)	44	60	19	1	1	-1.16	0.763
Medium reduction in risk							
Target market has high growth rate (VENCHAR)	35	60	18	7	4	-0.93	0.969
Entrepreneur articulate in discussing the venture (ENTCHAR)	30	63	27	2	3	-0.92	0.854
Familiar with entrepreneur's reputation (ENTEXP)	23	66	33	1	1	-0.88	0.736
Investment located <1 hour from home/office (VENCHAR)	32	46	43	2	1	-0.86	0.849
Entrepreneur and investor have compatible personalities (ENTCHAR)	30	44	44	5	1	-0.78	0.885
Entrepreneur referred by trustworthy source (ENTEXP)	23	59	37	3	3	-0.77	0.859
Entrepreneur provides good references (ENTEXP)	18	57	48	1	1	-0.72	0.744
Entrepreneur known to the investor (ENTCHAR)	28	43	40	10	3	-0.67	0.989
Entrepreneur seeks to be wealthy (ENTCHAR)	29	48	31	11	6	-0.66	1.073

Low reduction in risk							
Markets primarily to other businesses (VENCHAR)	14	40	61	6	1	-0.49	0.792
Potential for overseas sales (VENCHAR)	15	44	43	17	3	-0.42	0.987

Notes: ENTCHAR - entrepreneur/management team characteristic

ENTEXP - entrepreneur/management team experience

VENCHAR - venture characteristic (product, market, technology, location)

Table 4 **Due diligence activities by business angels for investment opportunities passing their initial screening**

Activity	Always [3]	Sometimes [2]	Never [1]	No response	Mean score	Standard Deviation
Interview members of management team	114	7	3	3	2.90	0.379
Tour company premises	108	13	4	2	2.83	0.453
Conduct in-depth review of financials prepared by company	106	13	5	3	2.81	0.483
Have informal discussions with experts about the product/service	59	56	10	2	2.39	0.634
Contact firm's accountant	59	45	17	6	2.35	0.715
Contact current/potential customers	57	48	18	4	2.32	0.717
Make a confidentiality agreement with the company	49	59	15	4	2.28	0.667
Contact the firm's bankers	55	41	24	7	2.26	0.772
Investigate the market value of comparable companies	49	54	19	5	2.25	0.708
Contact entrepreneur's former business associates	36	70	16	5	2.16	0.635
Agree an exclusivity period with the company	30	66	25	6	2.04	0.676
Conduct in-depth library work	33	55	30	9	2.02	0.733
Contact other private investors for their opinion	29	66	28	4	2.00	0.683
Contact the firm's suppliers	24	73	26	4	1.98	0.640
Contact firm's solicitors	27	57	36	7	1.92	0.724
Contact competitors	12	73	34	8	1.82	0.596
Obtain formal market research study	14	65	38	10	1.79	0.637
Obtain formal technology study of product	12	60	48	7	1.70	0.643
Solicit opinion of other companies in investor's portfolio	6	48	63	10	1.51	0.596

Table 5 **Types of information used by business angels when preparing a valuation of an investment opportunity**

	Importance [1 = 'no importance'; 5 = 'vital importance']							
Type of information	1	2	3	4	5	No reply	Mean score	Standard Deviation
Interviews with entrepreneurs	2	1	8	18	96	2	4.64	0.776
Cash flow	3	2	8	24	86	4	4.53	0.881
Profit and loss account	3	4	9	40	67	4	4.33	0.929
Sales and marketing information	2	2	15	39	65	4	4.33	0.873
Product information	2	2	16	37	67	3	4.33	0.881
Interviews with other company personnel	1	3	19	39	61	4	4.27	0.869
Curriculum vitae of management	3	6	16	30	69	3	4.26	1.019
Own due diligence report	6	5	11	30	69	6	4.25	1.105
Balance sheet	3	8	9	41	62	4	4.23	1.007
Audited accounts	3	5	16	33	63	7	4.23	1.002
Management projections (one year ahead)	3	3	22	34	60	5	4.19	0.982
Unaudited management accounts	6	7	22	25	62	5	4.07	1.169
Technical information on production capabilities	2	8	24	43	43	7	3.98	0.991
Management projections (more than one year ahead)	6	17	33	35	32	4	3.51	1.160
Due diligence by accounting/consulting firm	16	22	39	26	20	4	3.10	1.251
Trade journals	11	29	41	34	6	6	2.96	1.044
Other private investors	21	30	32	30	10	4	2.82	1.215
Statistical and information services	27	32	35	23	5	5	2.57	1.150
Financial press	24	32	48	11	6	6	2.53	1.065
Government industry statistics	30	42	34	13	2	6	2.30	1.104