

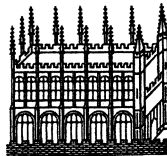


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**The Financing of Entrepreneurial Firms in the UK:
A Comparison of Business Angel and Venture Capitalist
Investment Procedures**

Mark S. van Osnabrugge

February 1998

This thesis is submitted as fulfilment of the requirements for the
degree of Doctor of Philosophy in Management Studies

Hertford College, Oxford

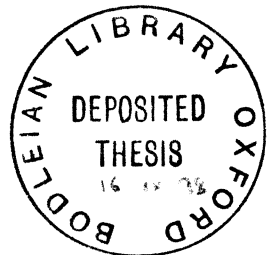


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LIST OF ABBREVIATIONS

3i	formerly 'Investors in Industry' (largest venture capital firm in the UK)
ACOST	Advisory Committee on Science and Technology
AIM	Alternative Investment Network
BA	Business Angel
BIS	Business Introduction Service
BVCA	British Venture Capital Association
EVCA	European Venture Capital Association
FP	Fund Provider
IMRO	Investment Management Regulatory Organisation
IPO	Initial Public Offering
IRR	Internal Rate of Return
KPMG	KPGM Management Consulting Company
MBI	Management Buy-In
MBO	Management Buy-Out
NPV	Net Present Value
NTBF	New Technology-Based Firm
OFEX	Off Exchange
SMEs	Small and Medium Enterprises
SWIG	SouthWest Investment Group (a BIS)
VC	Venture Capitalist
VCR	Venture Capital Report (a BIS)

ABSTRACT

The Financing of Entrepreneurial Firms in the UK: A Comparison of Business Angel and Venture Capitalist Investment Procedures

This thesis is submitted as fulfilment of the requirements for the degree of Doctor of Philosophy in Management Studies.

Mark van Osnabrugge, Hertford College, Oxford, Hilary 1998.

Although just a minority of all small firms in the UK, high-growth entrepreneurial ventures are becoming widely recognised for their increasing role in job growth and economic prosperity. However, due to their inherently high-risk nature, many of these early-stage firms experience difficulty in securing outside finance from institutional investors, which ultimately limits their growth and economic potential.

Fortunately, two investor types, business angels (BAs) and venture capitalists (VCs), do fund a small proportion of these entrepreneurial ventures, although they, especially BAs, often have much more financial capital available for such investments. Since many aspects of BA and VC investment processes remain unknown, it is hoped that a better understanding of how and why these investors fund particular investments may aid in further lessening the entrepreneurial funding problem.

This research study, therefore, conducts the first-ever detailed comparison of the investment criteria and procedures of these two financiers across the full investment process. To make the study more robust, a theoretical base is adopted (based on agency theory) to form research hypotheses which propose that BAs and VCs in the UK may use different approaches to limit potential agency risks in their investments (i.e. the risks associated with an entrepreneur's potential misuse of the investor's money). Utilising data from 40 personal interviews and 262 questionnaire responses, this study empirically supports the main hypothesised notion that, although both investors reduce agency risks at all stages of the investment process, BAs place more emphasis on doing so ex-post investment (the incomplete contracts approach), whilst VCs stress doing so more ex-ante investment (the principal-agent approach).

In supporting the hypotheses, empirical information is gathered about each investment stage and each investor group's heterogeneity. Possible implications of these findings are then discussed in the hope of aiding, no matter how slightly, the funding efficiency of small entrepreneurial firms.

ACKNOWLEDGEMENTS

Conducting doctoral research is a lengthy and time-consuming process, whose successful completion is as testament to the support rendered to the researcher, as it is to the researcher's efforts. It is this support which I would like to acknowledge here with heart-felt gratitude.

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Lastly, I would like to thank the 262 investors who were kind enough to participate in this research study, it is their entrepreneurial spirit that I have tried to capture in the pages of this thesis.

Mark van Osnabrugge, February 1998.

Dedicated to:

My Parents

In Memory of:

**van Osnabrugge Architects & Contractors Ltd.
1786 - 1967
Harmelen, Holland**

Chapter One

Introduction

Introduction

As job growth and economic prosperity in the UK and the US continue to become less dependent upon large firms (Storey, 1994; Freear et al., 1996), the economic importance of small firms is receiving increased attention from policy makers, academics, and the media (Binks & Ennew, 1997; Deakins, 1996). Although these small firms vary greatly in size and function, it is the high-growth minority of entrepreneurial firms which account for most of this economic potential (Wetzel, 1993; Storey, 1994). It is also these early stage firms which are most reliant upon outside financing to foster their growth, but, due to their inherently uncertain and high-risk nature, often have difficulty in finding this financial support from institutional investors (Harrison & Mason, 1996a; Wetzel & Wilson, 1985). Fortunately, there are two types of finance providers, business angels (BAs) and venture capitalists (VCs), which do fund some of these high-growth firms in the hope of generating high returns which will more than compensate them for the funding risks. Unfortunately, many other firms with growth potential remain constrained by their inability to locate financial support, even though BAs, especially, still have additional financial capital allocated for such investments (Harrison & Mason, 1992a; Martin, 1989). Since many facets of the investment process of BAs and VCs remain unknown, it is hoped that a greater understanding of how and why they choose their particular investments may assist in lessening this funding problem (Harrison & Mason, 1992b; Freear et al., 1992a). This research study will, therefore, conduct the first-ever

detailed comparison, across the full investment process, of the investment procedures and criteria of these two types of external financiers which are most vital to the survival and growth of early-stage entrepreneurial firms. Hopefully, this study's findings will have some relevance to entrepreneurs, financiers, academics, and policy makers which may aid, in some small way, the funding efficiency of these important components of our nation's economic health.

This chapter will provide a comprehensive analysis of the background issues which pertain to the financing of small firms so as to set the overall context for this research study. Then, to conclude, an overview of all the chapters in this thesis will be presented. This will set the framework for the research's theoretical foundation, data collection, and results presentation. This chapter is composed as follows:

1.1 - Background to the Research

1.1.1 - The Importance of Entrepreneurship and Small Business Growth

1.1.2 - Typology of the Provision of Finance Over the Evolution of the Entrepreneurial Firm

1.1.3 - Market Size and Influence of the Two Main External Sources of Entrepreneurial Finance

1.2 - The Research Questions

1.3 - Overview of the Chapters

1.4 - Conclusion

1.1 - Background to the Research

The economic benefits of small business and the different types of small firms will be analysed in this section, with a particular emphasis on the small minority of firms which have high growth potential. Then a typology will be offered to fully analyse the various groups of fund providers which finance these high-growth firms through their evolution from start-up to maturity. The impact of the two external financiers, BAs and VCs, which fund these firms at their most crucial development stages will then be addressed to highlight their economic impact potential.

1.1.1 - The Importance of Entrepreneurship and Small Business Growth

Since the 1980s, the economic importance of small businesses has grown dramatically in the UK and in the US (Deakins, 1996; Wetzel & Freear, 1994). With the election of the Conservative government in the UK in 1979, the indifference of the past towards small firms was removed when business creation was placed on the government's agenda by redesigning corporate and personal tax regimes to encourage expansion of the economy (Duggins, 1993). Since then, greater attention has been paid to small firms due to their potential for generating jobs and economic growth, and the UK now has one million more small businesses than it had in 1979 (Eglin, 1994). As a result, it is now accepted government policy that the small firm sector will provide the main vehicle for recovery from recessions and "will be the main provider of jobs during the rest of the 1990s." (Deakins, 1996, p.44). Similarly in the US, the economy passed a milestone of great importance in 1979, the shift from a decaying industrial/manufacturing economy composed of large firms to an entrepreneurial economy driven by information and

innovative technology (Wetzel, 1996; Freear et al., 1996; Wetzel & Freear, 1994). In fact, whilst the Fortune 500 companies lost over four million jobs between 1979 and 1995, over 24 million jobs were created by the entrepreneurial economy as the number of new businesses skyrocketed almost 200% (Freear et al., 1996; Wetzel & Freear, 1994; Conlin, 1989). Small business ownership has clearly become very popular, pervading every class, income category, and racial grouping; with such extensive dimensions, the economic influence of small business is not in doubt (Dennis, 1997).

1.1.1(A) - Importance of Small Firms

Due to their high degree of influence, emphasis on the economic contributions of small business is now a familiar characteristic of both developing and developed economies (Binks & Ennew, 1997). There are five main types of economic benefits produced by small businesses: innovation, employment, 'shock absorber' role in declining sectors, increased competition, and flexible specialisation. Each will now be addressed in turn.

First, small firms produce many important innovations vital to economic growth. In fact, out of 61 important US inventions and innovations this century, over half came from small firms and independent investors (Wetzel, 1982b). Small firms (with less than 1000 employees) also produce 24 times as many innovations per dollar of research and development spending as large firms (over 10,000 employees) and four times more than medium-sized firms (Wetzel, 1982b). Indeed, innovation and its diffusion was estimated by the Economic Report of the President (1989) to have accounted for half the historical increase in the US standard of living (Wetzel & Freear, 1994). Clearly, the innovation process has many social benefits, such as diffusion of new technology, increased tax

revenues, but also the creation of employment, which will now be addressed (Freear & Wetzel, 1991; Tewksbury et al., 1980).

Second, in the UK recessions in the early 1980s and the early 1990s, small firms were seen as effective means of reducing unemployment and fostering job creation, especially to avoid large scale state intervention (i.e. state subsidies to manufacturing enterprises), and so was heavily promoted by the government (Deakins, 1996). This was partially effective, and Daly et al. (1991) found that between 1987 and 1989, small firms in the UK were at least as effective as large firms in creating jobs, whilst others claim that small firm job creation significantly overtook that of large firms, who were often reducing their workforces (Martin, 1989; Keeble & Wever, 1987). Indeed, small firms generated 200,000 jobs in the latter half of the 1980s (Eglin, 1994). Firms with less than 10 employees (approximately 2.4 million firms) now account for about 95% of all businesses and 28% of UK employment, whilst firms with 10-200 employees (approximately 170,000 businesses) represent about 5% of all businesses and 30% of UK employment (McInerny, 1994). However, since small firms are also most susceptible to failure in recessions and accounted for 95% of the overall losses in the last recession, McInerny (1994) also stresses that it is vital to aid the creation of new firms. In the US, whilst large and medium-sized firms were decreasing their payrolls by over 25% and 5% respectively between 1979 and 1993, small firms created 20 million new jobs (Huey, 1994; Hale, 1992; Freear et al., 1995b), 12 million alone in the 1980s (Eglin, 1994). However, although Acs & Phillips (1997) estimate that the static share of employment in small and medium sized firms has remained close to 50%, this is misleading since some small firms grow into large firms, and some large firms decline into small ones, therefore

showing that small firms have great job creating power. In particular, US small firms have dominated job creation in about 40% of growing industries and almost 80% of the 2.6 million new jobs in the computer programming, restaurant and social services sectors (Acs & Phillips, 1997). In fact, Acs & Phillips (1997) conclude that “it is highly likely that small firms and entrepreneurs probably employ a much larger share of the US labor force than is commonly believed.” (p.9)

Third, small firms play the ‘shock absorber’ role of small firm job creation, since they create jobs in declining industries whilst most of those jobs are terminated by large firms (Acs & Phillips, 1997).

Fourth, small firms often complement large firms in an industry and so increase competition which may also make the economy more competitive (Mitchell, 1980). With many small firms, there may be less inclination to collude and accept restrictive practices which often erodes competition in industry sectors where only a few large firms operate (Mitchell, 1980).

Fifth, small firms are of increased importance due to their ability to quickly respond to change (i.e. ‘flexible specialisation’) and so the structure of the economy may have changed in favour of these small and flexible firms (Deakins, 1996).

Clearly, the economic benefit of small businesses is well documented, especially when compared to large firms. In the US, Wetzel (1982b) even concluded that:

“relative to their larger, established counterparts, small technology based firms (STBFs) are more effective contributors to the generation of new jobs, innovative technology, productivity, price stability and favorable international trade balances.” (p.336)

The economic potential and power of entrepreneurship is illustrated further on a smaller scale in a recent BancBoston study which analysed the worldwide impact of graduates and faculty of the Massachusetts Institute of Technology (MIT). It found that, since 1994, MIT alumni had founded 4,000 companies, which employed 1.1 million people and had \$232 billion in world sales. If these MIT-related firms were a separate country, its national economy would rank 24th in the world (International Herald Tribune, 1997).

The economic impact of small firms is also evident by the wealth that is generated for some of the entrepreneurs who start them. In the UK, 43% of the 400 wealthiest individuals are self-made, with a combined wealth of about £15bn (Bereford, 1991), whilst in the US there are about 2 million individuals worth over \$1 million, of whom nearly 90% are self-made (Freear & Wetzel, 1991). In fact, over 50% of the Forbes 400 Richest People in America were self-made and their combined net worth was \$288bn (Freear et al., 1992a).

1.1.1(B)- Categories of Small Firms

Since small firms differ in management structure, legal form, robustness, and sophistication, they are clearly diverse. However, rather than categorising small firms by their size, one of the best ways to distinguish between different types of small firms may be by their growth potential (Wetzel & Freear, 1994; Mayfield et al., 1997). Wetzel &

Freear (1994) identify three types of small firms: life-style, middle market, and entrepreneurial.

‘Life-style’ firms are those ventures which will only provide a reasonable living for their founders, rather than incur the risks which come with prospects of high growth. These firms are very unlikely to seek equity funding from external parties and form the majority of small firms in the economy (Wetzel & Freear, 1994; Storey, 1994). Indeed, McNerny (1994) found that in the UK the ‘Bonsai Syndrome’ is a common phenomenon with small firms since 75% of small firms did not express a willingness to grow over the next three years.

Middle market firms have growth prospects of less than 20% annually and rely infrequently on external finance, rather they often depend on bootstrapping to fund the business (Wetzel & Freear, 1994). Bootstrapping is a form of finance involving internal generation of funds through the use of personal savings, credit cards, second mortgages, customer advances and vendor credit (Wetzel & Freear, 1994; Winborg & Landstrom, 1997; Freear et al., 1995a). Wetzel & Freear (1994) called these firms the backbone of the US economy.

Entrepreneurial firms are those with a vision for growth, which are also innovative, risk-taking and able to change (Wetzel, 1993; Freear & Wetzel, 1994). They typically wish to grow into a substantial firm with fifty or more employees within 5-10 years, and Wetzel & Freear (1994) point out that they are the primary recipients of external equity finance:

“Unless a venture can offer the prospect of at least \$10 million in revenues, growth of at least 20 per cent annually, and pre-tax profits of at least 15 per cent within five years, it is unlikely to be of interest to any external supplier of equity capital, whether a venture capital fund or an individual investor.” (p.1-2)

Freear et al. (1996) even state in their US study: “One economist observed that our country’s ace in the hole is our ability to spawn a lot of high growth, entrepreneurial firms.” (p.1) Since these firms offer the greatest economic contribution out of all the firm types (Bygrave & Timmons, 1986), this small minority of firms will now be analysed more closely.

1.1.1(C) - The Economic Potential of Small Entrepreneurial Firms

Small entrepreneurial firms are high flying firms with the greatest ability, through their rapid growth, to generate jobs and high returns for potential investors (Storey, 1980).

But, Mitchell (1980) states:

“Only a minority of small firms can grow into large ones (...) However, the small minority that can grow are far more important than their numbers suggest. It is they who most represent the dynamism and potential for innovation claimed for small business generally. It is they who might create jobs and help to keep fixed capital going. Small firms on the move can show rates of growth that large ones can only emulate by resorting to acquisitions and mergers.” (p.53-4)

In the UK, Deakins (1996) discovered that these high growth small firms are very rare, comprising probably only 3-4% of all start-ups, whilst Storey (1994) found that it is these 4% of all start-ups which will provide 50% of employment out of all surviving firms in ten years’ time. Gallagher & Miller (1991) support this job-generation ability with their finding that out of 20,000 new firms in the South-East of England, 18% of firms accounted for 92% of the jobs, whilst out of 2,000 new firms in Scotland, 11% of

firms created 68% of the jobs. Furthermore, Stanworth et al. (1992) also support these findings with their identification of a 'growth corridor' for new and growing businesses, where 20% of firms enter this growth corridor whilst employing more than 5 people, but only 2% emerge with more than 50 employees.

In the US, these entrepreneurial firms also represent fewer than 10% of the one million start-ups per year (Wetzel & Freear, 1994). Since 1979, these job-generating firms have represented about 4-8% of all small businesses and have accounted for 70-75% of net new jobs (Wetzel, 1993, 1996; Birch et al., 1993).

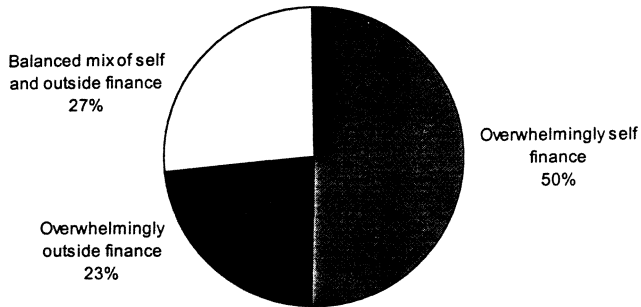
1.1.1(D) - Difficulties in Securing Finance for Small Entrepreneurial Firms

To finance small entrepreneurial firms (many of which are high-tech), most entrepreneurs will initially utilise personal savings and bootstrapping (i.e. the use of credit cards, second mortgages, customer advances, etc.) to fund growth, relying also on internally-generated retained earnings when produced (Wetzel & Freear, 1994; Winborg & Landstrom, 1997; Bhidé, 1992). Freear et al. (1991) found that bootstrapping was the most likely source of equity for 94% of new technology-based firms in their US sample. But for many of these fast growth firms, personal funds and internally-generated funds are just not enough to finance growth, and so they may seek external financing. In fact, firms with annual growth rates of 40% were found to be twice as likely to seek external equity finance as those firms with growth of less than 20% (Wetzel & Wilson, 1985). Freear et al. (1991) also found that the sources of equity finance a firm utilises are related to its growth expectations and whether the firm has raised external finance before. However, due to the prospect of having to surrender part of the firm's equity, many other

entrepreneurs may decide not to seek external funding (possibly preferring debt) and so limit their firm's growth (Landstrom, 1992; Alvarez et al., 1997).

Unfortunately, many of those entrepreneurial firms which want external funding have difficulty locating it (Wetzel & Wilson, 1985; Harrison & Mason, 1996a; Wetzel, 1993), particularly from more conventional sources like banks. Generally it is not the entrepreneur who bears the ultimate risk or uncertainty, but the person who provides the financing (Schumpeter, 1951), making the supply of funds limited. In particular, this is because these firms usually have: short performance histories, small scale operations, weak access to supply and distribution markets, illiquidity, long development times, uncertain growth rates, no collateral, relatively high transaction costs for the size of the investment, potentially high information asymmetries between entrepreneurs and potential investors, low survival rates, and involve an innovation which further increases its already high risks (Tyebjee & Bruno, 1981; Poindexter, 1976; Storey, 1980; Landstrom, 1993; McInerney, 1994; Bank of England, 1996; Mason & Harrison, 1996a). Due to these factors, Myers's (1984) 'pecking order' hypothesis - where internal sources of finance are to be preferred over external debt, and then over external equity financing - may no longer hold (Mason & Harrison, 1995). Not surprisingly, Stevenson (1997) found that in a survey of the 100 fastest growing unquoted firms in the UK, financing was the most frequently self-reported obstacle to growth. Moore (1994) also found that obtaining external finance (debt and equity) was a major start-up problem for 48% of small high-tech firms in the UK. He also found that 23% of small high-tech firms finance their start-up overwhelmingly with outside funding, 27% use a mix of self and outside finance, whilst 50% utilise overwhelmingly self finance, as Chart 1.1 depicts.

Chart 1.1 - Origin of Sources of Start-Up Finance for Small High-Tech Entrepreneurial Firms*



* Source: Moore (1994)

Even in the US, Freear et al. (1992b) note:

“Despite compelling evidence of their job generating power, today’s entrepreneurs face a daunting task in their search for equity financing, the fuel for the engine that created jobs and moves technology from the laboratory to the marketplace.” (p.2)

Furthermore, Freear et al. (1995b) found that the equity financing need of these high growth start-up firms in the US is around \$60bn a year, stating that “(this) is one measure of the capital formation challenge confronting the US economy.” (p.86)

Since these entrepreneurial firms often experience funding problems, despite their sizeable economic impact potential, this study will now analyse the different types of external fund providers which do fund these entrepreneurial firms through the various stages of their growth.

1.1.2 - Typology of the Provision of Finance Over the Evolution of the Entrepreneurial Firm

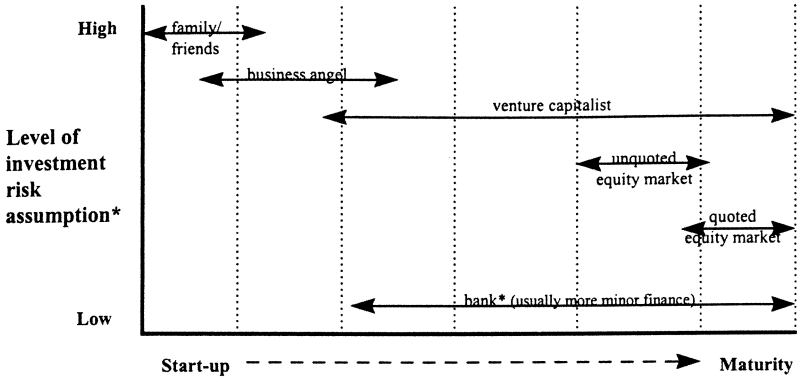
The entrepreneur's frequent difficulty in attaining equity capital is not always due to a lack of trying. In a Cambridge study of 2000 small and medium enterprises (SMEs) and entrepreneurs, 65% had tried to raise finance from external sources over the previous three years (Deakins, 1996). In another study, Mason & Harrison (1996a) conclude that:

“demand for external equity finance by growth-oriented smaller businesses is greater than commonly thought (...) The conventional wisdom that SMEs are unwilling to use external provided equity finance - which is based on the lack of articulated demand - is misleading.” (p.10)

In fact, the acquisition of external equity often benefits the firm. Freear et al. (1991) found that firms in their US sample which had received outside equity tended to have higher forecast growth rates, more international focus, and expected to have larger market share than those which did not receive external equity support. In the US, Bates (1990) even found that “financial capital input levels are strong determinants of small business survival prospects.” (p.551)

This section will now present a typology of the different types of finance providers who may fund those entrepreneurial firms able to secure outside financing. As Freear & Wetzel (1988) accurately comment, “The amount of equity required and the stage of the financing clearly indicate the most likely source of outside equity funds.” (p.347) The typology in Chart 1.2 demonstrates this.

Chart 1.2 - Typology of the Different Providers of External Finance Throughout the Evolution of the Entrepreneurial Firm



* bank will only lend on collateral and does not take equity share

** unlike in chart, stages are not equal in time.

Stages of Company Growth**

Inherent in this chart is the assumption that the size of funding increases with each stage of financing (Freear & Wetzel, 1990) and that as a firm becomes more mature and larger in size (i.e. its inherent riskiness probably decreases), its problems of securing finance will decrease (Wetzel & Wilson, 1985). This may be somewhat ironic since the small firms' dependence on outside funds for survival also decreases (Moore & Segaghat, 1992). A somewhat similar typology was presented by the Bank of England (1996) and Roberts (1991), although some of their premises (i.e. the similarities of business angels and venture capitalists) were slightly ambiguous, and will be corrected here. This typology does not assume that a firm will use each funding source, but that when one source has been fully exploited, the next form of financing may be utilised, although few firms will actually go beyond the bank stage (i.e. get quoted). Thus, as an entrepreneurial firm develops, its most likely sources of finance may be:

1.1.2(A) - Entrepreneur's own money and family & friends

1.1.2(B) - (The Equity Gap - a stage void of finance)

1.1.2(C) - Business angels

1.1.2(D) - Venture capitalists

1.1.2(E) - Banks

1.1.2(F) - Unquoted equity market

1.1.2(G) - Quoted equity market

These are now addressed in order.

1.1.2(A) - Entrepreneur's Own Money and Family & Friends

At the start-up stage, most entrepreneurial ventures are financed by the entrepreneur's personal savings, as aforementioned, and if more is needed, by family and friends (Brophy & Shulman, 1992; Harrison & Mason, 1996a; Deakins, 1996). Many times, this is supplemented by bank overdrafts and loans where the entrepreneur's assets act as collateral (Harrison & Mason, 1996a). Indeed, the Bank of England (1996) found that 71% of the firms they surveyed used private funds at the start-up stage, and this was utilised more than twice as much as the next most popular source. Roberts (1991) found this number to be closer to 74% in the US. The reason for personal financing's popularity is clear. Since risk perceptions of a firm decrease dramatically over its developmental stages, the cost of obtaining outside funds will also decrease (i.e. the entrepreneur will have to surrender less equity for a certain amount of funds) (Wetzel, 1983). Thus, the longer an entrepreneur may be able to survive on personal funds (i.e. 'sweat equity') and internally generated funds, the lower the cost of external risk capital and the more sovereignty the entrepreneur will have (Wetzel, 1983; Singleton et al.,

1997; Alvarez et al., 1997). However, once: “The resources of the founder, family and friends (the three Fs) (have been exhausted) (...) it will be necessary to seek external finance.” (Bank of England, 1996, p.12)

1.1.2(B) - The Equity Gap

Unfortunately, seeking and locating external finance at the very early stages of a business venture may be extremely difficult (Wetzel, 1983), as has already been partially addressed. This is principally due to the ‘equity gap’ which exists in the market for entrepreneurial finance in both the US and the UK (Wetzel, 1986a; Wetzel & Freear, 1994; Harrison & Mason, 1992a; Mason, 1996a; Martin, 1989; Bank of England, 1996). Mason (1996a) defines this equity gap as:

“the absence of small amounts of risk capital from institutional sources for companies at the seed, start-up and early growth stages which arises because the fixed costs of investment appraisal and monitoring make it uneconomic for venture capital funds to make small investments, and also because of the reluctance of banks to make unsecured lending.” (p.4)

Mason (1996a) and Deakins (1996) believe that this financing gap exists in the UK for amounts desired of less than £250,000 or even £500,000, whilst Lonsdale (1996) proposes that it lies below the £400,000 level. Similarly in the US, it is thought that the equity gap lies in the \$100,000 to \$500,000 borrowing gap (Alvarez et al., 1997).

However, this equity gap is not a recent phenomenon. More than sixty years ago, the difficulty UK small firms had in raising loan and equity finance was first formally identified in the Macmillan Report in 1931, and this equity gap was subsequently termed the ‘Macmillan gap’ (Harrison & Mason, 1996a; Singleton et al., 1997). Since then, the

equity gap problem was again officially identified by the government in 1959 (The Radcliffe Report), in 1971 (The Bolton Committee), and in 1979 (The Wilson Committee).

Although its presence is clear, its cause is more ambiguous. Traditionally, the gap has been attributed to a shortage of capital in the marketplace (Freear & Wetzel, 1991; Duxbury et al., 1996; Wetzel, 1983). However, within the last 10-20 years the explanation has been modified and the gap is now attributed to the fragmentation of the marketplace, where financial markets can not freely provide all relevant information about fund sources and investment opportunities to the buyers and sellers of capital (Wetzel, 1983; Wetzel & Wilson, 1985). This market inefficiency has led finance suppliers to claim that the gap is a demand-side problem, since investment proposals and entrepreneurs are often of a low quality (i.e. a management gap). Others believe it is more of a supply-side problem where the restrictive investment preferences and lending practices of the institutional investors restrict investment, regardless of the level of their available funds (Mason & Harrison, 1992; Bank of England, 1996). Indeed, these restrictive practices may be due to the small size of the desired investments, and due to the fact that the transaction and monitoring costs alone may make it infeasible for venture capital firms and banks to provide funding (Alvarez et al., 1997; Mitchell, 1980).

However, even though the development of the venture capital industry has helped to reduce the top portion of the equity gap, this gap still remains today (Mason & Harrison, 1992). In fact, in the 1990s, concern about the equity gap has increased due to changes in banking practice concerning small firm lending and the growing evidence that private

and public sector initiatives to close the equity gap have failed (Harrison & Mason, 1992a). Obtaining external finance is therefore still a sincere problem for UK and US small firms looking to grow and expand (Binks & Ennew, 1997; Alvarez et al., 1997).

1.1.2(C) - Business Angels

Luckily, there are private individuals in the market, who often have started their own successful firms in the past and are now looking to invest some of the money they have made, and experience they have gained, into a small entrepreneurial firm. They do this in the hope of getting financial returns but also for the fun of being involved again in the entrepreneurial process (Wetzel, 1983; Landstrom, 1992). This type of investor was originally referred to as 'Aunt Agatha' and 'the rich uncle' by the Wilson and Bolton Committees respectively (Mason & Harrison, 1990), but is now commonly called a 'business angel' (BA) (or alternatively, an informal venture capital investor) because many perceive that they save struggling firms with both finance and know-how when no one else will. In fact, the term 'angel' was originally coined at the turn of the century to describe the "well-heeled backers of Broadway shows who made risky investments in order to produce those shows." (Benjamin & Margulis, 1996, p.5)

However, in today's small firm financing arena, BAs in the UK and US are the only investors who invest primarily in the entrepreneurial high-growth areas cited as gaps in the market for funding, and which other investors are reluctant to support (Coveney, 1996; Mason & Harrison, 1995; Wetzel, 1983). Indeed, BAs partially ease the equity gap problem in many ways.

First, BAs prefer funding high-risk entrepreneurial firms which are in their earliest stages (Freear et al., 1991). In the UK, Mason & Harrison (1990) found that BAs are the most important source of external equity after family and friends, funding about 5% of small firms in their sample, whilst venture capitalists funded less than 1%. A 1992 Cambridge study of 1185 firms concurs that about 5% of small firms receive BA support (Deakins, 1996), whilst Moore & Segaghat (1992) and Coveney (1996) agree that BAs are a major source of external finance in the initial stages of development. Similarly in the US, BAs are the primary source of finance for early stage firms, investing more funds, in more rounds, in more firms, than any other source (Freear et al., 1992b). This is also supported by Roberts (1991) who found that BAs are the major source of external funds for start-ups with high growth potential. Chart 1.3 illustrates Roberts' (1991) findings.

Chart 1.3 - Primary Sources of Initial Capital for Small High-Growth Firms*

Source	% of Finance
Entrepreneurs' Personal Savings	74%
Family/ Friends	5%
Business Angels	7%
Venture Capitalists	5%
Non-financial Corporations	6%
Commercial Banks	0%
Public Stock Issues	3%

* Source: Roberts (1991)

In particular, BAs prefer investments where the deal size is under \$1 million and which generally have: less than 100 employees, less than \$5 million in annual sales, and growth rates under 40% (Freear & Wetzel, 1988, 1990, 1991; Wetzel & Wilson, 1985). Indeed, Wetzel (1993) claims that since 60% of BA deals are early-stage deals, whereas this may

only be between 10-28% for VCs, it is really the BA who is the real venture capitalist. Supporting this in the UK, Mason & Harrison (1996a) claim that: “business angels fill the so-called equity gap by making those investments precisely in those areas in which institutional venture capital providers are reluctant to invest.” (p.7) But, luckily, in addition to early stage deals, BAs also aid later-stage firms traditionally associated more with VC investing (Freear & Wetzel, 1989, 1991).

Second, BAs prefer funding the small amounts (falling within the equity gap) needed to launch new ventures (Freear & Wetzel, 1991). Since the funding needs of firms usually increase as the firm matures, these small amount of funding are clearly associated with early stage firms. Freear et al. (1992b) found that BAs provided 84% of rounds under \$250,000 and 58% between \$250-500,000, whilst in rounds of less than \$500,000, BAs provided, in dollar terms, four times as much as VCs.

Third, BAs tend to have less-risk aversion and lower return expectations than other investor types (Freear et al., 1991; Freear & Wetzel, 1991). Also, their cost of finance may be cheaper for the entrepreneur and their funding is received quicker than other finance sources (Freear et al., 1990).

Unfortunately, BAs are often overlooked by entrepreneurs and the equity gap debate as a source of capital (Freear & Wetzel, 1991; Wetzel & Wilson, 1985); Mason & Harrison (1996a) found that 34% of SME entrepreneurs were unaware of them. However, BAs are a plentiful source of finance and are especially valuable since they are located almost everywhere and can add value through their involvement (Mason & Harrison, 1996a;

Haar et al., 1988; Wetzel, 1983). The value of BAs has been evident for many years; in 1903 five BAs launched Henry Ford's auto empire with a \$40,000 investment, and more recently in 1978, a BA initiated the launch of The Body Shop retail chain with a £4,000 investment (Conlin, 1989; Stevenson & Coveney, 1994; Mason & Harrison, 1990). Even the \$6 million construction cost of the Golden Gate Bridge was financed by a BA, A.P. Giannini, discovered by the architect, Joseph Strauss, after a 19 year-long search for funding (Benjamin & Margulis, 1996).

It appears that BAs are 'seeding' start-up firms, of which some will subsequently receive funding from more formal sources of finance, such as venture capitalists, whilst the majority will never need to raise further financing (Freear & Wetzel, 1990; Freear et al., 1995b). In fact, a potentially complimentary relationship has been identified between BAs and VCs, especially in the US, where BAs act as the 'farm system' for the VCs, since BAs invest in and nurse small firms with growth potential into large firms which will interest VCs for further rounds of investment (Timmons & Sapienza, 1992; Wetzel & Wilson, 1985; Freear & Wetzel, 1988, 1989, 1991; Freear et al. 1991, 1996; Roberts, 1991). This was also partially supported in the UK by a British Venture Capital Association survey (BVCA, 1993) which noted that 23% of VC-funded firms had previously received funding from BAs. Indeed, Mason & Harrison (1995) claim: "The clear implication is that a healthy informal venture capital market is required for the institutional venture capital market to thrive." (p.41)

However, due to a number of inefficiencies in the informal venture capital market, BAs do not 'seed' as many early stage investments as may be potentially possible and thus the equity gap still remains.

1.1.2(C)(i) - Informal Venture Capital Market Inefficiencies

Unfortunately, as with the external equity market in general, the informal venture capital market of BA finance is also quite inefficient (Wetzel, 1987; Harrison & Mason, 1991a). This is primarily because of the fragmented nature of the market, the imperfect channels of communication, and the invisibility of BAs (due to their preference for anonymity) (Harrison & Mason, 1992b; Mason & Harrison, 1990; Freear et al., 1994a; Freear & Wetzel, 1991). Indeed, if it becomes widely known that an individual has money to invest, then he/she may be besieged with hundreds of proposals per year, when his/her desire may be only for three or four. Alternative explanations have suggested that there is a mismatch of investment preferences and available investment opportunities (Mason & Rogers, 1996), unfamiliarity of successful investment techniques for both investors and entrepreneurs (Wetzel, 1987; Landstrom, 1993), and the misconception of many entrepreneurs that BA funding is finance of the last resort (Mason & Harrison, 1990). Harrison & Mason (1992b) even suggest the possibility that the market may be efficient and that the gap reflects entirely realistic assessments of the risks in early stage deals. However, they believe this explanation to be doubtful.

Regardless, these inefficiencies impose high search costs on both investors and entrepreneurs (Mason & Rogers, 1996; Wetzel, 1987). In the informal market, therefore, entrepreneurs can find little guidance to locate BA funding, and the majority of BAs tend

to rely on random events to discover potential investment opportunities (Wetzel, 1983). Compounding this problem, Harrison & Mason (1992b) believe that information networks in the UK may also be less effective than in the US, particularly since the information may be of a lower quality and more redundant. This market development difference may be due to the UK BAs' greater level of risk aversion (Landstrom, 1993), or to cultural differences (Atkin & Esiri, 1993).

However, even though somewhere there is a BA willing to invest in almost any investment opportunity, in any sector (Wetzel, 1983), matching BAs and entrepreneurs is a sincere concern. Due to this problem, the financing potential of BAs is not being fully utilised and many BAs internationally complain that they have sizeable uncommitted funds available for investment, sometimes up to two or three times the amount of their current investment portfolio, but they can not locate suitable investment opportunities (Mason & Harrison, 1996a; Landstrom, 1993; Wetzel & Freear, 1994). One BA interviewed claimed that one reason for this may be because many investors are not skilled enough to identify good projects and need active assistance in doing so.

1.1.2(C)(ii)- Business Introduction Services

Although a number of UK government policy schemes were not very successful, one of the most promising approaches to easing the BA market inefficiencies, and lessening the equity gap in general, may be the emergence of business introduction services (BISs) (Mason, 1993, 1996a; Harrison & Mason, 1996a). These organisations provide a means of cost-effective communication between entrepreneurs seeking finance and BAs seeking investment opportunities by means of computer matching, forums, or some kind of

publication. They, therefore, enhance the BA market efficiency for finance by making both investors and entrepreneurs more visible, improving deal flow, and may enlarge the pool of BA funding by increasing the number of active BAs in the market (Mason, 1993). In fact, Lucius Cary, this study's non-academic advisor, started the first UK BIS, Venture Capital Report (VCR), in 1978. Since then, about one-third of the one thousand firms which have used the service have been successful in raising some or all of their desired funding, primarily from BAs (Cary, 1989).

However, despite the advantages of BISs, they may "only (be) scratching the tip of a potentially sizeable iceberg" since they have had limited impact in reducing the equity gap for small start-up firms (Stevenson & Coveney, 1994, p.2).

1.1.2(D) - Venture Capitalists

Once a small firm has grown into a medium or large-sized venture, its funding needs may grow beyond the means of individual BA investors (Wetzel & Freear, 1994) and "it is usually at this stage that the formal external finance network becomes available." (Moore & Segaghat, 1992, p.30) Venture capital firms (VCs) may, therefore, be the most likely source of external equity funding for those few entrepreneurial firms which have high enough growth potential to meet the restrictive investment criteria of VCs (Harrison & Mason, 1991a). In fact, VCs usually only fund 7 per 10,000 VAT registered firms (i.e. all categories of firms combined), which may possibly be only 6.5% of those entrepreneurial firms seeking funding (Storey, 1994). The late Tony Lorenz, Managing Director of a leading UK VC firm, (and whose memorial foundation partially funded this research study) described venture capital as "the investment in long-term, risky equity

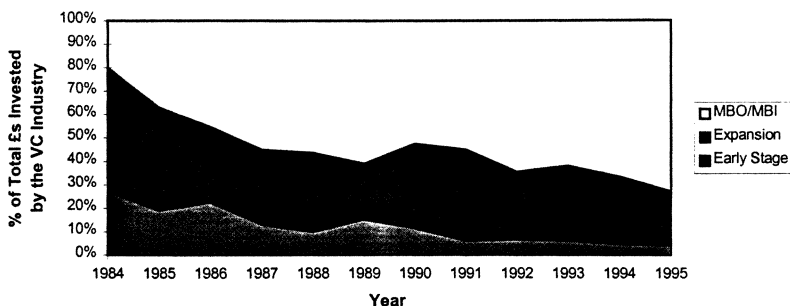
finance where the primary reward for the providers is an eventual gain, rather than interest income or dividend yield.” (Murray, 1995c, p.103).

Indeed, in the past VCs have helped to create such corporations as: Microsoft, Apple Computer, Intel, Federal Express, and Digital Equipment, to name but a few (Sahlman, 1990). VCs tend to fund high-growth ventures, some in their earlier stages (although still later in stage than most BA deals) and with little track record, which do not yet have access to the quoted securities markets and are still too risky for bank lending (Zacharakis & Meyer, 1995; Bank of England, 1990). In supporting non-established investments, VCs will often use their own input of business skills, whilst they may also fund second round and development capital for later stage firms which will usually need less assistance (Martin, 1989).

However, although in the early 1980s the VC industry invested modestly in early stage firms, in recent years the industry in the UK and in the US has started to shift its investment focus away from start-ups and early stage firms, in favour of mature ventures (i.e. development finance) and management buyouts and buyins (Mason & Harrison, 1994; Mason 1996a; Freear et al., 1993, 1995b; Duggins, 1993). This is clearly an unfortunate shift away from ‘classic’ venture capital (i.e. new equity provision), which involves forming, building, and harvesting new firms with a long term focus, to a greater emphasis on ‘merchant’ venture capital (i.e. replacement equity provision), which emphasises transaction crafting and closing, fee generation, and financial engineering know-how, and short-term gains (Bygrave & Timmons, 1992; Murray, 1994; Mason & Harrison, 1995; Sweeting, 1991; Landstrom, 1990). The division between venture

capital and merchant banking has now blurred as the industry depends almost entirely upon late stage investments and MBOs (Duggins, 1993; Cary, 1989). In fact, the British Venture Capital Association (BVCA, 1995) claims that start-up and early stage investments accounted for 27% of the full amount invested by the VC industry in the UK in 1984, but this percentage fell to 10% by 1988, and currently stands at 4%. However, during the same period (1984-1995), expansion capital financing fell from 52% to 23%, whilst MBO/MBI finance increased from 21% to 73% of the total amount invested annually by the VC industry (BVCA, 1995), as Chart 1.4 shows.

Chart 1.4 - Amounts Invested Per Stage by the VC Industry in the UK (1984-1995)



Although it is not clear whether this funding shift will change in the foreseeable future, the main reason for this shift is that, for structural reasons, later and larger firms are commercially more attractive for VCs than small and early stage ventures (Lonsdale, 1996). It is particularly due to a VC's: high overhead costs (Martin, 1989), high evaluation and monitoring costs relative to the size of the investment, long payback period, and inherently high risks (Harrison & Mason, 1991a; Harrison & Mason, 1992a; Hall, 1988) when investing in an early stage venture that makes these types of investments often not feasible. It may, therefore, not be surprising that the BVCA does

not even include ‘seed capital’ activity (i.e. pre start-up) as a category of UK venture capital activity (Murray, 1995b), particularly since Murray (1995a) estimates that seed capital comprised less than 0.035% of total funds invested by the VC industry in 1991. Chart 1.5 lists a variety of explanations for why VCs are reluctant to invest in early stage firms.

Chart 1.5 - Reasons Why Venture Capitalists Prefer Later-Stage Investments and Management Buyouts (MBOs)*

Later-Stage Investment & MBO Characteristics	Start-Up & Early Stage Investment Characteristics
Established business Predictable cash flow Customer and competitors known Often low-tech Market often domestic Experienced management team Due diligence possible Pricing possible ‘Hands off’ venture capital style Potential liquidity Research & monitoring costs/deal size ratio low Historically favourable rates of return Fewer investments needed to spread fund risk Larger deal sizes so fewer investments needed to invest total VC fund Short-term investment horizon Outright failure rare	An idea No income, only uncertain costs Customers and competitors unclear Commonly high-tech Market necessarily international One person and a ‘vision’ Due diligence almost impossible Pricing very difficult ‘Hands-on’ critical Illiquidity Research & monitoring costs/deal size high Historically poor rates of return More investments needed to spread fund risk Smaller deal sizes so more investments needed to invest total VC fund Long-term investment horizon Outright failure frequent

* This table is partially adapted from Murray (1992), as cited in Mason & Harrison (1992).

Due to the more favourable characteristics of later-stage investments, a 1990 BVCA survey showed that VCs in the UK almost unanimously concluded that the VC industry’s limited support to funding new and entrepreneurial ventures was their single biggest failure of their first decade (1980-90) (Murray, 1994).

Since most VCs will only invest in entrepreneurial firms which are no longer in their start-up and early stages, middle-aged ventures (which BAs sometimes nursed as start-ups) are clearly their funding preference. But, even though they now have this later-stage concentration, VCs still make significant economic contributions by funding these further rounds of development finance to the small proportion of rapidly growing businesses (Storey, 1994).

1.1.2(E) - Banks

Contrary to BAs and VCs, banks rarely take risky investments of a venture capitalist nature, rather, they prefer lending to firms which offer some form of collateral to limit the bank's risk (Alvarez et al., 1997). Banks do not want to assume equity risks for only debt returns. Although banks are generally the most important source of external funding for small firms (Binks, 1991; Harrison & Mason, 1996a; Landstrom, 1992), they are relatively unimportant for small firms in the start-up or early stages, which have high-growth potential and, thus, high risks (Moore, 1993; Roberts, 1991; Murray, 1994). This may be partly due to debt's external obligations and risk of default which may deter some entrepreneurs from assuming these heavy constraints on freedom of action and diminution of control (Hay & Morris, 1984). But industry observers believe it is primarily due to the banking industry's general restrictive lending practices and the recent macro-economic events which have forced bank practices to become even more constraining (Harrison & Mason, 1996a).

In general, because early-stage small firms lack a track record, lack reliable information on the entrepreneurs, are illiquid, and have volatile profit and cash flow measures, banks

often restrict lending to these firms since it is difficult and costly to evaluate these risks (Singleton et al., 1997; Alvarez et al., 1997; Storey, 1994; Binks & Ennew, 1997). Indeed, one VC interviewed for this study summed up the difference between banks and VCs:

“Banks are interested in minimising risk, venture capitalists are interested in minimising the positive correlation between risk and return. What we want to do is get off the curve and find deals where we are getting a higher return for a lower risk. Banks just don’t want risk.” (VC14, 17/6/96)

In a UK study of start-up firms in the high-tech industry, Moore (1994) found that just over two-thirds of the ventures in his sample considered banks as a potential source of funds, although this source failed to materialise for the majority, as Chart 1.6 shows.

Chart 1.6 - Considered and Actual Sources of Finance for High-Tech Start-Ups*

Source of Finance	% of Firms Considering Source	% of Firms Actually Securing Source
Founders' Savings	69%	49%
Bank Loans	69%	7%
Money from Family/Friends	12%	9%
Money from Government Agencies	48%	9%
Venture Capital (BA & VC)	45%	10%
University Endowments	5%	6%
Strategic Partners	29%	6%

* Source: Moore (1994)

Moore (1994) believes this shows that banks are more reluctant to finance high-growth (and thus high-risk) start-up firms than those in lower risk sectors. Indeed, Oakey (1984) also found that bank finance comprised only 6-7% of total fund sources for start-up firms. Thus, almost as a rule, since most early-stage firms do not have positive cash flow, profitability nor solvency, banks will rarely lend to them without a personal

guarantee or collateral (Alvarez et al., 1997; Brophy & Shulman, 1992; Storey & Westhead, 1995). In fact, the levels of collateral required by banks tend to be around 2.5 times the value of the borrowing (Binks & Ennew, 1997), although there may be valuation, depreciation, and re-valuation costs associated with taking collateral which may further restrict the lending practices of banks. Those entrepreneurs without sufficient collateral may fall into a debt gap.

Unfortunately, the restrictive lending situation for small firms has become worse in recent years, especially during the last recession, as banks experienced substantial losses from Third World debt, international property debt, property devaluation in the UK, and domestic corporate and SME failures (Gapper, 1993; Deakins, 1996; Harrison & Mason, 1996a; Eglin, 1994). Due to these losses, banks in the US and the UK sought to rebuild their asset bases by reappraising and changing lending practices, which further restricted the availability of debt finance to small (especially early-stage) firms (Mason & Harrison, 1993a, 1995; Harrison & Mason, 1996a). Due to these changes in practice, banks adopted a more cautious attitude to their lending practices and have, in particular, tightened their lending criteria (Mason & Harrison, 1993a, 1994, 1996a; Harrison & Mason, 1996a, Alvarez et al., 1997). Banks, therefore, are now requiring more collateral, placing more emphasis on the level of gearing, limiting access to overdraft facilities (which frequently substituted for equity rather than working capital), utilising more risk sensitive pricing systems, and placing more reliance on the borrower's cash flow and business plans, to make the lending decision (Harrison & Mason, 1996a; Mason & Harrison, 1996a; Smith, 1994). As a result, many bank managers have a strong lending

preference for bigger firms, rather than for smaller firms (Vyakarnam & Jacobs, 1991; Mason & Harrison, 1996a).

Although it may be too strong to call the current situation, in general, a 'credit crunch' for small firms (Duggins, 1993) "in the sense that there is a lack of available bank finance, there are undoubtedly growing mismatches between what the banks are prepared to supply, and under what conditions, and what small businesses demand." (Harrison & Mason, 1996a, p.8) There are strong indications that small firm support from banks is insufficient (Singleton et al., 1997), and Murray (1991) states that some commentators have observed that "the banks are on strike." (p.74) In particular, Mason & Harrison (1996a) note that fast-growth entrepreneurial firms, which are the focus of this study, may especially be adversely affected by the lending practices of banks, entailing an even greater reliance on venture capital financing, as the aforementioned typology also dictates. But, luckily, receiving venture finance in the early stages can also ease the bank lending process at a later stage:

"Small businesses which have raised finance from external investors are attractive propositions for the banks. They are likely to have a stronger balance sheet which can support borrowings, and in order to have been able to attract an outside investor are likely to be growth oriented." (Mason & Harrison, 1996a, p.10)

For high-growth firms in the UK, bank support becomes much more important as the company grows (Storey & Westhead, 1995). A Bank of England (1996) study found that in some stage of their development, 15% and 32% of technology-based firms used BA- and VC-finance, respectively, whilst 85% utilised bank finance, presumably mostly after the initial start-up stage of their development in order to procure working capital.

Clearly, banks do not usually provide debt finance to entrepreneurial growth firms at the start-up stage, but more so as the firm develops. Thus, due to these recent changes in banking practices, this financing burden may fall more heavily on BAs and VCs, two financiers which the Bank of England (1996) believes may be the most appropriate external sources of funds for young entrepreneurial firms.

1.1.2(F) - Unquoted Equity Market

Once a firm emerges from the high-risk early stages of development, where it was primarily dependent upon funds from the entrepreneur, family and friends, BAs, and sometimes VCs and bank financing, the next step may be to list the firm's shares on a publicly-traded financial market (Wetzel, 1982b). There are a number of advantages to doing so. First, a stock market listing provides further external capital which can be utilised to fund the firm's growth (Wetzel, 1982b; Mason & Harrison, 1991). Second, this permits investors who funded the firm in the early stages to realise their locked-in investments for a financial gain, which can then be re-invested elsewhere (Wetzel, 1982b; Mason & Harrison, 1991). Coveney (1996) found that 44% of the BAs in his sample would be encouraged to invest more in unquoted companies by the availability of exit routes, such as an unlisted stock market. Third, rendering entrepreneurs the opportunity to possibly repurchase shares of stock at a later date, and so regain control of their ventures, may make entrepreneurs more willing to seek external equity capital in the early stages of their ventures (Mason & Harrison, 1991; Dixon, 1991).

However, if a venture is not able to satisfy the rigorous listing requirements and pay the high listing costs of a large exchange, such as the London Stock Exchange, then the best

option may be to get listed on an unquoted equity exchange, such as the AIM (Alternative Investment Market) or the OFEX (the Off Exchange), which cater to the liquidity needs of smaller firms and may offer tax advantages (Bank of England, 1996). Indeed, the establishment of the first unquoted securities market in the UK, the Unlisted Securities Market (USM), in 1980, offered small firms a certain degree of potential liquidity and investors an exit potential, and so was a 'psychological milestone' which spurred on the development and growth of the VC industry in the UK (Duggins, 1993). However, unquoted equity markets are utilised by only a small percentage of entrepreneurial growth firms as a funding option and so their efficiency and liquidity may be slightly limited (Bank of England, 1990).

1.1.2(G) - Quoted Equity Market

If a venture is very successful, has maintained healthy growth rates, and is beyond the early stages of its development, it may elect to get listed on a quoted equity exchange through an initial public offering (IPO). At such a stage, the provision of finance is usually not the major motivation, rather the procurement of exit routes and share liquidity is primary (Bank of England, 1996). In addition, a public stock offering may also seem attractive because it does not directly involve soliciting the types of finance providers possibly exhausted in earlier rounds of financing (Freear et al., 1991).

However, few firms are fortunate enough to reach this stage. In the US, Wetzel (1986a) estimates that only 1% of corporations are publicly traded and only 0.25% are listed on a organised exchange (i.e. a quoted equity market). Thus, much less than 1% of corporate start-up ventures in the US will eventually be able to develop a market for their shares on

an exchange (Wetzel, 1986a), which may be partly because an IPO has to be in the \$20-50 million range in order to create a market for a firm, (Bank of England, 1996). Indeed, in the UK there were only 75 IPOs in total from July 1992 to June 1993 (Murray, 1995a). Nevertheless, entrepreneurs tend to be more optimistic about getting a listing than these statistics suggest they actually should do. Freear et al. (1991) found that 73% of the new technology-based firms (NTBFs) in their sample believed that a public stock offering was, as a source of future growth equity, 'highly-likely' or 'probable'. In addition, VC-funded firms were more optimistic than BA-funded firms about this funding option (Freear et al., 1991), probably because VC-funded firms are in a later development stage and larger in size.

In the US, Sahlman (1990) and Carter & Van Auken (1994) found that 33% and 28%, respectively, of all IPOs were VC-funded firms, whilst Murray (1995a) found this to be the case for 48% of IPOs in the UK. But IPOs provide firms with only a small fraction of the overall capital supplied by VCs, and especially BAs (Gaston, 1989; Mason & Harrison, 1991), although the IPO and equity markets have an important influence over the flows of venture capital within an economy (Bygrave & Sahlman, 1988).

However, because a stock exchange flotation (i.e. IPO) may not enable the investor to immediately sell his/her stake holding in its entirety, and the company may not be able to choose its funding partner (and possibly subject it to an unfriendly takeover), flotations have limited popularity. This has made trade sales the most common exit route for VC-funded firms (Bank of England, 1990; Mason & Harrison, 1991).

The quoted equity market is clearly a funding option that only few entrepreneurial firms are able to utilise, but its presence, and promise of eventual liquidity, is of much importance in stimulating investors (both BAs and VCs) to fund in the entrepreneurial arena.

Summary

The external equity financing typology of entrepreneurial growth firms that has been presented in this section offers an insightful analysis of the potential funding problems and solutions that the small minority of start-up firms (with the greatest economic potential) may experience. It appears that BAs are often the type of external investor which fund these ventures in their riskiest stage. Mason & Harrison (1996a), therefore, believe that BAs may be the most critical funding element to the survival and growth of entrepreneurial firms. Naturally, when these ventures grow too large for BA financing, VCs may support some of these ventures so that their growth, profit potential, and job-creating abilities may be further enhanced. Bank lending, although only slightly present in the start-up stage, becomes a much more important source of external finance later on, especially once profits, a track record and collateral have been attained, whilst a quotation on an equity market is a more unlikely and later stage possibility. For those early-stage entrepreneurial firms which seek additional financial capital, BAs and VCs are the primary players in the initial funding process of entrepreneurial firms. The respective size and influence of each of these investor's market potential will, therefore, be addressed next.

1.1.3 - Market Size and Influence of the Two Main External Sources of Entrepreneurial Finance

Since VCs and, especially, BAs are important to the survival and growth of many young entrepreneurial firms, this section will conduct a detailed analysis of their current influence in the financing market. This may render us with a clearer impression of their potential (met or un-met) in fostering our national economic growth through small firm support.

In particular, the BA market is especially important since, in the US, it is “the oldest and the biggest (market for venture capital finance) (...) Their know-how and their capital are two of this country’s least understood and under-utilised economic resources.” (Wetzel, 1993, p.5) In the UK this also pertains. The nature of BA investments, and the size and untapped potential of the BA market (compared to the VC market) will now be addressed.

1.1.3(A) - Nature of Business Angel Investments

Since BAs are individual investors with varied backgrounds, generalising about them as a whole may be slightly limiting. But, due to their unique characteristics, BA investments overall have many advantages which are noteworthy, some of which have already been addressed. First, BAs prefer smaller scale investments than VCs, which fall within the equity gap (Mason & Harrison, 1993b; Freear et al., 1996; Harrison & Mason, 1992b). Second, BAs usually invest in start-ups and early stage ventures, where the equity gap is most significant and VCs are hesitant to invest (Mason & Harrison, 1993b, 1995; Freear et al., 1996). Third, BAs make investments in virtually all industry sectors

(Mason & Harrison, 1995). Fourth, BAs are more permissive in their financial decisions than VCs, and tend to have different investment criteria, longer investment horizons (i.e. they are 'patient money') (Harrison & Mason, 1991b, p.271), shorter investment processes, and lower target rates of return (Freear et al., 1996; Harrison & Mason, 1992b; Deakins, 1996). Fifth, raising finance from BAs does not involve the high fees incurred when raising funding from financial institutions (Harrison & Mason, 1991b). Sixth, most BAs are value-added investors in that they contribute their personal business skills to furthering the young business (Mason & Harrison, 1996a) and therefore may elect to invest more locally to ease their involvement (Wetzel, 1983; Mason et al., 1995). Seventh, the BA financing market is more geographically dispersed than the formal VC market. Gaston (1989) claims that BAs can be found everywhere, not just in major financial centres. This is particularly important from a regional development perspective since this helps to retain and re-circulate wealth within a region (Mason & Harrison, 1995, 1996a). Eighth, BA finance has a leveraging effect in that it makes the investee firm more attractive to other possible sources of finance (Mason & Harrison, 1996a; Mason et al., 1995).

However, BAs also have a few disadvantages. First, BAs are less likely to provide follow-on investments to the same firm (Mason & Harrison, 1995). Second, BAs prefer to have a say in the running of the firm which may force the entrepreneur to give up some degree of control (Mason & Harrison, 1995). In addition, BAs may have limited expertise in running the particular type of investee firm, which may make his/her contribution less value-added (Deakins, 1996). Third, a small minority of BAs may turn

out to be 'devils' who have more self-serving motives for investment (Mason & Harrison, 1995).

Fortunately, the advantages of BAs outweigh their disadvantages, and this "prompted the UK's Advisory Committee on Science and Technology (ACOST) to conclude that 'an active informal venture capital market is a prerequisite for a vigorous enterprise economy' (ACOST, 1990, p.41)." (cited in Mason, 1996a) Indeed, BAs are the most significant external source of funds for small entrepreneurial firms, as will now be discussed.

1.1.3(B) - Comparison of the Overall Size of the BA and VC Markets

Wetzel & Freear (1994) quite correctly state that for BAs the "Lack of visibility does not imply, however, lack of importance in the supply of equity capital." (p.4) Indeed, it is well documented in both the UK and the US that the BA market is the largest single source of risk financing for entrepreneurial firms, exceeding the institutional VC industry (Mason et al., 1995; Mason & Harrison, 1993b, 1996b; Benjamin & Margulis, 1996; Wetzel, 1987). Gaston (1989) even suggests that the amount of BA investment in the US almost exceeds that of the combined total of all other financing sources of external equity for start-up and early stage growth firms.

However, due to the invisibility of BAs, estimating their market size involves inducing measurements from small samples and this has rendered a variety of assessments from the academic sector. Therefore, these back-of-the-envelope estimates, particularly of the size of the BA market, should be considered as ballpark estimates, rather than as

definitive (Mason, 1996b). But, regardless of the diversity of the findings, it is universally agreed that the BA market is enormous.

Indeed, although the UK BA market is less developed than its counterpart in the US, it has grown substantially over the last 10-15 years (ACOST, 1990; Mason & Harrison, 1994, 1996). It is estimated that in the UK there are between 30,000-50,000 BAs (KMPG, 1992; Bowden, 1994; Mason & Harrison, 1993a), who have invested almost twice as much in small entrepreneurial firms as the formal VC market, with investments of £2 billion and £1.25 billion respectively (Mason & Harrison, 1993a; Mason et al., 1995; Bannock, 1991). However, when the results of this research study were applied to Mason & Harrison's (1993a, p.34-35) equation for computing the size of the BA market, the result was closer to the £4 billion mark, as was also found by Stevenson & Coveney (1994). However, because BAs invest, on average, smaller amounts per deal than VCs, the number of firms that BAs fund in the UK vastly exceeds the number supported by VCs (Mason & Harrison, 1996a).

Similarly, in the US, BAs are also of great importance, as the more comprehensive and more varied US data shows. It is estimated that in the US there are anywhere from 250,000 (Freear et al., 1992b, 1995b) to 1-2 million BAs (Freear et al., 1996; Ou, 1987), who hold anywhere from \$50 billion (Wetzel, 1987) to \$100-300 billion (Ou, 1987; Wetzel & Freear, 1994) in equity investment portfolios. On an annual basis, about 250,000 (or one eighth of the BA population) of these US BAs (Wetzel & Freear, 1994) will invest between \$10-30 billion (Wetzel & Freear, 1994; Ou, 1987; Freear et al., 1995b; Freear & Wetzel, 1991; Gaston & Bell, 1988; Gaston, 1989) in about 20-60,000

small firms (Wetzel, 1987, 1993, 1996; Freear et al., 1992b; Benjamin & Margulis, 1996), although about 100,000 start-ups annually meet the minimum funding requirements of BAs (Wetzel & Freear, 1994). It has even been estimated that BA investments account for 0.15% of the US's gross domestic product (GDP) (KMPG, 1992).

In contrast, the US VC industry holds a portfolio of about \$20 billion (Freear & Wetzel, 1991), invests about \$2-4 billion annually (Freear & Wetzel, 1991; Wetzel & Freear, 1994; Gaston & Bell, 1988; Wetzel, 1996) in only 2,000 firms (Wetzel & Freear, 1994), of which two-thirds were supplementary investments to existing portfolio companies (Wetzel & Freear, 1994). This disparity between the BA and VC markets suggests that BAs fund an annual amount of two to five times more to entrepreneurial firms than the VC industry! (Wetzel, 1987; Freear et al., 1996; Mason & Harrison, 1993a). Since BA investments are, on average, of a much smaller size, estimates claim that BAs in the US fund between 10-15 times (Wetzel, 1987; Freear et al., 1996) to 30-40 times (Wetzel & Freear, 1994; Gaston, 1989) the number of entrepreneurial firms financed by the formal VC industry.

Although the size of the BA market overwhelms that of the VC market in both the UK and the US, the BA market is still not running at its full potential.

1.1.3(C) - Untapped Potential of the BA Market

Despite its significant size, the potential scale of the BA market is significantly greater than the current figures suggest (Mason et al., 1995; Mason & Harrison, 1993a, 1993b). First, the BA market is an inefficient market in which most BAs have difficulties finding suitable investment opportunities and, therefore, have substantial funds available for potential investment (Harrison & Mason, 1996a; Mason & Harrison, 1996a). KPMG (1992) found that Scottish BAs invest only 50% of available funds, whilst for BAs in the US this figure may be nearer 80%. Similarly, Mason & Harrison (1993b) discovered that BAs in their UK sample had the equivalent to three times the amount invested still available for possible entrepreneurial investments, whilst Stevenson & Coveney (1994) noted that 70% of BAs cited lack of suitable business proposals as the most common reason for not investing more. Business introduction services (BISs) may slightly ease this inefficiency, but only a small proportion of BAs use them (Coveney, 1996). This leads Coveney (1996) to conclude: "It is clear (...) that business introduction services can at best play a secondary, or support role, to personal and business contacts as an information source for investment proposals." (p.182) Second, entrepreneurs often reject funding offers from BAs. One BIS even found that four times as many offers are made as are accepted (Mason & Harrison, 1996b; Mason et al., 1995). Third, the BA market is underdeveloped and there is still scope for expansion (Mason & Harrison, 1996a). In particular, the active BA investors in the market are significantly outnumbered by 'virgin angels', who are other high net-worth individuals with entrepreneurial backgrounds, wishing to make their first entrepreneurial investment, but have not yet done so (Freear et al., 1994a; Wetzel & Freear, 1995; Stevenson & Coveney, 1994). Studies have shown that there may be between 10-20 times as many virgin angels as there are active angels

(Wetzel & Freear, 1993; Riding & Short, 1987). Mason & Harrison (1993a) claim that “there is a need to convince (virgin angels) (...) that investing a fraction of their investment portfolio in the form of informal investments makes sense.” (p.31) Freear et al. (1992a), in a US study, suggest that virgin angels may be most influenced to invest by: assistance in investment monitoring, opportunities to participate with other BA investors, and possibly a reduction in the capital gains tax. However, in the UK, Harrison & Mason (1996a) claim that little evidence to date shows that tax incentives influence BAs, whilst Mason & Harrison (1993a) even suggest that with the right combination of enticements it may be possible to entice over half of the virgin angels to become active BAs.

Clearly, the BA market is not reaching its funding potential, which may certainly restrict its ability to further curtail the equity gap.

Summary

BA finance is clearly ‘smart money’ (Mason & Harrison, 1996b, p.106) since most BAs are value-adding investors whose experience and investment behaviours can be of great benefit to entrepreneurs. Despite the enormous size of the BA market compared to the VC market, the former is still inefficient and far from reaching its funding potential. With the right incentives this may be slightly remedied. This is especially important because as the investment criteria of other investors in the market are becoming more conservative, “informal sources of venture capital (BAs) seem likely to become even more significant in the financing of entrepreneurial companies in the foreseeable future.” (Mason & Harrison, 1993a, p.34)

1.2 - The Research Questions

As this chapter has outlined, BAs and VCs are very important forms of finance for many small entrepreneurial growth firms in their early, and most turbulent, stages of development. However, to date, little is known about the investment procedures of BAs and, in particular, no direct comparison has ever been conducted between the investment criteria and procedures of BAs and VCs throughout their full investment processes, although a need for such comparative research has been well documented (Ehrlich et al., 1994; Mason & Harrison, 1996b; Muzyka et al., 1993; Freear & Wetzel, 1993). Indeed, to potentially unleash some of the BA market's untapped potential, an initial step must be to conduct more research on BAs (Harrison & Mason, 1992b; Mason & Harrison, 1996b; Short & Riding, 1989; Freear et al., 1992a) and especially on how they compare to their closest comparative investor type, the VC (Ehrlich et al., 1994). Freear et al. (1992a) state in their US study:

"This research is motivated by the proposition that the know-how and the capital of high net worth individuals are two of the nation's most potent, but least understood and under-utilized economic resources. Understanding the investment attitudes, behaviour and characteristics of high net worth individuals is a step toward putting more of these resources to work for entrepreneurs." (p.374)

Whilst in the UK, Harrison & Mason (1992b) also note:

"(A)ny discussion of the role of informal investors in contributing to the closing of the equity gap in the UK is handicapped by the complete absence of information on their characteristics, investment behaviour, investment preferences, and motivations." (p.461)

This current need for more understanding, especially between BAs and VCs, was even voiced by a manager of a UK business introduction service:

“There is a lot of confusion about the difference between angels and venture capitalists. These pundits on TV tend to put them together at times, it is just very unclear. A clarification about the differences between the two would be very helpful for all involved.” (AC1, 25/3/96)

To fill this important gap in academic and practitioner knowledge, this research study will conduct the first such comparison between BAs and VCs across the full investment process. Hence, this study’s first research question reads:

Research Question 1: How do BAs differ from VCs throughout the full process of investing in early stage entrepreneurial firms?

But to compare these two investor types rigorously, it is imperative that the research study be based on a theoretical framework (Bygrave, 1989; Smith et al., 1989). Therefore, as the next chapter will show, agency theory will be used to hypothesise that BAs and VCs use different approaches throughout the full investment process to reduce the possibility of agency risks (i.e. the risk that the entrepreneur will not use the investor’s money in the responsible manner agreed upon). The agency theory literature identifies only two theories of investor-firm relations, the principal-agent theory and the incomplete contracts theory. Each highlights a different approach which can be taken to reduce agency risks. However, they do not imply that the investor-entrepreneur relationship is necessarily non-harmonious, but consider the possibility of potential conflict. Although both approaches advocate reducing risk at each stage of the investment process, the principal-agent approach places more emphasis on conducting extensive screening, due diligence and contract formulation ex ante investment to limit

potential agency risks, whilst the incomplete contracts approach places more emphasis on extensive ex post monitoring of the investment. Due to their structural and agency risk differences, this study will hypothesise that BAs utilise the incomplete contracts approach, whilst VCs employ the principal-agent approach throughout their investment processes.

As a direct consequence of adopting a theoretical framework to address the first research question, the second research question reads:

Research Question 2: How do the two theoretical approaches to investor-firm relations, when tested empirically for agency risk reduction in the investment process, contribute to greater investor understanding?

The formulation of this theoretical framework will be detailed in the next chapter.

1.3 - Overview of the Chapters

To fully address these two research questions, the remaining chapters will review the existing literature, formulate a theoretical framework, review the research methodology utilised, analyse and present the empirical results which will hopefully answer the research questions, and, lastly, discuss the implications of the research study. A summary of these chapters is now presented.

Chapter 2 - Review of the Literature & Formulation of the Research Hypotheses

An overview of the BA and VC literature will be initially undertaken in this chapter, whilst the bulk of the chapter will thoroughly review the agency theory literature and

apply it to the comparison study of BAs and VCs. Primarily by analysing the structural and agency pressure differences between these two investors types, this chapter will conclude by drawing up research hypotheses which suggest that BAs use a more ex post investment approach to limiting agency risks (the incomplete contract approach), whilst VCs utilise a more ex ante investment approach (the principal-agent approach). The remaining chapters will then test these hypotheses so as to render more insight into the investment processes of these two investor types.

Chapter 3 - Methodology & Method

In order to test the eight research hypotheses generated, this chapter will describe the population samples selection and the qualitative and quantitative data collection processes utilised. In addition, a review of the strengths and the limitations of this study will also be undertaken. The chapter will end with an examination of the statistical procedures employed to bring understanding to the plethora of raw quantitative data.

Chapter 4 - Testing the Research Hypotheses: Deal Origination, Screening, and Due Diligence Differences Between BAs and VCs

The first three hypotheses will be addressed in this chapter by comparing the initial procedures that BAs and VCs employ in the investment process. These results will render support to the hypotheses that VCs and BAs do indeed employ their respective agency risk reduction approaches in the initial investment stages.

Chapter 5 - Testing the Research Hypotheses: Investment Criteria Differences Between BAs and VCs

The investment criteria which investors utilise to screen and thoroughly assess the investment opportunity will be reviewed in this chapter. Although both BAs and VCs find the entrepreneur and/or the management team the most important criterion, they differ in their ratings of other criteria, just as was partially hypothesised. However, this empirical examination of the investment criteria will only add limited support the notion that BAs and VCs utilise different agency risk reduction methods.

Chapter 6 - Testing the Research Hypotheses: Contractual Control, Monitoring, and Exit Differences Between BAs and VCs

To conclude the empirical testing of the research hypotheses, this chapter will compare the contractual control, monitoring, and exit procedures of BAs and VCs. Some support will be demonstrated for the remaining hypotheses that BAs do indeed utilise the contract incompleteness approach and VCs the principal-agent approach throughout their full investment processes. This may render new insight into the differences between BAs and VCs throughout their investment procedures.

Chapter 7 - Further Insight into the Research Findings: An Analysis of Differences Within Each Investor Group

To bring further understanding to the group differences already found between BAs and VCs, unprecedented intra-group comparisons will be conducted for both investor types. This will demonstrate the heterogeneity within each investor group, which is rarely addressed in BA and VC studies. Although the intra-group comparisons may be

noteworthy by themselves, many of them will further support the inter-group comparison results.

Chapter 8 - Summary & Implications

The results of the empirical and theoretical comparisons between, and within, the BA and VC groups found in this research will be highlighted in this, the final, chapter so as to determine their practical implications for: the management literature, research methods, theory, practitioners, policy, and further research.

1.4 - Conclusion

In this chapter, the economic importance has been highlighted of the minority of small early-stage firms which have high growth potential - entrepreneurial firms. In the process, their frequent inability to fully fund growth internally through retained earnings or support from family and friends was also documented. But due to their inherently high-risk nature, it was shown in the funding stage typology that most institutional investors (including banks and VCs) refrain from financially supporting these economically beneficial firms in their early stages, whilst stock market listings were shown to be applicable only to the few highly profitable firms in the later stages of their development. BAs were identified as the most suitable external funding option, especially since they collectively invest more money, in more small early-stage entrepreneurial firms, than any other investor type. However, although BAs have significant economic funding power and offer many value-added benefits to

entrepreneurial firms, their economic potential as financiers is under-utilised due to various market inefficiencies. Unfortunately, before steps can be taken to alleviate this problem through effective policy incentives and other measures, the overview of the thesis chapters highlighted that the initial step must be to gain a greater insight into BAs and how they differ from their most comparable investor type, the VC. The first major research objective of this study is, therefore, to generate greater understanding of BAs and VCs throughout their full investment experiences, from initial deal origination to exit of the investment. But to ensure that this investigation is robust, a theoretical base will be applied to generate research hypotheses to guide the study. In doing so, the second major research objective of this study will be to empirically compare the two theoretical approaches to agency risk reduction identified in the literature. Since both these research objectives are unprecedented in the existing literature, it is hoped that this research study's findings may have some implications for practitioners and the academic research community.

Chapter Two

Review of the Literature & Formulation of the Research Hypotheses

Introduction

To establish a guide for the research, this chapter will present a brief overview of past research studies and use the literature to formulate a theoretical foundation.

In the first part of the chapter, a brief literature review will highlight the research progress in the fields of BA and VC research and identify some areas which warrant further investigation. In particular, an emphasis will be placed on research conducted on the full investment process and investment criteria of these two types of investors.

In the second part of the chapter, a detailed review of agency theory will be given so as to form a robust base for the study. This will address the foundations of agency theory, the problems emanating from the agency relationship, and the two theoretical approaches identified in the literature which shed light on how to deal with these agency problems. It will then be asserted through an analysis of structural and agency pressure differences between BAs and VCs that these investors may employ two distinctly different approaches to deal with agency problems.

Since there is no clear framework in the academic literature for differences between these two approaches (especially throughout the investment process), this chapter's main focus will be to draw on the literature to formulate eight research hypotheses, in the last part of the chapter, which hope to offer such a framework.

The chapter is divided into three main sections:

2.1 - Business Angel and Venture Capital Literature Overview

2.2 - Agency Theory Literature Overview

2.3 - Formulation of the Research Hypotheses

2.1 - Business Angel and Venture Capital Literature Overview

In this overview of the BA and VC literature, only a very general outline will be given so as to identify research gaps which need further attention, and so render support to the sincere need for this study's first research question to be thoroughly addressed. In addition, a comprehensive analysis of past research findings will be incorporated into the presentation of the results in Chapters 4-7. This allows a more direct comparison to be conducted in the results chapters and provides a better impression of the significance and implications of this study's findings. The literature review will first cover the evolution of the BA and VC research fields and then review the literature on these investors' investment motivations and preferences, investment process, investment criteria, and post-investment experience.

2.1.1 - Evolution of the Business Angel and Venture Capital Research Literature

Compared to more established disciplines, which have been analysed for centuries, the study of entrepreneurship and the funding of small entrepreneurial ventures has only evolved over the last 25 years in the US (Bygrave, 1989) and even less in the UK.

2.1.1(A) - Evolution of the Business Angel Literature

Although business angels have been recognised by many researchers as having potentially more funds available for entrepreneurs than formal venture capitalists, the majority of research has concentrated on the latter. The term ‘business angel’ was not actually used until 1983, when one of the main pioneers of this research area, Professor William Wetzel, Jr., published the article “Angels and Informal Risk Capital” in the *Sloan Management Review*. This article is recognised by many internationally to be the first mainstream research article on business angels. But this is not where the study of BAs started.

According to Wetzel’s chronology of informal venture capital research (Wetzel, 1986b), the first BA study was conducted by Albert Rubenstein in 1958 in the U.S. as part of the Federal Reserve studies that preceded the Small Business Investment Act of 1958. Then in 1964, Gordon Baty examined the initial funding of new research-based organisations in New England, whilst in 1972 the first doctoral thesis was written on BAs by Cary Hoffman at the University of Texas. Although a few more notable studies were conducted in the 1970s, it was the 1980s which showed a sharp rise in BA research, with Wetzel and his colleagues (John Freear and Jeffrey Sohl) at the University of New Hampshire producing the most material to date. Other researchers across the US also started studying the BA phenomenon. In particular, studies were conducted in California (Tymes & Krasner, 1983), Ohio and Kentucky (Neiswander, 1985), the Sunbelt Region (Gaston & Bell, 1985), the Great Lakes Region (Aram, 1987), the East Coast (Haar et al., 1988) and the Knoxville Region (Postma & Sullivan, 1990). As a result, the research

field was able to render a good impression of the ABCs (Attitudes, Behaviour and Characteristics) of business angels.

This rise in US interest grew even more in the 1990s, and has become more international. In the UK, Colin Mason and Richard Harrison are the recognised authorities in the field, and only a few others such as Stevenson & Coveney (1994), KPMG (1992), and Kelly & Hay (1996) have produced notable work in the area. In Canada, Short and Riding (1989) have made significant contributions, whilst in Sweden, Hans Landstrom has conducted some more theoretically-based work. Although this field only has about a dozen dedicated researchers, it is still growing and slowly spreading to many other countries (Mason, 1996b).

2.1.1(B) - Evolution of the Venture Capital Literature

Within the entrepreneurship literature, venture capital investing has received a lot of attention (Zacharakis & Meyer, 1995). One reason is that a number of studies have found that VC-backed ventures have a higher average survival and investment return rate than non-VC backed ventures (Timmons, 1994, Zacharakis & Meyer, 1995; Sahlman, 1990). Another reason is that due to the nature of the investor, venture capitalists are easier to identify and access for research purposes than BAs.

In the 1970s a considerable amount of pioneering empirical research was conducted on VCs, although most of it “remains buried in the ‘underground’ literature of unpublished doctoral dissertations and government reports.” (Tyebjee & Bruno, 1981, p.283). Most of these concentrated on the operation of the VC firms, their deal evaluation process,

and/or a risk-return assessment of VC investments. In the 1980s, research in the field became more prominent and a large array of work was completed. In particular, in the US, Bygrave & Timmons (1986, 1992), Gorman & Sahlman (1989), MacMillan et al. (1985, 1987, 1988), Tyebjee & Bruno (1981, 1984, 1985), and Sapienza (1992) have been very influential in shaping the field. In the UK, Murray (1994, 1995a,b,c) and Wright & Robbie (1995, 1996, 1997) have been most prominent. Naturally, VC research has also entered a greater international scale as is typified by Sapienza et al.'s (1996) study of venture capitalists in France, The Netherlands, the UK and the US.

With its higher output and more attention, the VC research field has certainly guided the younger BA field. Indeed, the latter has taken concepts and inspiration from the former, but it has been only recently that we have started to see some direct comparison studies between the two fields, as this research study proposes to do.

2.1.2 - Investment Motivations & Preferences Literature

The investment motivations of BAs and VCs have been quite well documented over the years and appear to be very similar for both UK and US investors. Although it is well chronicled that VCs are primarily interested in the financial returns (and little else) as a motivation for making entrepreneurial investments (Hall & Hofer, 1993), the motivations of BAs are more complex.

BAs make informal investments for a combination of three reasons: financial (i.e. for high capital appreciation), entrepreneurial (i.e. to play a role in the entrepreneurial process), and non financial-motives (i.e. for the fun of investing) (Landstrom, 1993).

Stevenson and Coveney (1994) found in a large-scale study of British BAs that 51% of BAs think financial rewards were a primary investment motive, whereas only 34% and 29% of the BAs believed the same for the entrepreneurial and non-financial motives respectively. Each motivation will now be addressed more fully.

First, in making their investment decisions, BAs are driven first and foremost by the opportunity for high returns (Mason & Harrison, 1994; Stevenson & Coveney, 1994). Although most BAs are sufficiently wealthy so as not to need these returns from a successful investment, the losses will still hurt, but not affect their lifestyle (Baty, 1991; Mason & Harrison, 1994). Second, BAs gain personal satisfaction from having the opportunity to play a role in the entrepreneurial process. One BA summed this up: "I do angel deals for some of the same reasons I support the ballet. Take one look at me and you'll know I'm not a ballet dancer, but I like being part of something that is worthwhile." (Conlin, 1989, p.48) Baty (1991) has suggested that the typical BA is best thought of as a 'recreational investor', investing 'casino money' (Mason & Harrison, 1994). Third, it is the influence of non-financial factors (or 'hot buttons') that distinguishes BAs from professional VCs (Wetzel, 1983). Wetzel (1983) found that 50% of BAs reported that they would assume higher risks or lower returns if the firms they invest in are expected to create jobs in the community, commercialise socially useful technology, assist women entrepreneurs or entrepreneurs from ethnic minority groups. This may also explain why Freear et al. (1995b) found that BAs (who tend to invest in high risk start-up deals) expected 32.5% annual returns on their investment, whilst VCs expected 40% on their funds. This counterintuitive difference may be due to the BAs' 'psychic' income from investments.

Clearly, there are stark differences between the investment motivations of professional (VC) and non-professional (BA) investors. Despite extensive analysis in the area, some researchers have called for continuing research into the motivations of BAs (Harrison & Mason, 1992b; Short & Riding, 1989).

2.1.3 - The Investment Process Literature

The investment process, in this context, refers to all the stages of investment leading up to the actual investment. This includes the screening of prospective investments, the due diligence process, and the negotiation and contract formation stages. As with the investment motivation literature, the investment process of VCs has been researched much more comprehensively than that of BAs. In particular, Tyebjee & Bruno (1981, 1984), Pence (1982), Rea (1989), MacMillan et al. (1985, 1987), Carter & Van Auken (1994), and Bygrave & Timmons (1986, 1992) are just some of the US researchers in this area, whilst Dixon (1991), Murray (1994, 1995a, 1995c) and Wright & Robbie (1995, 1996) have analysed the UK venture capitalists. Despite this plethora of work, some VC researchers have called for its continued study (Hall & Hofer, 1993).

Unfortunately, research on these aspects remains deficient in the BA field. Most research to date has instead focused on the investor by analysing their characteristics, motivations, and investment characteristics, rather than aspects of the investment process, deal characteristics, or the investee firms (Mason & Harrison, 1996b). In fact, Mason & Harrison believe that knowledge of the BAs' investment process is one of the "aspects of the operation of the informal venture capital market for which research-based

evidence is lacking, necessitating a reliance on, possibly inaccurate or atypical, anecdotal evidence and speculation.” (Mason & Harrison, 1996b, p.107)

Thus, we know a lot about who BAs are, why they invest, and what they invest in, but we are not completely sure how they do it. Researchers in the US and the UK believe that our information is either limited or non-existent on the BAs’ process of deal origination, screening, evaluation (due diligence) and structuring, and have urged for more research to be conducted in these areas (Freear & Wetzel, 1991, 1992; Freear et al., 1996; Haar et al., 1988; Mason & Harrison, 1996b; Hall, 1988; Wetzel, 1986a, 1987; Mason, 1996a; Ehrlich et al., 1994). In particular, a more detailed direct comparison of the BA and VC investment process is needed (Ehrlich et al., 1994).

2.1.4 - The Investment Criteria Literature

Analysis of the investment criteria of VCs and BAs include examination of the characteristics of investee firms and the investment attractions of investors. This has been particularly well researched in the VC field where such US researchers as Tyebjee & Bruno (1981, 1984), Pence (1982), Knight, (1986), MacMillan et al. (1985, 1987), Sandberg et al. (1987), and Hall & Hofer (1993) have conducted comprehensive studies. Little comparable analysis has been conducted in the UK venture capital market.

The investment criteria of BAs have been chronicled to a lesser extent than those of the VC. In the US and the UK, Mason et al. (1995), Mason & Rogers (1996), Haar et al. (1988), Landstrom (1993, 1995), Stevenson & Coveney (1994), and Freear et al. (1991) have addressed this area. However, some researchers have pointed out limitations of

these studies. In particular, they focused on: the investor, not the deal (Mason and Harrison, 1994, 1996b); the investor's preferences, rather than criteria actually used (Mason & Harrison, 1994, 1996b); general criteria, rather than deal-specific variables (Mason & Rogers, 1996; Lumme, 1996), and a number were constrained by small sample sizes. Even with research progress in this area, many researchers have stressed the need for more examination into the investment criteria and decisions of BAs (Wetzel, 1987, 1993; Freear & Wetzel, 1992; Mason, 1993, 1996; Haar et al., 1988; Harrison & Mason, 1992b). Only Fiet (1995b) has conducted a direct comparison of BAs and VCs in this respect (it dealt with risk avoidance strategies), so research comparing the investment criteria of BAs and VCs is clearly needed (Wetzel, 1986b; Freear & Wetzel, 1991; Muzyka et al., 1993).

2.1.5 - The Post-Investment Experience Literature

The post-investment experience refers to the investor's involvement with the investee firm from the time of investment to the exit and realisation of that investment. This includes the role that investors play in the firm (their degree of involvement) and the financial returns they achieve.

The literature on VC involvement in their investee firms is quite extensive and has been analysed by many researchers, primarily in the US. Some of the more notable are Gorman & Sahlman (1989), Rosenstein et al. (1989, 1990), MacMillan et al. (1988), Barney et al. (1994), Tyebjee & Bruno (1984), Sapienza (1992), Sapienza et al. (1992, 1996), and Busenitz et al. (1997). Whilst in the UK, only Murray (1995b) and Sweeting

(1991) have made contributions to this area. However, they utilise sample sizes of only six and four respectively. More UK-based research is clearly warranted.

Findings on the post-investment experience of BAs are, however, more limited and often not based on research-based evidence (Mason & Harison, 1996b). Many of the studies conducted have been quite general, with few devoting a significant proportion of their study to a BA's involvement in the investment. This area has been covered in the US by Freear et al. (1991, 1992, 1993, 1995b) and Freear & Wetzel (1989, 1991), in the UK by Mason et al. (1992a, 1995), Mason & Harrison (1992a, 1996b) and Stevenson & Coveney (1994), and in Sweden by Landstrom (1990, 1992, 1993).

To date, only two studies have conducted a direct comparison of the post-investment involvement of BAs and VCs. One was conducted in the US (Ehrlich et al., 1994), the other in the UK (Harrison & Mason, 1992a). However, both these studies are based on the investee firm's perspective, rather than on the investor's. Clearly, more research is needed on BA involvement in their investee firms, with a particular emphasis on conducting a direct comparison with VC investors.

In addition to investor involvement, little is known about the financial returns that BAs realise from their investments (Mason et al., 1995, 1996b; Freear et al., 1996), in particular with reference to those of VCs (Mason, 1993).

Summary

As the literature review shows, no comprehensive research to date has conducted a direct comparison of the differences between BAs and VCs throughout their full investment process, from initial deal screening to realisation of the investment. Neither has a direct comparison of the investment criteria of these two investors been conducted. A need for comparative research on both these aspects has been well documented (Ehrlich et al., 1994; Freear & Wetzel, 1993; Mason & Harrison, 1996b; Muzyka et al., 1993).

Although findings prove to be relatively similar between countries, there is a general lack of UK research on a number of aspects, which has forced the substitution of US research in its place. This may be due to the smaller relative size of the UK market, and the more recent recognition of the VC and BA markets in the UK. Thus, a need for more analysis of UK venture capitalists and business angels is required, which may explain the British Venture Capital Association's (BVCA) willingness to finance this research study.

This section has rendered further evidence that this study's first research question, which asks: 'How do BAs differ from VCs throughout the full process of investing in early stage entrepreneurial firms?', has thus far not been fully addressed in the academic literature. Therefore, the next section will review the theoretical foundation this study will use to address this research question, and so produce eight research hypotheses based on agency theory.

2.2 - Agency Theory Literature Overview

Many research studies in the BA and VC fields have lacked a theoretical foundation upon which to conduct research and interpret findings (Landstrom, 1992). Due to the young nature of these research fields, this was in the past tolerated, but in recent years more researchers have called for more theoretically-based research (Freear et al., 1996, Freear & Wetzel, 1992, Brophy & Shulman, 1992, Harrison & Mason, 1991a). Therefore, an overview will now be presented addressing why we need a theoretical framework, and how components of one such framework (agency theory) can be utilised to generate research hypotheses to drive this study.

2.2.1 - The Need for Theory

As a field of research develops, it moves through a number of overlapping stages (Freear et al., 1996). In the first, the area of study's worthiness is established. In the second, empirical evidence about the subject is collected, assimilated, interpreted and disseminated by researchers, and its relationship to other areas of study is attained. In the third stage, researchers draw upon their knowledge base in other fields to attempt to transform their interpretation of the evidence into explanatory and predictive theories. The study of business angels has only just passed through the first two stages and is beginning to penetrate the third (Freear et al., 1996).

The study of small firms in general can be characterised by a lack of theoretical framework, as is evidenced by the many empirically-based studies and the few that utilise theory (Landstrom, 1992, Deakins, 1996). Although the field of finance has used

predictive theories for quite some time, this has not yet fully penetrated the 'early stage' fields of venture capital and entrepreneurship research (Freear & Wetzel, 1991, Bygrave, 1989, Bull & Willard, 1993). To date, most theory that has been witnessed in entrepreneurship research has been 'borrowed' from more established disciplines (Brophy & Shulman, 1992). This has led Bygrave and Hofer (1991) to conclude that "one of the major challenges facing entrepreneurship researchers in the 1990s is to develop models and theories on solid foundations from the social sciences." (p.13) But it is also argued that one reason for why the field of entrepreneurship research does not yet have any great theories may be that it is a fragile area in which parameters are always changing. This may make it more difficult to apply theory to venture capital research. But applying a theoretical foundation to research is important. The ability to utilise theory which can accurately predict may very well increase the robustness of research and render more enlightening results and more insight than ad hoc research studies.

To formulate a theoretical base for this research study, agency theory will be 'borrowed' from the field of finance and applied to (formal and informal) venture capital investing. A few other researchers in the field have utilised this approach in different ways and it is believed that an agency theory framework is "a potentially valuable framework to apply to the informal venture capital market." (Freear & Wetzel, 1991, p.29) For example, Landstrom (1992) used agency theory to generate twenty-five hypotheses about small unlisted firms, Fiet (1995b) applied it to a risk-aversion study of business angels and venture capitalists, whilst Sapienza (1989, 1992) and Norton (1995) applied it to the study of formal venture capital. Norton (1995) even concluded that "agency theory may provide the most valuable insights into venture capital practice." (p.27) This research

study will, therefore, also employ agency theory. However, unlike past approaches, this study will also use Oliver Hart's (1995a) contract incompleteness model to formulate research hypotheses. A close overview of the agency theory to be employed will now be undertaken.

2.2.2 - Overview of the Foundations of Agency Theory

Agency theory has been used by academics in accounting, economics, finance, political science, organisational behaviour, and sociology (Eisenhardt, 1989). Its applicability clearly spans many areas, one of which is also the area of small firm financing where information asymmetries and agency problems are usually prevalent (Reid, 1996, Pettit & Singer, 1985, Landstrom, 1992, Sapienza et al., 1996, Freear & Wetzel, 1991). In fact, Norton (1995) believes that "few other financial settings contain as many potential agency cost problems as venture capital investments (...) Many times the investment is backed only by intangible assets and trust in the ethics and abilities of the entrepreneurial team." (p.23) Before we can analyse agency theory, and the aspects of the theory upon which the hypotheses will be formulated, an overview of its main premises is warranted.

2.2.2(A) - Separation of Ownership and Control: The Agency Relationship

In most modern corporations and many small and medium-sized firms (primarily those funded with outside equity) there is, to use a phrase made famous by Berle & Means (1933), a 'separation of ownership and control' which is utilised to run the organisation (Hart, 1995b). In such an arrangement, one party (the principal) delegates work and responsibilities to another (the agent), who performs that work on the principal's behalf (Jensen & Meckling, 1976). This separation of decision and risk-bearing functions is

common in such organisations in part because of the benefits of specialisation of management and risk bearing (Fama & Jensen, 1983, Hart & Holmstrom, 1987). Such a relationship might also be employed in risk situations on the assumption that the agent is more knowledgeable than the principal (Ross, 1974).

In an agency relationship, it is ultimately the principal who bears the risk for the agent's actions and this is one of the potential costs of such a relationship. To curtail these costs, the principal will try to share the consequences as best he/she can with the agent (Ross, 1974). The primary way in which the principal aims to limit his/her potential risks is through employing contracts, which primarily aim to align the potential rewards for the agent with those of the principal. Agency theory, therefore, attempts to outline this relationship using the metaphor of the contract (Jensen & Meckling, 1976).

2.2.2(B) - Asymmetries of Information

In such a situation where an agent is contracted to run a firm and make decisions on behalf (and in the supposed best interests) of a principal, information asymmetries are prevalent between the parties. That is to say that there are certain pieces of information, having a material affect on the firm and the contract, which are available to one party and not to the other. It is assumed that because the agent runs the firm, he/she most likely knows more about the firm than the principal. This information asymmetry can be of concern if the agent decides to use his/her information advantage for his/her own advantage, rather than for the benefit of the firm and the principal. Since it is often difficult for a principal to ascertain whether the agent is using his/her information advantage for the principal's benefit, a number of problems can arise in the running of a

firm (in which a principal has already invested) and in an entrepreneur's attempt to raise outside equity finance from potential investors (potential principals). However, in this chapter the primary emphasis will be on the former, although both will now be addressed.

If a principal-agent relationship has already been established in a firm, the principal may have justifiable worries about whether the agent is acting prudently. In his celebrated book *The Wealth of Nations*, Adam Smith (1776) somewhat pessimistically echoes these concerns:

“being the managers rather of other people's money than of their own, it cannot be expected, that they should watch over it with the same anxious vigilance with which the partners in a private company frequently watch over their own (...) Negligence and profusion, therefore, must always prevail, more or less, in the management of affairs of such a company.”
(Jensen & Meckling, 1976, p.305)

To make matters worse, the problem of asymmetric information is usually greater for smaller firms, who may find it expensive to supply audited financial statements, and difficult to overcome this deficiency with additional information (Pettit & Singer, 1985). Furthermore, Freear & Wetzel (1991) state that an information asymmetry between the agent and reality, which is often ignored in studies, may also hamper the situation.

Asymmetries of information can also impede an entrepreneur's ability to raise equity (and debt) finance from external investors. In small businesses which are highly dependent on their owners, the owners (the potential agents) will have much more knowledge about the firm than potential external investors and they may experience difficulty in accurately conveying this knowledge to the outside investor (Ross, 1977).

Part of the reason is that much of the knowledge is intangible (Mason & Harrison, 1990; Landstrom, 1992). An additional problem is that agents may also not be motivated to disclose their information for fear that it might be used against them, so called information impactness (Kaplan & Atkinson, 1989; Landstrom, 1992). With such information asymmetries, potential outside investors (i.e. potential principals) will quite justifiably feel that they are at an information disadvantage and may use the entrepreneur's behaviour (i.e. possibly the choice between internal and external sources of equity capital) as a signal about the quality of the firm (Ross, 1974, Myers & Majiluf, 1984).

Since the investors are imperfectly informed about the quality of businesses, the choice to issue equity (which dilutes the entrepreneur's relative ownership percentage) may be attributed with low-quality firms. Likewise, the choice to issue debt may be attributed to high-quality firms, and thus high-quality firms which attempt to raise equity finance for positive net value projects may be unfairly categorised by the market and ultimately will have to forgo those projects (Myers & Majiluf, 1984; Hart, 1995a, de Meza & Webb, 1995).

Clearly, asymmetries of information are prevalent in many types of agency relationships, leading to a host of agency problems and some innovative ways in which to curtail their potentially negative effects.

2.2.2(C) - The Role of Contracts

Since an agency relationship consists of individuals with differing preferences trying to engage in co-operative effort, contracts are employed to limit the agency costs which may arise. These agency costs are as real as other costs and their cost level “depends among other things on statutory and common law and human ingenuity in devising contracts.” (Jensen & Meckling, 1976, p.357). These contracts (written or unwritten) specify rights of the agent, performance criteria on which the agents are evaluated, and the payoff functions they face (Fama & Jensen, 1983). Contracts, therefore, try to capture most of the probable scenarios (and problems) which can likely arise in an agency relationship so that future problems can be avoided. Because principal-agent theory attempts to determine the most efficient contract governing the principal-agent relationship, contracts are the unit of analysis (Fama & Jensen, 1983; Jensen & Meckling, 1976; Hart, 1995a). These central contracts in any organisation will identify the nature of the residual claims and the allocation of the decision process steps among the agents. Any organisation is therefore a nexus of contracts, written and unwritten (Fama & Jensen, 1983).

2.2.2(D) - The Causes of Agency Problems

Unfortunately, contracts can not be costlessly written and enforced, and this leads to agency problems in the firm. Due to the costs of structuring, bonding and monitoring contracts among agents and principals with conflicting interests, the cost of their full formulation and enforcement may exceed their benefits (Fama & Jensen, 1983). As Pettit & Singer (1985) wisely noted: “the firm’s nonhuman assets can be secured relatively easily through simple contracts. This is more difficult for the firm’s human

assets.” (p.50) This means that the problems associated with asymmetries of information can not be fully contracted away and, therefore, agency problems arise. Conversely, if contracts, and their enforcement, were costless, agency problems would be negligible or non-existent. Although the standard principal-agent model assumes that contracting is costless if both parties can observe all the variables, the transaction cost literature (introduced later in this chapter) shows that contracts are costly to formulate (Hart, 1995a).

The inability to safely contract asymmetric information problems in the agency relationship leads to two main causes of agency problems: (1) conflicts in alignment and verification of goals, and (2) conflicts in risk sharing.

2.2.2(D)(i) - Conflicts in Alignment and Verification of Goals

The first major cause of agency problems is that given an agent’s self-interest, the agent may or may not behave as was agreed in the contract. This problem arises when:

- (1) the desires and goals of the agent and principal differ, and
- (2) if is difficult or too costly for the principal to verify what the agent is actually doing.

The former is specifically significant in the entrepreneurial context when an entrepreneur (the agent) decreases his/her ownership claim by bringing in outside equity investors (the principals). This may reduce the entrepreneur’s incentive to devote significant effort to creative activities and finding profitable new projects (Jensen & Meckling, 1976). The latter may also be accentuated in the small firm because it inherently has an added

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flexibility which makes it easier to substitute one asset for another, which may change the risk of the firm and make it more difficult for the principal to verify what the agent is doing (Pettit & Singer, 1985).

2.2.2(D)(ii) - Conflicts in Risk Sharing

The second major cause of agency problems is that although the principal and agent have different attitudes toward risk, they must share the risk. This means that due to their different risk preferences, each may prefer different actions (Eisenhardt, 1989).

2.2.2(E) - Two Particular Agency Problems

In the formal literature, these two conflicts lead to two particular agency problems: moral hazard and adverse selection.

2.2.2(E)(i) - Moral Hazard

Moral hazard occurs when the agent does not put forth the effort originally agreed upon in the contract (Fama & Jensen, 1983). Furthermore, since the agent only benefits from returns when the firm is making profit, rather than in a bankrupt state, the agent may decide to take on risky investments of given mean return instead of safer investments (Jensen & Meckling, 1976). The agent may also have personal incentives to withhold or modify crucial information, even though disclosing such information is necessary for mutual cooperation with the principal (Cable & Shane, 1997). Pettit and Singer (1985) claim that this problem may be more critical in a smaller firm since the management team is usually dominated by one individual. In such situations, the behaviour of the individual influences the nature of the small firm. They contend that since these

individuals are often characterised as being zealous champions of a product or service they believe in, they are more willing to take risks than managers of larger firms, assuming that the structure of the smaller firms allows a degree of risk taking. “Under these circumstances, less risk-averse managers will tend to be concentrated in smaller businesses, with the effect that those businesses will be more risky.” (Pettit & Singer, 1985, p.50)

2.2.2(E)(ii) - Adverse Selection

Adverse selection refers to the misrepresentation by the agent as to his/her abilities. The agent may falsely claim to have certain skills when he or she is hired. Adverse selection arises because the principal can not completely observe and verify these skills or abilities when the agent is hired or whilst in his/her employment.

Moral hazard and adverse selection are the two primary agency problems which arise from situations where a contract can not effectively capture the risks associated with asymmetric information in a principal-agent relationship. The two ways of dealing with these problems will now be addressed.

2.2.3 - Two Approaches to Deal with Agency Problems

The literature has identified two primary approaches (to investor-firm relations) which can shed light on how to decrease agency problems in a firm. The first, the principal-agent approach, is essentially the 'classical' agency theory and is primarily concerned with determining the optimal contract, between principal and agent (Hart, 1995a; Jensen & Meckling, 1976). To formulate such an optimal contract, the approach advocates pre-investment screening and due diligence of the firm so that asymmetries of information decrease and a better contract can be negotiated. However, the second approach, the incomplete contracts approach, states that contracts are always incomplete, therefore it is really the ex post allocation of control which is more important, rather than ex ante screening and contract writing (Hart, 1995a, 1995b). Although both theoretical approaches advocate risk reduction at each stage of the investment process, each places greater emphasis on different stages of this process.

These two theoretical approaches identified in the literature will now be addressed more fully.

2.2.3(A) - The Principal-Agent Approach

When dealing with the potential effects of moral hazard and/or adverse selection, the principal can limit divergences from his/her own interests by incurring screening costs to reduce the asymmetries of information between the principal and agent. More comprehensive contracts can then be formulated to influence the agent's behaviour (Pettit & Singer, 1985). These contracts can either be behaviour- or outcome-based. In the former, the appropriate behaviours of the agent are stipulated to limit any devious behaviour by the agent and the principal will incur monitoring costs (behaviour-based

observation) to ensure the agent behaves as was agreed upon (Sappington, 1991). Such contracts are feasible if the principal can observe and verify the agent's behaviour. However, in the latter, the principal may not be able to observe the agent (making the behaviour-based contract not feasible) and so the principal will establish appropriate contractual incentives for the agent, reliant upon the agent's performance (outcome-based contracting) (Jensen & Meckling, 1976). These are the two main ways the principal-agent approach aims to limit (contractually) an agent's ability to pursue his/her own agenda and so provide important checks and balances on the agent's behaviour. Although the specific structures of the contracts (i.e. preferred stock, convertible debt, etc.), and the situations in which certain structures are more preferable (i.e. see: Aghion & Bolton, 1992; Berglof, 1994; Ravid & Spiegel, 1997), will not be reviewed in this research study, the general characteristics and applications of the two types of contracts will be examined.

2.2.3(A)(i) - Behaviour-Based Observation

Control of agency problems in the decision process is important when the agent who initiates important decisions does not bear a major share of the wealth effects of those decisions. Without effective contractual control and monitoring, such agents may take decisions more in their own interest than those of the principals (Fama & Jensen, 1983). For instance, providing a constant fee for the agent might be quite poor since it leaves the agent indifferent as to which decision to choose (Ross, 1974). One way of monitoring this moral hazard problem is to monitor/observe the behaviour of the agents to ensure the agent's effort exerted does not deviate from the effort agreed upon in the contract, although too much monitoring may also have the effect of demotivating the agent. Since

moral hazard prevents direct information transfer, the ability to observe and monitor the actions ('which speak louder than words') of agents/entrepreneurs may provide the principals with information ('signals') on the quality of their firms (Leland & Pyle, 1977, Ross, 1977).

However, in this sense monitoring refers to more than just measuring or observing the behaviour of the agent, it also includes efforts to 'control' the behaviour of the agent, primarily to align it with what was agreed contractually (Jensen & Meckling, 1976; Sappington, 1991). One way may be to control the agent through budget restrictions, operating rules, salaries, and hierarchical governance (Eisenhardt, 1989; Landstrom, 1992). Another way may be to invest in information systems (i.e. surveillance mechanisms) such as budget systems, reporting procedures, board of directors, and additional layers of management (Eisenhardt, 1989) to ensure the agent follows the behaviours agreed upon contractually. The board of directors, for instance, oversees the agents and has to approve all major decisions made by the agents before implementation, and so provides an important separation of decisions and control in a firm (Hart, 1995b, Fama & Jensen, 1983). Furthermore, if the principals (the equity holders) are not pleased with the performance of the board of directors, they may have the power to remove and replace them (Hart, 1995a).

Unfortunately, these monitoring activities are not without their costs. When purchasing equity in a firm, prospective minority shareholders will realise that the price they pay for shares will reflect the monitoring costs that control the divergence of interests between them and the agents (Jensen & Meckling, 1976). In small firms, these costs may be

even relatively greater since in these firms it is often difficult to differentiate between the owner's personal finances and those of the firm, and also because these costs are a greater fixed cost element to the firm (Pettit & Singer, 1985; Harrison & Mason, 1991b). Clearly, when the risks of a firm increase, the principal is less able to infer from monitoring whether the principal-agent contract has been breached, and so the costs of monitoring rise and the value of the firm (or project) decreases (Audretsch, 1995).

2.2.3(A)(ii) - Outcome-Based Contracting

A second option for controlling agency problems may be for the principal to reward the agent based on outcomes (i.e. profitability), and thus use this as a surrogate measure for behaviour when the agent's behaviour can not be observed (Fama & Jensen, 1983; Hart 1995a). This may be done through the use of outcome-oriented contracts (i.e. commissions, stock options, transfer of property rights, market governance). Eisenhardt (1989) sums up the essence of these arrangements:

“such an outcome-based contract motivates behaviour by coalignment of the agent's preferences with those of the principal, but at the price of transferring risk to the agent. The issue of risk arises because outcomes are only partly a function of behaviours. Government policies, economic climate, competitor actions, technological change, and so on, may cause uncontrollable variations in outcomes (...) When outcome uncertainty is low, the costs of shifting risk to the agent are low and outcome-based contracts are attractive.” (p.61)

Although it might seem attractive to have the risks and uncertainty now borne by the agents and so have a reduction in the cost of monitoring, there are certain difficulties with outcome-oriented contracts. One problem is that choosing the optimal fee schedule is a complex procedure for the principal. Since the agent can choose the action, the principal must choose a fee schedule that more appropriately motivates the agent in a

manner advantageous to the principal (Ross, 1974) and this decision will involve ex ante information gathering such as screening (Anderlini & Felli, 1994). And even if the principal is able to solve this problem accurately, the resulting fee schedule would be dependent on the payoff structure. If the agency relationship is ongoing, each new problem would necessitate a new fee schedule and this instability would certainly result in significant computation costs for the principal (Ross, 1974).

Both options for controlling agency costs have their advantages and disadvantages, although both involve information gathering and contract formulation. This trade-off between the costs of measuring behaviour and the costs of measuring outcomes and transferring risk to the agent is the heart of principal-agent theory (Eisenhardt, 1989). However, most research studies treat the control of agency costs as a dichotomy: behaviour versus outcome. Nevertheless, controlling these costs can vary on a continuum between behaviour and outcome contracts (Eisenhardt, 1989). A number of different scenarios increase/decrease the relative attraction of each approach, some of these are: the availability and measurability of outcome measures, the principal's knowledge of the transformation process, programmability of the task, relaxing the assumption of potential inherent principal-agent goal conflict, and relaxing the assumption of risk-averse agents (Ouchi, 1977, Landstrom, 1992, Eisenhardt, 1989).

On a side note, it should be re-emphasised that the agency risk control options for unobservable agent behaviour have related primarily to the principal-agent relationship where the principal is an equity holder in the firm. However, in the debt financing scenario there are three further options the principal may wish to employ, in addition to

the two options already listed. First, the principal can enact covenants with the debt loan which have the ability to transfer control from low to high productivity agents. This leaves the agents in control in high earning states and the creditors (the principal) in low earnings states (Aghion & Bolton, 1992). Second, the principal can attempt to compensate for agency costs by charging higher interest rates on debt. Unfortunately, this may prove to be counterproductive when the higher interest rates increase the range of states over which firms are bankrupt, forcing agents with low risk firms out of the market (adverse selection) and increasing moral hazard problems. As a result, higher interest rates may yield lower returns to lenders (principals) of debt finance (de Meza & Webb, 1995). Third, the agent's ability to supply collateral for debt finance may enable principals (the debt lenders) to reduce their agency costs. However, this may result in agents with low-quality firms and collateral receiving loans whereas agents with high-quality firms and no collateral are unable to do so. Thus, the assumption that low-risk agents are able to raise enough collateral to distinguish themselves from high-risk agents may not always hold (Binks et al., 1992; Bester, 1985).

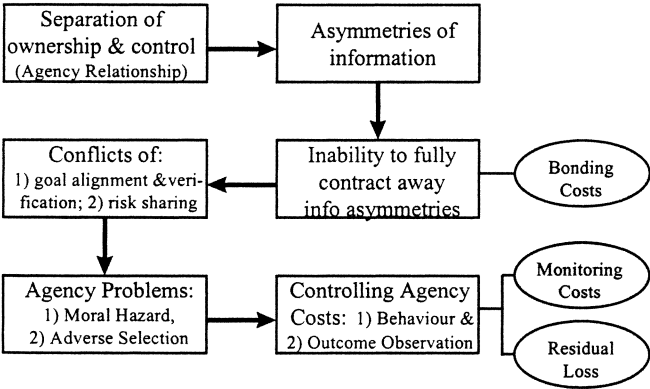
2.2.3(A)(iii) - Total Agency Costs with the Principal-Agent Approach

As the aforementioned has shown, there are a number of unavoidable agency costs arising from the asymmetric information in the principal-agent approach. To summarise, there are three main agency costs (Jensen & Meckling, 1976):

- 1) Monitoring costs
- 2) Bonding costs
- 3) Residual loss

Monitoring costs result from trying to observe and control the actions of the agent so that they are aligned with what was contractually agreed upon, whilst bonding costs arise from trying to form contracts (either behaviour- or outcome-based) to control the agent's behaviour. One last cost, which has not yet been mentioned, is residual loss. This may be described as the money equivalent of the reduction in welfare experienced by the principal due to the divergence of interests and preferred actions between the principal and agent (Jensen & Meckling, 1976). An overview of the agency relationship is given in Chart 2.1 to show where these agency costs arise in the relationship.

Chart 2.1 - Implications of the Agency Relationship



Unfortunately, these costs are unavoidable in the agency relationship and are borne by the principal who attempts to minimise them as well as possible. However, the principal will only incur these costs if the benefits of the agency relationship (and thus the origin of the costs) are enough to outweigh them (Jensen & Meckling, 1976). The magnitude of these costs will vary between firms and will increase as the financing moves from “internal to external sources, from debt to equity, from secured to unsecured debt, from

short-term to long-term, and from private placement to public markets.” (Harrison & Mason, 1991b, p.271)

The principal-agent stream of research is clearly concerned with determining the optimal contract, behaviour versus outcome, between the principal and agent whilst placing more emphasis on ex ante, rather than on ex post, control of agency problems. In contrast to this approach, the incomplete contracts approach will now be reviewed to show how more emphasis on ex post control, rather than on ex ante contractual control, may also limit agency risks. Although both approaches advocate risk reduction at every stage of the investment process, each places more emphasis, comparatively, on different stages.

2.2.3(B) - The Incomplete Contracts Approach

In the incomplete contracts approach contracts are not assumed to be costless, as in the principal-agent approach, and thus it assumes that contracts will always be incomplete and therefore the ex post allocation of power is what really matters. This incompleteness of contracts will now be more fully explained by reviewing three of its causes: transaction costs, bounded rationality, and asymmetric information (Spier, 1992, Hart, 1995a). Then, Hart’s (1995a) ex post allocation of control approach will be used to apply the notion of power.

2.2.3(B)(i) - Causes of Contractual Incompleteness

The standard principal-agent model (reviewed thus far) assumes that it is costless to write a comprehensive contract. Hart (1995a) states:

“One important factor missing from the principal-agent view is the recognition that writing a (good) contract is itself costly (...) Agency theory ascribes all contracting costs to the cost of observing variables. If a variable is observable by both parties, then the theory assumes that it can be contracted on costlessly. But this is not the same as supposing that it is costly to write a contract.” (p.21)

However, in reality contracting costs may be sizeable. One explanation for incomplete contracts is the transaction cost approach which argues that the costs of contracting on an unlikely event may well outweigh the benefits (Spier, 1992; Hart & Holmstrom, 1987). The transaction cost literature lists four *ex ante* costs that are particularly important. First, the cost of thinking about (and planning how to deal with) all the different eventualities that may arise during the contractual relationship. Second, the cost of negotiating with others about these plans. Third, it may be very difficult and costly to write a contract which, when it is violated and in dispute, is clearly verifiable by a third party - such as a judge (Hart, 1995b, Hart & Moore, 1988; Townsend, 1979; Anderlini & Felli, 1994). Fourth, there are *ex post* legal costs incurred, in addition to the *ex ante* writing costs, in actually having this contract verified and enforced by a third party (Spier, 1992; Sappington, 1991). In fact, because exotic contracts are hard to evaluate and enforce, contracts in reality tend to be simpler and less sensitive to environmental differences (Hart & Holmstrom, 1987).

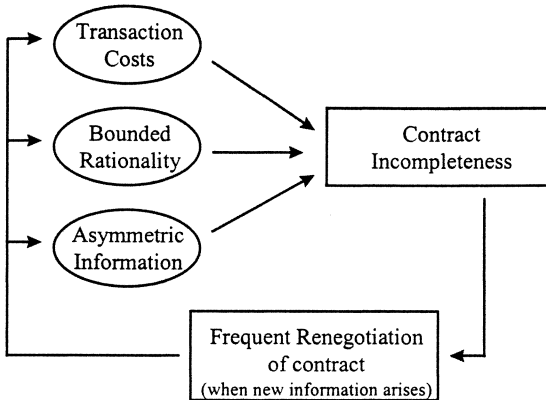
With these transaction costs, it is troublesome to write a comprehensive contract. The resulting contract will, therefore, more likely be incomplete and future provisions will only be partly specified or not at all (Spier, 1992). The parties may exclude many possible scenarios, preferring to take the point of view that it may be better to wait and see what happens than to anticipate and include unlikely contingencies. Of course, other contingencies will also have been omitted because they will not have been anticipated by

the parties (Hart & Holmstrom, 1987). As a result, these contracts will have to be renegotiated as new information arises or resolved through legal intervention. (Hart, 1995b; Spier, 1992).

A second explanation for incomplete contracts is bounded rationality, which argues that agents either have only limited ability to evaluate elaborate contingencies or are not able to foresee unlikely contingencies (Spier, 1992; Hart, 1995a).

A third explanation for incomplete contracts is asymmetric information. This approach argues that a person may refrain from including a certain clause in a contract so as to signal his/her type (Spier, 1992). Thus, under full information optimal contracts may be as elaborate as standard theory predicts, but under asymmetric information they may be incomplete or overly simple. One such example is given by an athlete negotiating a contract with a particular team. "The athlete's agent may advise him to refrain from asking for an injury clause, because the team manager would infer from such a request that the athlete is more accident prone and would make the terms of the contract worse." (Spier, 1992, p.433) Such signalling concerns can make complete contracts relatively more expensive, especially when the worries are unjustified, and so an individual may forgo completeness for the less expensive option. This problem can occur in the initial negotiations, but also at the re-negotiation stage. In this latter stage, each party may fear that the other party will 'hold-up' the relationship, and so each party is more likely to make investments that are relatively non-specific, which has the effect of making the contracts even more ambiguous and incomplete and, thus, more prone to being renegotiated again in the future (Hart, 1995a).

Chart 2.2 - Overview of the Causes of Contract Incompleteness



Due to these three explanations, the incompleteness of the contracts will lead to renegotiation when new information arises. When this happens, these three causes of incompleteness may operate once again. However, the contracting parties can make up for this incompleteness to a limited degree by including mechanisms in the original contract for revising its terms when new information arises. But with such an option to rescind the original contract and write a new one, severe limitations are placed on the renegotiations and revisions that can take place (Hart & Holmstrom, 1987; Hart & Moore, 1988). Although these aforementioned explanations place much emphasis on contract formulation, and their subsequent incompleteness, it pays less attention to the idea that power is important and the implementation of organisational arrangements to allocate that power. This will now be addressed.

2.2.3(B)(ii) - Importance of the Ex Post Allocation of Control

If it was costless to write a contract, then an optimal contract might be written which was fully comprehensive of all future scenarios. Such a contract “would lay down each person’s obligations in every conceivable eventuality and impose large penalties if anyone fails to live up to them.” (Hart, 1995a, p.4) In such a situation, power would be irrelevant because the contract would not be breached or renegotiated. Here power refers approximately to the position of each party if the other party does not perform as agreed, such as when one of the parties behaves opportunistically (Hart, 1995a). However, Oliver Hart contends that because contracts are not complete and can not specify each party’s obligations in every contingency, it is the ex post allocation of power and control that matters (Hart & Holmstrom, 1987; Hart, 1995a, 1995b; Hart & Moore, 1990, 1994). Since contracts can not be written on returns, they can only be written on assets (Hart & Holmstrom, 1987; Hart, 1995a). Thus, in his property rights approach, Hart states that one source of this control may be possession of a firm’s residual control rights (i.e. assets) (Hart & Moore, 1990, 1994; Grossman & Hart, 1986). Indeed, the assignment of such rights can have important implications for the value and performance of the agency relationship (Sappington, 1991). Hart & Moore (1990) explained the importance of asset-control by reviewing a theory on the optimal assignment of assets in which “an agent is more likely to own an asset if his action is sensitive to whether he has access to the asset and is important in the generation of surplus.” (p.1149) So, the underlying idea is that a key right provided by ownership is the option to exclude use of the assets to certain people. This authority over the assets will, thus, translate into authority over people (Hart & Moore, 1990). It is implied, therefore, that it is the potential loss of control benefits which are the entrepreneur’s incentive to behave accordingly (de Meza

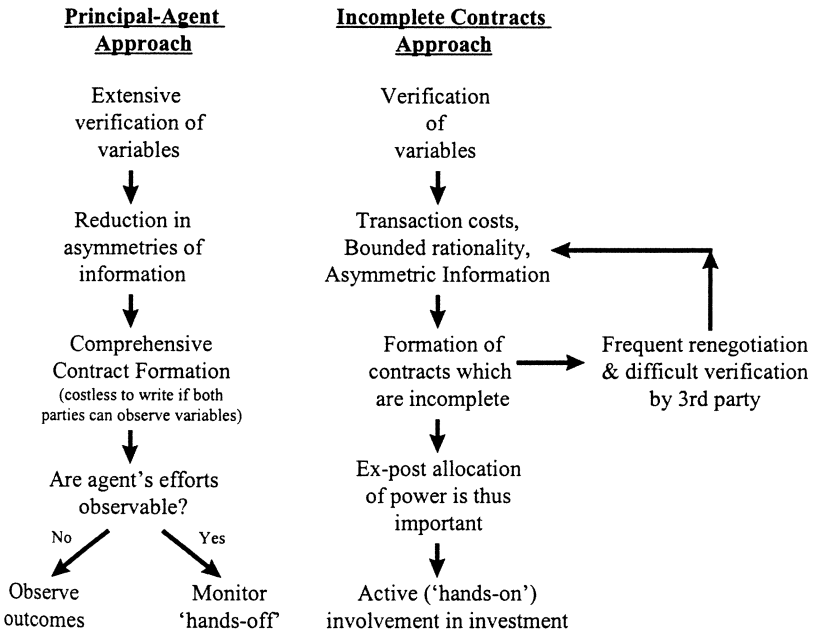
& Webb, 1995) and the power to have control in different situations is what really matters. In an equity investment, for example, the protection (and source of power) that the equity holders have is their vote to remove and replace those running the firm (Hart, 1995a). This is what gives them a degree of control over the firm's assets.

However, because Hart (1995a) uses large established firms with multiple shareholders and assets as the basis for his analysis, he is able to advocate the possession of a firm's assets as a means to acquiring ex post control. But in the small firm environment (especially with small start-up entrepreneurial firms), the possession of a firm's assets may be meaningless because these firms are often highly leveraged and have no real assets. Thus, this research would like to propose that in the high-risk small-firm environment, the best way to gain ex post control and exert power over the investment may, instead, be through active involvement in the investment.

Summary

To deal with the agency problems of the principal-agent relationship, the literature suggests two main theoretical approaches, which are reviewed in the Chart 2.3.

Chart 2.3 - An Over-Simplified Summary of the Areas Particularly Emphasised by the Two Approaches of Dealing with Agency Problems in the Small Firm Investment Context



Although both approaches aim to limit agency costs at each stage of the investment, the over-simplified Chart 2.3 aims to stress that the principal-agent approach does so slightly more ex ante, whilst the incomplete contracts approach does so slightly more ex post. Thus, the principal-agent approach places more emphasis on the formulation of an optimal contract, behaviour versus outcome, between the principal and the agent. To form such an optimal contract, which considers foreseeable future contingencies, the use

of pre-contract screening and due diligence is especially advocated to reduce asymmetries of information between the principal and agent. With this approach, the contract is the unit of analysis (Jensen & Meckling, 1976). The second, the incomplete contracts approach, is based on Oliver Hart's (1995a, 1995b) work and concludes that contracts are always incomplete and it is, therefore, the ex-post allocation of control that matters when investing in a firm. The best way to attain this in the small firm environment may be through active involvement in the investment.

2.2.4 - Application of the Two Theoretical Approaches of Dealing With Agency Problems to the Small Firm Funding Environment of BAs and VCs

Faced with these two choices of dealing with agency problems, the question arises:

Why might two investors in the same environment prefer to employ different approaches to control agency problems?

This question will be addressed in the rest of this research study by analysing a 'real life' example of two different investors who perform similar functions in the same environment, although each utilises a different one of these approaches to control agency risks. This research proposes that one such an example may be the analysis of BAs and VCs, both of whom are small firm finance providers in a high risk environment where agency problems can be a serious concern.

This research study will, therefore, undertake an overview of the structural and agency pressure differences between BAs and VCs to add insight into why BAs and VCs may employ different approaches to limiting agency risks. In particular, that BAs may tend to

follow the contracts incompleteness approach when investing in high-risk small firms, whilst VCs may tend to follow the principal-agent approach. Then eight research hypotheses will be generated in Chapter 2.3 based on the two approaches and tested empirically in Chapters 4-6.

However, before the structural and agency risk differences between BAs and VCs are analysed and the research hypothesis are generated, an overview will be conducted of how these approaches may be influenced by the high-risk small-firm environment in which BAs and VCs operate.

2.2.4(A) - Uncertainty and Limited Control of Outcomes

In addition to high levels of asymmetric information and high agency costs, small start-up firms operate in a high-risk environment in which the outcomes are uncertain and may only be partly affected by an agent's efforts. Since there is usually a long time lag between the principal's investment and the result, a wide dispersion of outcomes, and a limited set of observations for the principal, it is not surprising that there is so much uncertainty about outcomes in a small firm. This uncertainty and uncontrollability of outcomes for small entrepreneurial firms is echoed by Fried and Hisrich (1989) who state:

“venture capital portfolios, even of highly successful partnerships, have historically shown low or even negative returns in their first two or three years ('the lemons come home early' is an industry cliché). As a result, the performance of a partnership is very hard to measure until most of its investments have been liquidated, often six to eight years after the partnership was created.” (p.264)

Many new ventures are launched despite these numerous and often consequential uncertainties which can only be resolved by going forward. However, since most start-up firms only have limited resources, unexpected snags can quickly exhaust available funding and lead to bankruptcy (Gorman & Sahlman, 1989). Clearly, in order to control the potentially high agency costs in small firms (which usually lack collateral), the principal-agent theory's outcome-based approach would not be an effective way to monitor the actions of the agent.

2.2.4(B) - Superiority of Behaviour-Based Observation Approaches

When outcomes are only partially dependent upon the behaviour of the agent and the environment is highly volatile, it is more prudent for the principal to limit his/her agency risks by monitoring the agent's behaviour (Sapienza, 1992; Norton, 1995), either through contracts and passive monitoring (i.e. an option advocated by the principal-agent approach), or through the principal's active involvement (i.e. a more incomplete contracts approach). In the former approach, for example, the principal may spend effort on selecting an agent (through screening and due diligence) who has the right qualifications (to be able to behave in a desired manner), form a contract, and then monitor that agent to ensure that the contract is not violated. However, in such a situation, the agent's familiarity with the industry, personal characteristics, and track record may be used by the principal as, at best, partial predictors of future success. This may introduce the problem of adverse selection as the agent attempts to present these qualities in a biased manner (Wright & Robbie, 1996). In the latter approach, the fixed cost element of a monitoring system (or active involvement) in a small firm is an

additional cost concern for the principal and if these costs are too high, the principal may invest his/her finances elsewhere (Pettit & Singer, 1985).

However, in such highly volatile start-up situations where the agency costs can be sizeable and the observation of behaviour is the best approach, it is also in the best interest of the agent to decrease the asymmetries of information (and the concern of agency risk) for the principal. Doing so would procure a less restrictive environment in which the agent can operate and will also keep the principal in the firm. This helps us explain “why accounting reports would be provided voluntarily to creditors and stockholders, and why independent auditors would be engaged by management to testify to the accuracy and correctness of such reports.” (Jensen & Meckling, 1976, p.306) Thus, an agent may establish (and agree upon with the principal) some up-front rules of procedure and behaviour to ‘signal’ competence so as to ease the principal’s conscience and decrease the level of monitoring that the agent would otherwise have to endure. A more detailed discussion of how agents may wish to decrease the level of agency risk for the principal will be discussed in the following section.

2.2.5- Differences Between BAs and VCs Which Influence Their Choice of Approach to Deal With Agency Problems

Since the ventures BAs and VCs finance are usually only backed by intangible assets and trust in the ethics and abilities of the entrepreneurial team (Norton, 1995), the agency costs which could arise may be significant. This section will review the structural and agency pressure differences between BAs and VCs to show why these two investor types may wish to use different approaches to control these agency problems.

2.2.5(A) - Structural Differences Between the Investor Types

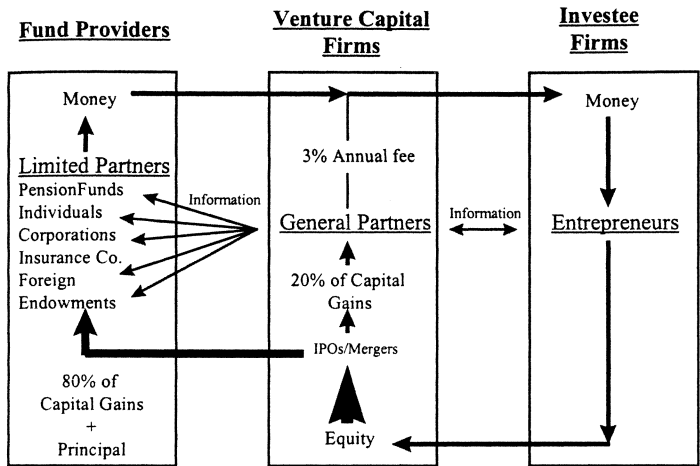
This structural analysis of the investor types will show that due to the agency concerns of their fund providers (i.e. the VCs' principals), VCs must demonstrate competent behaviour to them from the very start of their investment process in small investee firms. This will involve competent screening, due diligence and contract formulation before investment is placed in risky portfolio firms (i.e. the principal-agent approach is followed). Conversely, since BAs invest their own money, they are not under such pressure to behave professionally and may wish to control agency problems more ex post through active involvement (i.e. the incomplete contracts approach). This structural analysis will show that VCs are more likely to utilise the principal-agent approach to deal with agency problems in their investment process of funding portfolio firms to demonstrate (i.e. signal) competent behaviour (ex ante investment) to their fund providers.

2.2.5(A)(i) - Diversity of Investor Base Difference

The structural difference between BAs and VCs is the difference in the diversity of their respective investor bases. BAs are accountable only to themselves because they invest in entrepreneurial ventures with their own money. VCs, however, raise finance from outside fund providers (such as pension funds and other institutional investors) on a competitive basis and then invest those funds in entrepreneurial ventures. The venture capitalist's primary aim is to gain financial returns from their investment portfolio so they can repay the original sum to their fund providers and take a percentage of the profit for their own income. In fact, Bygrave & Sahlman (1988) found that, in addition to their original investment, fund providers receive 80% of the capital gains earned by the fund,

whilst venture capitalists earn the balance of the capital gains (20%) plus their 2-3% annual management fee. Chart 2.4 clarifies this arrangement.

Chart 2.4 - Flows of Venture Capital

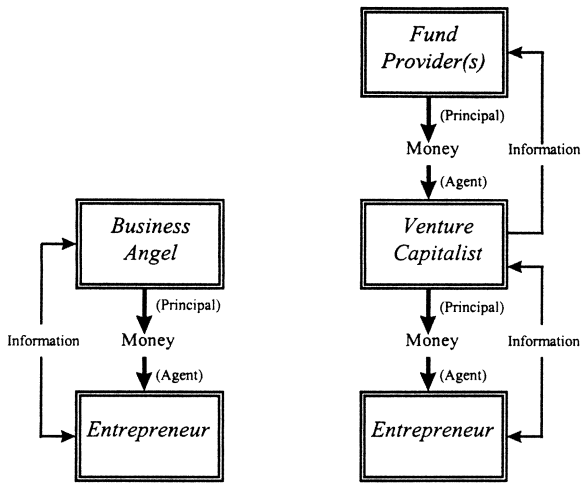


Source: Bygrave & Shulman (1988)

Clearly, VCs have an additional level of the agency relationship to deal with that BAs do not: that of the fund providers. In this sense, the VCs and BAs are both principals to the entrepreneur (agent) in whose venture they have invested, whilst venture capitalists also assume the role of agent in respect to their fund providers (the principals) (see Chart 2.5). This has ignited an academic argument between Murray (1991) and Lloyd (1989). Murray believes that the VC's customers are the fund providers who provide the money which is invested in entrepreneurial firms. He classifies the investee firms as 'raw material' and claims that VCs must demonstrate to the fund providers the ability to add value to the funds invested. On the other hand, Lloyd believes that the customers are those entrepreneurial firms in which the investments are made and the fund providers are

seen as suppliers of the ‘raw material’ (Duggins, 1993). Although this research study will not pick sides, it will lean towards the former approach as a means of explaining the differences between BAs and VCs in their approaches to dealing with agency risks.

Chart 2.5 - A Comparison of BA and VC Agency Relationships



The VC’s agency relationships, therefore, force the VC to wear two hats and contend with both the supplier and the user of finance in the uncertain and volatile environment of entrepreneurial investing. In a sense, the focus of this research study will be to ascertain how this additional agency relationship for the VC (with its fund providers) forces the VC to choose a different approach to deal with potential agency problems from that taken by BAs. This will inevitably change its investment practices from those of the less-restricted (and less accountable) BA.

2.2.5(A)(ii) - VC as an Intermediary

In the financing context, VCs take on an intermediary role between the fund providers and the entrepreneurial firms. But why should fund providers use an intermediary to invest in entrepreneurial ventures, rather than invest directly?

Leland & Pyle (1977) contend, in their signalling model of intermediation, that information asymmetries are the primary reason for why intermediaries exist. They state that information which is not publicly available can only be obtained at a cost. This information might then be sold to lenders, and with some economies of scale, organisations could be formed which collect and sell information on particular asset classes. However, there are two problems which would deter these firms from selling information directly to investors (Leland & Pyle, 1977). First, since the purchasers of information are able to resell the information, without diminishing its usefulness to them, the original firm which gathered the information may only collect a fraction of what the buyers in totality would be willing to pay for it. This clearly is a free-rider problem (Diamond, 1984). Second, the information must be credible in order to be saleable. Thus, it may be difficult (or impossible) for potential buyers to determine whether the information is good or bad. The market price of information will, therefore, reflect the average quality. If low quality suppliers of information enter the market, the average price will decline and high quality suppliers will no longer be able to afford to expend sizeable resources to collect good information.

However, both of these problems will disappear if the firm collecting the information becomes an intermediary and buys and holds assets based on the specialised information

it collects (Leland & Pyle, 1977). The costs of the information gathering will then be covered by the returns received from its investment portfolio. One major hurdle which the intermediary might face is that of convincing potential buyers that its information is of a high quality and, therefore, that investment in the intermediary is justified. This problem can be overcome by signalling (Leland & Pyle, 1977). The intermediary (VC) must signal *ex ante* to the buyers (fund providers) the quality of its information and the investments it has made based upon that information. Since investment outcomes are often still years away and venture capital funds are raised in a very competitive market, responsible behaviour on the VC's part may be the best way to signal to their fund providers that they are a high-quality organisation. This responsible behaviour will probably consist of employing the principal-agent approach to deal with agency problems since it emphasises screening and comprehensive contract formulation *ex ante* investment more so than the incomplete contracts approach. This certainly looks like a more responsible approach than conducting less screening before investment and controlling agency problems more after the money has been invested. Of course, fund providers must still guard against false signalling and invest in screening of the VC (Sahlman, 1990; Robbie et al., 1997).

In addition to using competent behaviour as a signal *ex ante* that the intermediary is high quality, Diamond (1984) states that diversification (within the financial intermediary) is another factor which may attract investment. By diversifying investments across a large number of fund providers, the intermediary can utilise economies of scale in screening and monitoring to reduce the per-investor cost below what each investor would otherwise incur. But, since it is often difficult to determine in a single investment whether poor

performance is due to poor management or misfortune, another advantage of diversification is that the random elements of unique risk should cancel out in a large portfolio and allow the intermediary to attain the suitable market rate of return (Diamond, 1984; Bhattacharya & Thakor, 1993). Alternatively, the acquisition of investments spread out over time may be another way in which an intermediary can reduce the investment portfolio's random risks for the benefit of its principal investors. Sustained poor performance may, thus, be more indicative of the intermediary's management competence rather than a single failure (Diamond, 1984; Mayer, 1986). An intermediary's reputation may, therefore, be best established in the short-term through close monitoring by the principals (i.e. showing responsible behaviour, as aforementioned) and thereafter by its long-term portfolio performance.

So, responsible behaviour and diversification are the two ways in which intermediaries can signal their quality and benefits, at least in the short-term. Indeed, such benefits can be sizeable. King & Levine (1993) found that the size and efficiency of financial intermediaries have reliable linkages to national economic growth and development rates. In the next section we will address how venture capitalists (i.e. intermediaries) signal these qualities to their fund providers, and how fund providers monitor the venture capitalists. This is an area of analysis of particular importance since it has almost been neglected by academic researchers (Robbie et al., 1997).

Before continuing the analysis of intermediaries (i.e. VCs) one more question must be addressed: Why don't business angels also use intermediaries like fund providers? Mason (1996a) believes that this does not occur primarily because the creation of pooled

investment vehicles (intermediaries) is not attractive to BAs for two reasons. First, BAs want to use their own judgements when making investment decisions and do not want to delegate this task to fund managers. Second, the presence of intermediaries does not allow BAs to contribute to the investee firms through hands-on involvement. The nature of the BA investor, therefore, does not incline it to use intermediary investors.

2.2.5(B) - Agency Pressure Differences Between Investor Types

Unlike BAs, VCs face agency pressures to demonstrate competent investment behaviour as a means of reducing their fund providers' potential agency risk concerns and demonstrating their quality and benefit as an intermediary. One of the many ways VCs may do this is to utilise the principal-agent approach to deal with agency problems ex ante investment. Indeed, the number of different ways in which VCs signal competence, and why the need for such prudent behaviour is increasing, will now be addressed.

2.2.5(B)(i) - Ways in Which VCs Reduce Agency Risk for Their Fund Providers

Since it takes time to realise performance results, VCs hope that ensuring the impeccability of their reputation, qualifications, rules and procedures, will signal competence to fund providers and act as a good indication of future performance. Fried & Hisrich (1989) found that fund providers believe that people, teamwork, performance, discipline, and strategy are the five criteria most important in selecting VC funds to back.

However, once fund providers have selected a VC, the VC will continue to reduce the asymmetries of information. One London VC stated his attempts to reduce asymmetries of information for his fund providers: "we are accountable to our investors only, we

formally see them twice a year, once in person and once at a meeting, so we actually see them quite often really. I also go round to their offices every couple of months.” (VC1, 5/6/96)

Such continual information exchange and signalling is an important part of conveying the VC’s quality to the fund providers. But the cultural gap between VCs and their fund providers (i.e. often pension fund managers) intensifies its importance. Fried & Hisrich (1989) found that:

“pension managers are employees, often life-long, in generally mature companies. They are used to thinking in terms of financial models and efficient markets. They want to deal with ‘hard data’ (...) Venture capitalists on the other hand, deal with small companies, often in very dynamic situations (...) While they do process a lot of hard data, they also view ‘soft’ data as extremely important.” (p.272).

Clearly, the need for VCs to show responsible behaviour is paramount to their survival, making the ability to market themselves effectively to fund providers vital (Murray, 1995a).

Venture capitalists, therefore, must employ a number of ways to signal to (potential and current) fund providers that they behave in a responsible manner. Some of these ways are: maintaining a good reputation for the VC firm, presenting impressive qualifications of the VCs, presenting up-front rules which emphasise to the fund providers that responsible conduct is standard operating procedure, and demonstrating that the most responsible procedures are utilised in choosing investments for the VC fund (i.e. the more ‘competent’ principal-agent approach of emphasising ex ante risk reduction may be

used, rather than the incomplete contracts method which emphasises ex post reduction). A more detailed discussion of each risk reducing signal will now follow.

2.2.5(B)(i)(a) - Reputation of the VC Firm

Venture capital funds must be raised competitively and the primary way for a VC firm to win funding over its competitors is to have a better reputation (Norton, 1995). Reputation depends on many aspects of the firm and is the aggregate culmination of many small procedures, conduct, and performance levels which the VC firm maintains. By demonstrating that the top US VCs were perceived to add more value than other VCs, Rosenstein et al. (1993) found that reputation and performance go hand in hand. Thus, with a better reputation than competitors, a VC can raise more total funds and so earn greater annual management fees, which average around 3% of the raised funds. One VC stated, "It doesn't take a genius to figure out that a 5% return on a \$100 million is better than 20% on \$10 million." (Sapienza et al., 1996, p.466-7) The size of a particular VC is, therefore, often a function of its past investment success and reputation (Gupta & Sapienza, 1992; Zacharakis & Meyer, 1995).

However, building a reputation as a VC by investing in early stage ventures, which themselves are high risk, is difficult and risky. These investments, even if they are successful, will not be realised for 7-10 years after the initial investment. Although returns will be less impressive, financing later-stage deals is less risky and will allow VCs to show good returns, and so build up their reputation and attract more funds. Hence, VCs face a trade off between a high-risk, high-return strategy with a long-term horizon, or a low-risk, low-return strategy with a short-term horizon (Norton, 1995). It

is, thus, not surprising that Gompers (1996) found that young venture capital firms tend to take companies public earlier than older venture capital firms in order to establish a reputation and successfully raise capital for new funds. Since many of the VCs in this study engage in early stage financing (although as a percentage of their funds this will differ per VC), many of them are clearly engaging in a high-risk strategy, which makes signalling responsible behaviour even more vital for building a good reputation.

But even if a VC has a good reputation, easing up on the rules and procedures which initially rendered it a strong reputation is unwise. Since the venture capital community is small and networked, reputation effects echo loudly, and can easily damage that carefully built reputation and may offer new opportunities to a large number of potential replacements in the market (Sapienza & Korsgaard, 1996; Cable & Shane, 1997). Not surprisingly, most venture capitalists interviewed were careful to protect their reputation. When responding to the question “Looking back on your investment, would you have done anything differently?”, not one VC said that they could have improved upon what they did, whilst a significant percentage of BAs claimed there was room for improvement.

2.2.5 (B)(i)(b) - Qualifications of the Venture Capitalists

Another way for VCs to signal competence is to hire individuals for the venture capitalist team who have excellent qualifications and experience in the industry. This may explain why the prospectuses of most venture capital funds list the education levels and industry experience of all their venture capitalists. The fact that so many of them have MBAs from Harvard and other top schools is surely no coincidence. In fact, fund providers

almost always want to see the qualifications of the general partners of the VC before they invest (Fried & Hisrich, 1989). Good qualifications are yet another performance substitute that VCs (and other firms) use to reduce the asymmetries of information and perceived agency risks for their fund providers.

2.2.5(B)(i)(c) - Up-Front Rules

Since portfolio returns will not be realised by the VC for sometimes up to ten years, and thus observation of outcomes by fund providers can not be effectively employed as a means of reducing agency risks, the agreement between the VC and the fund providers is highly complex. To reduce future asymmetries of information and gain financing from fund providers, VCs may establish up-front rules which they will agree to follow in managing the fund providers' money and may even advertise these in their publicity material. In a way, these are self-formulated behaviour-based control mechanisms that VCs employ to ensure to their fund providers (ex ante investment) their competent behaviour (ex post investment). One manager of a BIS that was interviewed summed this up: "venture capitalists invest someone else's money, so they have to work to criteria they have promised their subscribers they are going to work to." (AC1, 25/3/96)

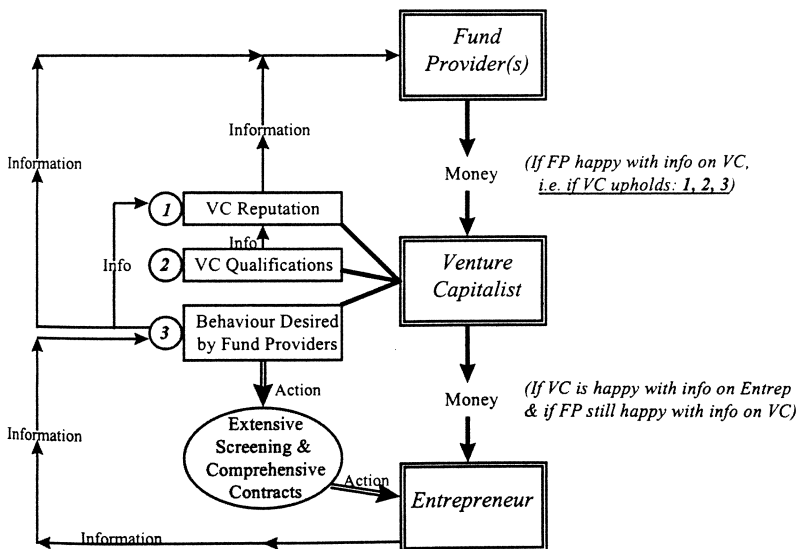
Thus, up-front rules (or promises) translate into bureaucratic rules which promote internal uniformity. This uniform corporate culture, in turn, furthers the reputation of the firm (Kreps, 1991). One VC stated that these rules were vital:

"Venture capitalists are investing money on behalf of pension funds, we get our money by raising funds. They don't want us goofing off and having fun (...) We are not here to enjoy ourselves or satisfy our egos, we are there to make capital gains to benefit pension funds. And that sort of constrains what we do really." (VC15, 19/6/96)

2.2.5(B)(i)(d) - Procedures and Documentation of Investments

To further signal that they behave in a most competent manner, VCs carefully follow procedures (often emanating from the aforementioned up-front rules) and meticulously document decisions to show that they took every care ex ante in picking the best investments (i.e. a more principal-agent approach may be used). This and other signals of VC competence are shown in Chart 2.6, which also clarifies how VCs might use the principal-agent approach (which emphasises ex ante screening and comprehensive contract formulation) to deal with potential agency problems in their investee firms.

Chart 2.6 - Information Signals and Agency Pressures in a Venture Capitalist's Early Investment Process



In a pioneering study, Sahlman (1990) identified a number of procedural mechanisms that VCs and fund providers employ to reduce agency cost concerns. These included: the

specific prohibition of certain acts by the venture capital firm which would cause conflicts of interest, mechanisms to ensure gains are distributed to investors, expenditure of resources to monitor the VC firm, and regular furnishing of specific information to the funds providers by the VC firm. Following such careful procedures in picking investments will also aim to limit a VC's accountability as best they can if the investments fail to realise an adequate return.

In addition, the documentation of decisions is now required by the UK's Financial Services Act of 1986 and enforced by IMRO (Investment Management Regulatory Organisation), a regulatory group for venture capitalists. This ensures that venture capitalists keep accurate records from the time leading up to each of their investment decisions and allows fund providers to check that proper due diligence was conducted.

One VC stated:

"IMRO makes sure that you are running a proper show. I don't think that they are too concerned about the quality of the decision, but the fact that every decision is documented. Everything we do has to be properly recorded and we need proper board minutes for every decision that is reached (...) A business angel deals with his money, so he just makes a decision and does it." (VC5, 6/6/96)

These records proved to be particularly helpful during my interviews since they allowed VCs to remind themselves about the particular investment decisions under discussion.

2.2.5(B)(ii) - Increased Power of Fund Providers in Recent Years Exacerbates

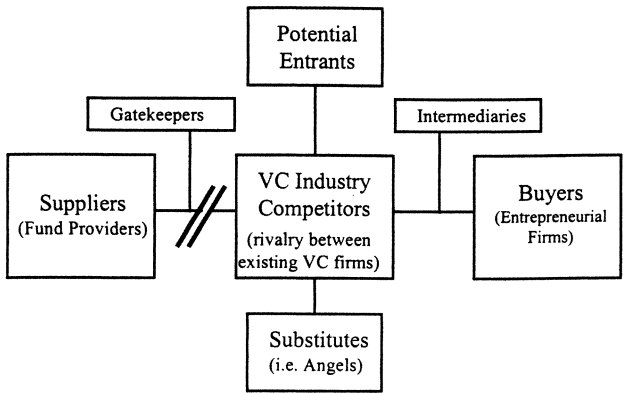
VCs' Pressures

The importance of the ways in which VCs behave to reduce asymmetries of information for fund providers has increased in recent years as the marketplace in which VCs try to

raise money has become more competitive, both in the US and the UK (Robbie et al., 1997; Duggins, 1993; Murray, 1995a; Sapienza, 1992). Indeed, this research found that VCs believed that they had, on average, 8.1 (median: 5) direct VC competitors in their sector. This has made it even more imperative for them to market themselves favourably to suppliers of finance. This means that there is now even more pressure on VCs to use qualified employees, up-front rules, and thorough procedures in the investment process so that fund providers can more easily monitor them, and they can signal their high level of competence.

A number of factors have contributed to this increased power of the fund providers, and forced them to monitor their VCs more closely. First, increased transparency of returns has increased the ability to benchmark the performance of VC firms, rendering fund providers with a much better informed picture than ever before. (Robbie et al., 1997). In fact, fund providers have become sceptical that the industry can pay the price it has promised for the supply of money, creating a huge credibility gap between VCs and fund providers. This has forced many fund providers to 'turn off the tap', as Chart 2.7 shows (Duggins, 1993; Timmons & Sapienza, 1992). The extent of the problem is evident in a recent BVCA survey response in which 74% of respondents agreed with the statement that 'UK venture capitalists had oversold the potential returns of their industry to institutional investors' (Murray, 1995a). Fund providers clearly employ closer scrutiny of performance.

Chart 2.7 - Porter Analysis of the VC Industry



Source:Duggins (1993)

Second, the venture capital industry is increasingly being driven by the requirements of the fund providers whose institutional fund managers are under increasing pressure to achieve better than average short-term results. Since these fund managers often only have a 3-4 year job horizon, this works against them taking a longer term view. With an increasing onus on solvency requirements, fund managers may prefer more liquid investments in traded securities, rather than early stage venture investments in ten year funds (Murray, 1995b; Bank of England, 1996). Third, the rapid internationalisation of the venture capital market has brought an influx of new domestic and foreign competitors. Furthermore, alternative sources of finance for entrepreneurs (such as BAs and strategic alliances) and the increasing sophistication of entrepreneurs has eroded venture capital returns. Both these factors have increased competition for the supply of fund provider’s capital and for high-quality entrepreneurial investments in markets already at or past saturation (Sapienza, 1992; Sapienza et al., 1996). Fourth, fund providers are now also being advised by organisations known as ‘gatekeepers’, who

determine which venture capitalists should be supplied (Robbie et al., 1997). This further increases the pressure on VCs. Fifth, there is an increasing trend towards making a smaller number of investments involving larger amounts. This allows fund providers to focus on a smaller number of relationships, although since they are now also less diversified, it also increases their need to monitor VCs more closely (Robbie et al., 1997). Lastly, fund providers now have a need to develop their investment strategies which has increased the need for more non-standard information from VCs.

VCs have responded to these increasing pressures in a number of ways. First, they have increased their information flows to their funds providers by enhancing their communication and reporting approaches. This has allowed them to place more emphasis on being proactive in providing early warning signals about impending problems and to give interim rates of return and final payout predictions (Bank of England, 1990, Robbie et al., 1997). Currently, VC firms provide about four to six pieces of information to fund providers per year, such as annual reports, semi-annual reports, quarterly reports, semi-annual portfolio evaluations and an annual presentation/visit. As the amount of information required increases, it is expected that there will be a shift away from annual and semi-annual portfolio valuations to more frequent ones (Robbie et al., 1997). Second, as the bargaining power moves to the fund providers, the management fees of the VC are coming under increasing pressure at a time when investee companies are also expecting a greater level of service from their VC investors (Murray, 1995a). Front-end fees (up to 2-3% of committed funds) are thus being eliminated (Bank of England, 1990). Third, VCs have started to place greater emphasis on quicker exits and have, therefore, increased their investments in

management buy-outs (Bank of England, 1990). Fourth, more VCs are beginning to incorporate pre-set performance targets and can stipulate minimum returns to their investors. Many also require capital repayment from entrepreneurs upon realisation of individual investments. Fifth, VCs have increasingly started to promote an image of being more aware and responsive to the needs of fund providers. By placing more emphasis on marketing themselves and their services in the present competitive climate, VCs aim to differentiate themselves in the marketplace (Murray, 1995a; Robbie et al., 1997).

The competitive pressures in the venture capital market have had significant implications. Funds are now no longer available to VCs without a proven track record and as the industry stops growing rapidly, firms can only expand by taking marketshare from each other (Bank of England, 1990, Duggins, 1993). This section showed why behaving competently ex ante investment is vital for VCs (i.e. employing more of a principal-agent approach) and only a personal discretion for BAs.

Summary

Due to their structural and agency pressure differences, it is proposed that BAs and VCs will probably utilise different approaches to deal with potential agency problems in their investee firms. Since VCs have pressure to behave competently for their fund providers right from the start of the investment process, it is proposed that they spend more effort controlling agency pressures ex ante investment (i.e. through screening, due diligence, and the use of comprehensive contracts), as is advocated by the principal-agent approach. Conversely, since BAs are not under such pressures and in general are not professional investors with research and contracting skills, and often prefer active involvement, we might assume that they elect to control agency problems more so ex post, as would be advocated by the incomplete contracts approach. To test whether BAs and VCs do indeed employ different approaches limiting potential agency problems throughout the investment process, eight research hypotheses (covering stages of the whole investment process) will now be formulated.

2.3 - Formulation of the Research Hypotheses

Based on the assumption that BAs prefer the incomplete contracts approach and VCs the principal-agent approach to deal with agency problems in their investee firms, this section will contrast these two approaches to formulate research hypotheses covering investor differences over the full investment process, from deal origination to exit. Then in Chapters 4-6 they will be empirically tested to determine whether this main assumption is supported.

2.3.1 - Deal Origination Differences Expected

In the first stage of the investment process, deal origination, an investor will try to locate a number of potential investment opportunities so that he/she will have some choice as to which one to fund. There are three arguments for why VCs may have greater deal origination flows than BAs.

2.3.1(A) - Greater VC Deal Origination is in Line with Principal-Agent Approach

Following the assumption that VCs utilise the principal-agent approach, and that BAs use the incomplete contracts approach, we would expect VCs to have a greater deal origination (than BAs) so that they can then extensively screen to find a suitable investment opportunity (Hart, 1995a).

2.3.1(B) - VC Has Obligation to Fund Providers to Generate Deal Flow to Pick Best

Opportunities

Since VCs have a fiduciary responsibility to their fund providers, they have to behave in a competent manner, as has already been well documented. Thus, VCs ensure that they receive a large deal flow (Sweeting, 1991), which will render them more investment choice and a greater chance of finding an investment opportunity which matches their criteria and renders the possibility of generating financial returns for their fund providers. Conversely, BAs look for investments in an ad hoc, unscientific and usually less proactive manner than VCs (Mason & Harrison, 1992, 1993b; Wetzel, 1981).

2.3.1(C) - VC Has Contacts and Networks to Generate Deal Flow

To generate this deal flow, VCs use extensive referral networks of portfolio companies, investors, and other VC firms (Bygrave & Timmons, 1986). In a poorly defined environment in which to find prospective deals, where a potential candidate is too small a company to be readily identifiable, the use of intermediaries by VCs is very important. VCs have an obligation to invest funds and, thus, extensively utilise networks to invest those funds in an optimal manner. BAs, on the other hand, have no such obligation and tend to rely on smaller networks of personal contacts to see if any investment opportunities exist. Indeed, BAs tend to have an elusive nature and will not be as visible to entrepreneurs (with investment opportunities) as VCs. This may help to explain why these non-professional investors do not have as large a deal flow as the professional VCs (Conlin, 1989, Wetzel, 1983). Furthermore, many VCs also tend to specialise in certain areas, which allows them to attract more of a certain sector of investments from other VCs and referrers who specialise in different areas.

Summary

Because it is assumed that VCs employ the principal-agent approach, it may be hypothesised that VCs have greater deal flow than BAs. The fact that VCs are obligated to their fund providers to screen a large number of potential investments to find a suitable one, and have extensive referral networks, often of a more specialised nature, further supports this. Thus, the first hypothesis for empirical examination reads

Hypothesis 1: VCs generate and maintain a greater deal flow than BAs.

2.3.2 - Initial Screening and Pre-Investment Due Diligence Differences Expected

After deal origination, the initial screening process selects those investment opportunities which warrant further investigation. Those left will receive extensive due diligence, which includes analysis of both market and entrepreneur variables. This research assumes that greater investment knowledge of the market factors also reduces asymmetries of information with the entrepreneur and, thus, has an effect in reducing agency problems.

Four arguments are presented for why VCs may conduct more initial screening and due diligence than BAs.

2.3.2(A) - Greater VC Screening and Due Diligence is in Line with Principal-Agent

Approach

Following the assumption that VCs utilise the principal-agent approach, and that BAs use the incomplete contracts approach, we would expect VCs to conduct more initial screening and due diligence than BAs. This reduces asymmetries of information for VCs and provides them with a firm base for writing a comprehensive investment contract (Hart, 1995a, Pettit & Singer, 1985).

2.3.2(B) - VCs Screen and Conduct Due Diligence to Show Competence

As has been shown, VCs are under a great pressure to behave in a responsible manner so as to reduce asymmetries of information for their suppliers of capital and attract further funding in the future. Primarily for this reason, we might expect VCs to be very thorough in their initial vetting and subsequent screening and due diligence processes. In addition, financial regulators (i.e. IMRO) check with VCs to ensure that proper due diligence is done.

Since BAs use their own money for investments, they will still conduct initial screening and some due diligence, however, they have no one to impress but themselves. We may, therefore, assume that they might be less comprehensive in their investment procedures (Mason & Harrison, 1995). One BA summed up this potential difference between BAs and VCs:

“With early stage firms, there is no way you can be remotely certain that it will succeed, whatever precautions or investigation you do, it is simply fundamentally impossible. This is why venture capital companies can not get involved in these (start-up firms), because they have to operate only on detailed research and planning and it is here completely inapplicable,

and therefore they are hopeless at small scale investments and don't try in 99% of cases." (BA10, 19/3/96)

Fiet (1995b) also stressed this assumed difference in screening and due diligence. In his comparison of the risk avoidance strategies of BAs and VCs, he found that these two investors had different approaches to evaluating market risk (due to unforeseen competitive conditions) and agency risk (due to the uncertainty of whether the entrepreneur or venture capitalist will comply with the venture capital contract). He found that BAs tend to rely more on the entrepreneur for protection from market risk and, therefore, worry more about agency risk. However, VCs were deemed to be more concerned about market risk because they were able to protect themselves contractually from agency risk. Thus, VCs are concerned about conducting extensive due diligence to reduce these (market) risks for themselves and reduce any potential agency costs for their fund providers.

The arguments that now follow lend further support to the notion proposed above, although they are less theoretically-based and more inherent of the nature of each investor. But, of course, the differences between the nature of each investor type are still influenced by their contrasting agency relationship structures.

2.3.2(C) - VC Has Time, Money, Experience, Resources, and Contacts to Do Screening and Due Diligence

Since VCs are professional full-time investors, unlike most BAs, they have the time, resources and expertise to conduct extensive screening and due diligence. Wetzel (1987) found that "venture investing is not a full-time occupation for informal investors.

Learning the tricks of the trade takes time and time is scarce.” (p.311) Moreover, since VCs are under an obligation to invest all the funds under their management, they make more frequent investments, are more skilled professional investors, and have more screening and due diligence experience than BAs (Harrison & Mason, 1991a, 1994; MacMillan et al., 1988). Unlike VCs, BAs usually do not have professional researchers on staff or offices dedicated to investigating deals. Thus, BAs “often lack competency with sophisticated analytical tools to evaluate (...) risk” (Fiet, 1991a) and “seem to be rather frustrated in obtaining market risk information themselves.” (Fiet, 1995a, p.558) Since VCs have more time, resources and expertise, we might assume that they conduct more extensive initial screening and due diligence than BAs.

2.3.2(D) Individual VC Usually Personally Accountable

BAs are only responsible to themselves and have no need to refer decisions to others for approval (Mason & Harrison, 1995). VCs, however, are often personally accountable for investment projects which they ‘champion’. Although most investments are approved by an investment committee, the individual VC is still partially accountable and, thus, excessively screens investment opportunities and conducts due diligence.

One VC interviewed stated that if one or two of his investments went sour, he would be frowned upon by the firm’s partners. But, if three or more of his investments were disappointing, there might be some pressure on him to leave. Another VC (a chairman of a small VC fund) believed that VCs conducted more due diligence than was really necessary just to save their own jobs in case things went wrong in the future. He stated that protecting one’s back was especially important when investing large amounts in one

deal. This implies that the level of due diligence that is hypothetically needed to adequately assess an investment (i.e. the upper level of research we might expect from BAs) is exceeded by VCs just to protect their jobs and reputations. Since one cannot know how much research is necessary, the urge to err on the side of caution must be strong. Indeed, one VC stated: "venture capitalists are career people and think constantly about their jobs. The more and better investments they make, the quicker they get promoted. They may have less concern about the eventual success of their investments." (Anonymous) A high degree of ex ante due diligence by the individual VC championing an investment, therefore, seems to be, in part, a mechanism for deflecting potential future blame from themselves in their pursuit for career advancement.

Summary

Because it is assumed that VCs employ the principal-agent approach, it may be hypothesised that VCs conduct more initial screening and due diligence ex ante than BAs. This is further supported by the fact that VCs have an obligation to their fund provider to behave in a competent manner, more resources and skills for screening and research, and more individual accountability for choosing successful investments. Thus, the second and third hypotheses for empirical examination read:

Hypothesis 2: VCs are more selective in their initial screening of investment opportunities than BAs.

Hypothesis 3: VCs conduct more pre-investment due diligence than BAs.

2.3.3 - Investment Criteria Differences Expected

Investment criteria are the factors of importance to the investor that he/she uses to assess the funding potential of an investment opportunity. Since BAs and VCs employ different approaches to dealing with agency problems, their investment criteria may also differ.

2.3.3(A) - BAs Place More Emphasis on Criteria Related to Ex-Post Involvement and VCs Place More Emphasis on Criteria Related to Initial Screening, as Predicted by Their Relative Agency Approaches

Since it is assumed that BAs employ the incomplete contracts approach to reducing agency problems when investing, they will place more emphasis on acquiring ex post control and power (Hart, 1995a, 1995b). Since assets have only limited value in leveraged start-up firms, the main source of control may be through active ex post involvement in the investee firm. We might, therefore, assume that BAs will evaluate investment proposals by placing more emphasis on criteria related to ex-post involvement. In addition, since it is also assumed that VCs employ the principal-agent approach to investing, they will place more emphasis on screening the investments comprehensively before investing. We might, therefore, assume that VCs will evaluate investment proposals by placing more weight on firm criteria related to initial screening (i.e. a firm's projected financial returns). Thus, the fourth hypothesis for empirical examination reads:

Hypothesis 4: BAs Place More Emphasis on Investment Criteria Related to Ex-Post Involvement and VCs Place More Emphasis on Investment Criteria Related to Initial Screening.

2.3.4 - Contractual Control Differences Expected

The principal-agent approach assumes that if an investor has a better investment contract, that investor will have more control over that investment (Pettit & Singer, 1985; Hart, 1995a). Since there is no comparison research in the literature on BA and VC contract formulation practices, this assumption will be used to form five arguments upon which to base the hypothesis of quality differences between BA and VC investment contracts.

2.3.4(A) - Greater VC Contractual Control is in Line with Principal-Agent Approach

Following the assumption that VCs utilise the principal-agent approach, and that BAs use the incomplete contracts approach, we would expect (almost by definition) VCs to write more comprehensive contracts than BAs (Hart, 1995b).

2.3.4(B) - Comprehensive Contracts Show Competence to Fund Providers

Since VCs must demonstrate competence to fund providers, they will formulate comprehensive contracts with their investee firms. This is not an agency pressure that BAs have. However, a more thorough discussion of how VCs gain some relative power over the entrepreneur to write a comprehensive contract is now addressed.

2.3.4(C) - VCs Write Better Contracts than BAs to Realise Returns for Fund Providers

Although behavioural observation is the best performance indicator that fund providers have for VCs until the investments are realised, it is still, of course, the actual investment returns (the outcomes) that are the fund provider's best measure of VC performance. However, VCs can only earn a return on their investments if the investee firm is acquired or has an initial public offering. To accomplish this the "business must be severable

from its founders" and the VC must have a degree of control (Kanellos, 1996, p.146), which is usually attained through comprehensive investment contracts. Conversely, BAs invest only for themselves and are not dependent on investment returns to make a living, and are not under such pressure to formulate contractual ways to exit and realise returns from their entrepreneurial investments.

But to write a comprehensive contract and gain a high degree of control, the VC must have some relative power over the entrepreneur (or investee firm). This is gained partly by the saturated market for investment finance which floods VCs with investment opportunities, clearly giving them the upper hand over entrepreneurs (Bygrave & Timmons, 1986; Steinberg, 1996). Their use of extensive networks for gaining good information about the terms ('market rate') offered by other VCs fortifies this greater degree of power for the VC. The entrepreneurs on the other side of the bargaining table, however, have little ability to get information on the market price of a deal. This, and their relative lesser negotiating experience, will put the entrepreneur at a disadvantage when negotiating contractual terms (Bygrave & Timmons, 1986). Not surprisingly, "a common perception among entrepreneurs is that venture capitalists are sharks (or some other pejorative term) that take advantage of the entrepreneur under the tenets of the investor's golden rule - 'he who has the gold makes the rules'." (Norton, 1995, p.22) It is doubtful that a BA will have such superior information or resources and therefore he/she would be expected to be on a more even par with the investee (Norton, 1995).

2.3.4(D) - VC May Have Lower Information Asymmetries at Time of Investment

As stipulated by the principal-agent approach, to form a good contract which can incorporate different future scenarios, the asymmetries of information must be relatively low between the two parties entering into the agency relationship (Hart, 1995b). VCs may have less asymmetries of information compared to BAs for two reasons. First, since we have assumed that VCs conduct more screening and due diligence of prospective investments than BAs, they are in a more informed position from which to write a good contract (Pettit & Singer, 1985). Second, BAs operate in a more inefficient marketplace than VCs and so less information may be available to them upon which to write an investment contract (Fiet, 1995a; Wetzell, 1987; Gaston & Bell, 1985). Thus, since BAs have less contractual control over their investments, it will be argued later that they gain control through active monitoring and hands-on involvement in their investee firms.

The arguments that now follow lend further support to the notions proposed above, although they are less theoretically-based and more inherent of the nature of each investor.

2.3.4(E) - VCs Have Better Resources for Contract Formulation

Writing (and enforcing) contracts is not costless (Fama & Jensen, 1983). A good contract can be expensive to write, but there are three reasons why VCs can better reduce and afford these costs. First, as Fiet (1995a) asserts, VCs have “economies of scale in the writing of contracts.” (p.556) Indeed, financial intermediaries in general use these scale advantages to write better contracts (Diamond, 1984). Second, since VCs usually have funds which are worth millions of pounds, significantly more than a typical BA

would have available for investment, the VC is more able to afford good contract formulation. Third, VCs tend to make investments of at least £1,000,000 or more, whereas the BA invests an average of around £50,000, so as a proportion of the investment amount, the cost of forming a good contract will be less for a VC (Mason & Sackett, 1996; Freear & Wetzel, 1990). One BA interviewed stated that it wasn't worthwhile for him to invest £5,000 in writing a good contract if the investment was only £40,000. On the other hand, BAs are also usually inexperienced investors and have less experience (and no economies of scale) in forming comprehensive contracts (Fiet, 1995a).

Summary

Because it is assumed that VCs employ the principal-agent approach, it may be hypothesised that VCs write more comprehensive investment contracts ex ante than BAs, and, therefore, have more contractual control over their investments. Thus, the fifth hypothesis for empirical examination reads:

Hypothesis 5: VCs have more contractual control over their investments than BAs.

2.3.5 - Post-Investment Monitoring Differences Expected

Once an investment contract has been formed and agreed on by both parties, the actual financial investment is made by the new principal to the agents of the entrepreneurial firm. It is only after this investment that agency risk concerns, such as moral hazard, can become a reality. The principal is, therefore, inclined to conduct enough monitoring

(assuming that the costs don't outweigh the benefits) to keep agency costs to a minimum preferred level. It should be noted that such monitoring can take the form of close monitoring as well as a less constraining approach of rendering beneficial advice to the entrepreneur.

A number of theoretical and non-theoretical assumptions will now be presented upon which to form a hypothesis.

2.3.5(A) - Greater BA Ex Post Monitoring is in Line with Incomplete Contracts

Approach

Following the assumption that VCs utilise the principal-agent approach, and that BAs use the incomplete contracts approach, we would expect BAs to monitor more ex post than VCs (Hart, 1995a).

2.3.5(B) - VCs Have More Contractual Control than BAs, and so Monitor Less Actively

As suggested in the last section, VCs have more incentives than BAs to formulate good contractual agreements with their investee firms. Chapter 2.2.3 proposed that principals who can form better contracts (with the inclusions of more provisions) will have more contractual control. With more contractual control over the actions of the agents, it is proposed that less monitoring is needed to limit potential agency risks (Fiet, 1995a). In a study of four international markets, Sapienza et al. (1996) found that "problems of delegation of decision-making authority and managerial opportunism may be adequately handled by the contractual and structural arrangements between VCs and their portfolio companies." (p.462) Based on these assumptions and evidence, it is probable that VCs

monitor their investee firms less actively than do BAs, who elect to monitor more hands-on (Fiet, 1995a). This lesser emphasis on contractual control, and greater emphasis on involvement, by BAs is also echoed by Freear & Wetzel (1991): "individual investors tend to be less concerned to seek voting control or to set clear provisions at the time of the deal, but in some cases work full-time or part-time with the ventures after the investment is made." (p.35)

2.3.5(C) - VCs and BAs Have Different Risk Emphases

Adding more support to the previous argument, Fiet (1991a, 1995a, 1995b) claims that the importance that investors attach to a particular type of risk (agency vs. market) is inversely related to the type of risk they are more competent to control. Furthermore, VCs are less concerned about agency risks because they protect themselves "through the use of boilerplate contractual terms and conditions that they append to each venture capital agreement" (Fiet, 1995a, p.556), and so are more concerned about conducting due diligence on market risk. But, as this research has already proposed, this concentration on market risk also deals indirectly with agency risks through the reduction of asymmetries of information with the entrepreneur. In contrast to VCs, the ineffective research training of BAs often causes frustration when obtaining market risk information, and so BAs tend to rely on the entrepreneur to evaluate the market risk for them. Fiet (1995a), therefore, claims that BAs tend to concentrate on evaluating agency risk.

Since BAs do not have the relative skills or power to write comprehensive contractual terms to limit agency costs (compared to VCs), we might assume that they limit agency risk through their level of involvement in the investee firm (Landstrom, 1991; Harrison

& Mason, 1992a). Indeed, potential BAs recognise the need to monitor the investee firm as a post-investment necessity and, therefore, Freear et al. (1992a) believe that more monitoring assistance to BAs would be the most influential incentive to get (current and potential) BAs to make more entrepreneurial investments.

The arguments that now follow lend further support to the notions proposed above, although they are less theoretically-based and more inherent of the nature of each investor.

2.3.5(D) - VCs are More Experienced at Monitoring

Since, on average, a VC makes venture investments on a more frequent basis than a BA, the VC will also have more experience in monitoring those investments. With more exposure to monitoring situations, one might expect there to be a learning or experience curve effect to monitoring portfolio firms (Norton, 1995). This is not to say that because VCs may monitor less, the monitoring is less effective than that of the BA. Sapienza et al. (1996) emphasise this point:

“we also expect that greater experience will be associated with greater efficiency in information processing and decision-making. Thus, for highly experienced VCs, less face-to-face investment interaction should be required to produce decisions of the same quality as those produced by less experienced VCs (Sapienza, 1989, Williamson, 1975).” (Sapienza et al., 1996)

2.3.5(E) - VCs Have More Investments, Less Time to be Actively Involved in Each

Investment

Because VCs have a sizeable fund to invest and a preference for diversifying it into multiple investments, they will have a number of investments in their portfolio which they will have to monitor until realisation (Gupta & Sapienza, 1988). In a US study, Gorman & Sahlman (1989) found that the average VC monitors nine investee firms. However, the VC only has a finite number of hours per week that he/she can spend on monitoring, so it may be assumed that each venture would receive less hours of monitoring from the VC than they might from a BA who usually only has one or two investments. Indeed, when scheduling interviews with both types of investors, about 25% of VCs called back to reschedule the interview due to a conflict, whereas none of the BAs rescheduled. After the 40 interviews (and at least 40 cups of tea) it was clear that, on average, the BAs had, and were willing to give, more time and appeared to have fewer business commitments than the VCs. Of course, this is inherent in the different natures of these two types of investors.

2.3.5(F) - Investment Motivations: VCs for Financial Returns, BAs May Wish to be

Involved.

Whereas VCs invest to gain significant financial returns for their fund providers and themselves (Bygrave & Timmons, 1992), BAs are often also motivated by the opportunity to be involved in their informal venture capital investments (Wetzel & Freear, 1994; Stevenson & Coveney, 1994). So the different investment motivations between BAs and VCs lead them to different levels of monitoring of (and involvement in) their investee firms. Although it could be argued here that a BA's greater level of

involvement may not be evidence of a concern for agency risk reduction, it was clear in the 25 BA interviews that this desire for involvement in the entrepreneurial process was in most cases seen as a way to confirm that the investee firm was run properly and so to ensure that agency risks were reduced. One BA echoed the general sentiment: “ I couldn’t just be an investor in the venture and sit back and look at the results each quarter, I wouldn’t trust anyone that far. I get twitchy, I want to be involved” (BA12, 22/3/96), whilst another BA also voiced this agency concern:

“Once you have put the money in, then the skeletons will come out of the closet and it can be hard to keep the entrepreneur focused. So you have to keep an eye out to see what happens and hope that once the dirt is out and the air has been cleared, the company can move forward with your help.”
(BA17, 26/3/96)

2.3.5(G) - VCs Prefer to Invest in More Established (and Less Risky) Ventures.

As has been well documented in Chapter 1, VCs generally prefer investments in firms which are more established, rather than in the start-up stage. These later stage firms tend to be less risky and, therefore, on average, require less monitoring than start-up firms (Gupta & Sapienza, 1988). Since BAs tend to prefer earlier stage firms than VCs, it may be possible to assume that, on average, BAs monitor firms more closely than VCs do.

Summary

Assuming that BAs employ the incomplete contracts approach, it may be hypothesised that they monitor more ex post than VCs. Thus, the sixth hypothesis for empirical examination reads:

Hypothesis 6: BAs monitor more actively post-investment than VCs.

2.3.6 - Exit Preference Differences Expected

After the investment has been monitored for a number of years, most investors will wish to realise their investment for its capital gains. Based on the following two reasons, we might assume that this concerns VCs more than BAs.

2.3.6(A) - Greater VC Reliance on Exit Routes is in Line with Principal-Agent Approach

Following the assumption that VCs utilise the principal-agent approach, and that BAs use the incomplete contracts approach, we would expect that VCs may wish to employ their contractual powers to exit the investee firm and realise financial returns.

2.3.6(B) - VCs Have an Obligation to Realise Investment Returns for Fund Providers

As has been documented in Chapter 2.3.4(C), VCs have a responsibility to their fund providers to return to them the principal investment amount plus financial gains made on their portfolio investments, as was stipulated in the investment contract (Berglof, 1994). This increases the pressure for VCs to exit investments. Since BAs invest their own money and often enjoy involvement in the firm, exiting may not be as great a concern.

Summary

Assuming that VCs employ the principal-agent approach and are under more pressure than BAs to realise investment returns for their fund providers, it may be hypothesised that VCs place more emphasis on exiting their investments than BAs. Thus, the seventh hypothesis for empirical examination reads:

Hypothesis 7: VCs are more concerned about exiting their investments than BAs.

2.3.7 - Overall Investment Process Differences Expected

Lastly, the main assumption that BAs and VCs use different approaches to deal with agency problems must be tested. This assumption essentially combines the previous seven hypotheses and, therefore, is the main theoretical focus of this research study. Thus, the eighth hypothesis for empirical examination reads:

Hypothesis 8: VCs prefer the principal-agent approach to deal with agency problems, as is evidenced by their greater emphasis on ex ante screening, due diligence, and the writing of comprehensive contracts.

BAs prefer the incomplete contracts approach to deal with agency problems, as is evidenced by their greater emphasis on ex post monitoring of investments.

2.4 - Conclusion

This chapter presented a brief overview of the existing literature to accentuate a number of significant gaps (and uncertainties) in our current knowledge of BAs and VCs. In particular, the further need for UK comparison research on the investment processes and investment criteria of BA and VC investors was outlined.

To address this need, a detailed overview of agency theory was offered to provide a foundation upon which to formulate research hypotheses about the differences between BA and VC investment procedures. In this way, a central focus of this research study is

to empirically test whether BAs and VCs employ different approaches to deal with potential agency problems throughout the full investment process. Indeed, the latter may place more emphasis on protecting their investment ex ante by conducting extensive due diligence and writing comprehensive contracts, whilst the former may place more emphasis on protecting their investment ex post through active monitoring and hands-on involvement in the investee firm. Thus, if BAs and VCs do indeed employ these different approaches we would expect to see the following throughout the investment process:

Hypothesis 1: VCs generate and maintain a greater deal flow than BAs.

Hypothesis 2: VCs are more selective in their initial screening of investment opportunities than BAs.

Hypothesis 3: VCs conduct more pre-investment due diligence than BAs.

Hypothesis 4: BAs Place More Emphasis on Investment Criteria Related to Ex-Post Involvement and VCs Place More Emphasis on Investment Criteria Related to Initial Screening.

Hypothesis 5: VCs have more contractual control over their investments than BAs.

Hypothesis 6: BAs monitor more actively post-investment than VCs.

Hypothesis 7: VCs are more concerned about exiting their investments than BAs.

Hypothesis 8: VCs prefer the principal-agent approach, and BAs prefer the incomplete contracts approach, to agency risk control.

The next chapter, Chapter 3, will address how the empirical data were collected, whilst Chapters 4-6 will use the data findings to address the eight hypotheses in turn.

Chapter Three

Methodology & Method

Introduction

To empirically test the theoretical hypotheses generated in the last chapter, this chapter will comprehensively review the methodology and method that this study adopted. In particular, the interview and questionnaire processes will be thoroughly analysed, as well as the aspects of this research study which improve upon deficiencies of past studies, and aspects of this study which create limitations. These will be addressed in the following sections:

3.1 - Methodology

3.2 - Method

3.3 - Strengthening of the Methodology & Method

3.4 - Limitations of the Methodology & Method

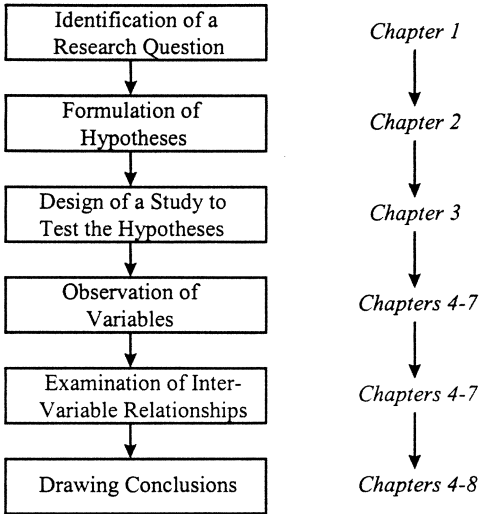
3.5 - Statistical Tests Utilised

3.6 - Conclusion

3.1 - Methodology

To ensure a high degree of robustness for the research, this study adopted an expansive methodology to collect the necessary data. Indeed, to utilise rigorous standards for assessing whether explanations of observed events are in fact accurate, a systematic process should be followed (Mowday & Steers, 1979). One such process is the scientific method, whose essence is “to develop ever more precise and accurate ‘maps’ that both describe and predict different phenomena in the ‘real world’.” (Hofer & Bygrave, 1992, p.91) Mowday & Steers (1979) state that this method ascribes that first the research question should be identified (as was done in Chapter 1) so that theoretical research hypotheses can be formulated (as was done in Chapter 2). Then a study should be designed to test the hypotheses (as is done in this chapter), whilst the collection and analysis of data variables should then ensue so that conclusions can be drawn about the research question (as will be done in the subsequent chapters). Chart 3.1 shows an overview of the scientific method.

Chart 3.1 - An Overview of Mowday & Steers's (1979) Scientific Method for Rigorous Research Utilised in this Research Study



Thus, to design a sound data collection procedure which ensured that the theoretical hypotheses would be effectively tested, this study utilised the following approaches:

- 3.1.1 - Prescribed Theory
- 3.1.2 - Functionalist Paradigm
- 3.1.3 - Qualitative & Quantitative Approaches
- 3.1.4 - Case Study Approach
- 3.1.5 - Survey Approach
- 3.1.6 - Convenience Samples

Each will now be briefly addressed.

3.1.1 - Prescribed Theory

As was mentioned in the last chapter, few research studies in the entrepreneurship field have utilised theory to guide research (Smith et al., 1989; Bygrave, 1989; Bull & Willard, 1993), whilst most of the theory that has been used has been borrowed from other, more 'established', disciplines (Brophy & Shulman, 1992). But as Bygrave (1989) asserts, the use of theory is a necessary requirement so that it can develop an overall plan (or 'map') for the research. Subsequent research stages can then test this plan against real world phenomena to determine the accuracy and precision of those theoretical predictions. Thus, rather than utilising a grounded theory approach (Glasser & Straus, 1967), in which the theory is generated *ex post* from the data collected, this research study utilised agency theory to create relational hypotheses which define the scope of this study and render its direction for empirical testing. The main advantage of utilising theory first is that there is initial clarity about what is being researched, which also allows easier replication of the study by other researchers, although the grounded theory approach may render more exploratory insight (Easterby-Smith et al., 1991). But this study mainly aimed to validate the theoretical hypotheses and so emphasis was placed on this prescribed theoretical framework in the hope that the quality of the study on the conceptual level might somewhat determine the quality of the resulting empirical research (Mowday & Steers, 1979). By adopting theory first, Easterby-Smith et al. (1991) claim that a more positivist position (i.e. objectivist view) is being taken to view the world, in which "the social world exists externally, and (...) its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition." (p.22) Conversely, the phenomenology approach (i.e. more subjectivist view) advocates the idea that reality is socially constructed and,

therefore, the researcher should assess and collect the data from a more personal standpoint (Easterby-Smith et al., 1991). However, in this research the former approach was adopted and so more emphasis was placed on: independence of the researcher, large samples, testing theories, experimental design, and verification (Easterby-Smith et al., 1991). To add further insight into how this study's data and results were viewed and presented in the social context, a more detailed review of the adopted frame of reference (from which this study choose to view social reality) will now be addressed.

3.1.2 - Functionalist Paradigm

In their pioneering book, *Sociological Paradigms and Organisational Analysis*, Burrell & Morgan (1979) present four different paradigms from which to view the world. These paradigms are based on the possible assumptions a researcher may hold of how to interpret: 1) the nature of social science (i.e. from an objective or a subjective approach) and 2) the nature of society (i.e. as orderly or with conflict). In regards to the nature of social science, if one adopts the objectivist approach, then the social world is treated as the natural world, as being hard, real and external to the individual. If a subjective approach is utilised, then the social world is treated as being much softer, personal, and more subjective and emphasis is placed on understanding how an individual creates, modifies, and interprets the world. In regards to the second assumption, the nature of society, the world can either be viewed as 'orderly' (i.e. integrationist view of society), where stability, integration, functional co-ordination, and consensus prevails, or the 'conflict' view (i.e. coercion view of society) may be adopted which views society as encompassing change, conflict, disintegration, and coercion. Based on these two

assumptions, Burrell & Morgan (1979) present four different paradigms of looking at the world, as Chart 3.2 clarifies.

Chart 3.2 - Burrell & Morgan’s (1979) Four Paradigms for the Analysis of Social Theory

The Sociology of Radical Change			
Subjective	Radical Humanism	Radical Structuralism	Objective
	Interpretive Sociology	Functionalist Sociology	
The Sociology of Regulation			

Note that these four different paradigms are based on different meta-theoretical assumptions about the nature of science and society. The view of reality within each paradigm is the same whilst the paradigms are mutually exclusive, although Parker & McHugh (1991) advocate that cross-paradigm dialogue may be possible. However, this research study assumed that the nature of social science is objective and the nature of society is orderly, and so the functionalist paradigm was adopted. This paradigm views the researcher more as an observer, rather than a participant, of action and is concerned with:

“providing explanations of the status quo, social order, consensus, social integration, solidarity, need satisfaction and actuality (...) (and) In its overall approach it seeks to provide essentially rational explanations of social affairs.” (Burrell & Morgan, 1979, p.26)

This approach was deemed most appropriate since it is problem-oriented and attempts to provide practical solutions to practical problems.

3.1.3 - Qualitative & Quantitative Approaches

The choice of whether to adopt a qualitative or quantitative research approach (or both) is also very important methodologically. There has been some debate as to which approach is superior (Clegge et al., 1985). However, the difference between the two is not the 'quality', but the research procedure. In fact, the qualitative approach places emphasis on the individual under study, whilst the quantitative approach is motivated by a prior set of concerns (Bryman, 1989).

In general, qualitative research findings are not arrived at by statistical techniques but by observation and interviews. In this flexible and unstructured approach the skills and knowledge of the researcher play an important role in the data analysis and there is a focus on the social process, rather than the social structure. In addition, the data collection and analysis are often conducted simultaneously. This approach advantageously produces rich, holistic, real, and descriptive data, making it ideal for inductive and more explanatory research (Bryman, 1989). On the other hand, quantitative research findings are obtained through statistical methods where the emphasis is on testing and verification (of facts), rather than on understanding (from the respondent's point of view) as with the qualitative approach. The advantage of this approach is the generalisability of findings across a large research sample, rather than in-depth results from a small number of respondents. However, qualitative and quantitative

methods are not mutually exclusive and can be used together, as was done in this research study.

To date, most studies in the entrepreneurship field have relied primarily on quantitative data. For this reason, Hofer & Bygrave (1992) advocate greater use of qualitative techniques to catch more insights on the entrepreneurial process:

“The holistic, dynamic, unique, discontinuous nature of the entrepreneurial process combined with the numerous antecedent variables and the change of state involved in entrepreneurial processes all suggest the necessity of gathering rich, detailed, qualitative *and* quantitative data, rather than just the easily available quantitative data frequently gathered in other fields of inquiry.” (p.95) (italics added)

Thus, this research sought to utilise both approaches, the qualitative (i.e. the 40 interviews) to initially explore all the variables and to render initial support to the hypotheses, and then the quantitative approach (i.e. the 262 returned postal questionnaires) to test the hypotheses. As subsequent chapters will show, both approaches were then used together to present to research results.

3.1.4 - Case Study Approach

One approach adopted by this study which allowed qualitative and quantitative methods to be combined was the case study (Bryman, 1989). Due to its flexibility, the case study rendered direct observation and interaction with the BA and VC investors so as to establish as sense of which issues were important to them and how these issues were interrelated (Hakim, 1987). This study, therefore, relied on the interview method to generate insight on, and pre-test, the theoretical hypotheses (verbally and in a pilot questionnaire) which could then be tested more extensively later using the survey

approach (i.e. through the postal questionnaire method) (Bryman, 1991). In this way, Bryman (1989) states that the case study provides greater understanding of areas not well documented and also renders theoretical insights. To determine how and why investors in the research sample made investments, this exploratory approach was deemed most suitable. However, two limitations of this approach are the issues of verification and generalisability. The former states that because the case study is often a single, one-off case, often of short duration and usually researcher-subjective, it may be difficult to adequately establish causal inferences between variables (Clegge et al., 1985). The latter states that due to the small number of case studies usually conducted by a researcher, they tend to be more “opportunistic and unique, rather than representative of a larger population.” (Clegge et al., 1985, p.8) To partially circumvent these limitations, the survey approach was also utilised.

3.1.5 - Survey Approach

To further analyse the hypotheses initially tested with the case study approach, the survey approach was adopted. This approach was chosen because, as Bryman (1989) states:

“survey research entails the collection of data on a number of units and usually at a single juncture in time, with a view to collecting systematically a body of quantifiable data in respect of a number of variables which are then examined to discern patterns of association.”
(p.104)

By employing this approach, questionnaires gathered further information from individual investors on the phenomena which could not be directly observed (Frankfort-Nachmias & Nachmias, 1992; Easterby-Smith et al., 1991; Hakim, 1987). However, rather than

sampling the whole population under examination, it is usually more feasible to conduct a survey on only a sub-set of a population, which is fully representative of the main area of analysis (Easterby-Smith, 1991). This research study used the postal questionnaire method to collect information on a large-scale. However, due to the nature of the BA market, the sampling of a representative BA sample was not possible.

3.1.6 - Convenience Samples

Although this research study utilised a random sample of VCs, it employed a convenience sample for the BAs. Bryman (1989) states that:

“A convenience sample occurs whenever a researcher gathers data on a sample of persons or firms, but the sample has not been derived from any form of probability sampling; rather, it is simply a sample that was available to the researcher.” (p.113)

Unfortunately, such a non-probability sample has an uncertain degree of external validity and so there may be doubt as to how representative it is of the population and whether the findings are in turn generalisable to that population (Bryman, 1989). However, this approach may be deemed most appropriate when: 1) practical reason inhibit the use of random samples and 2) “non-random samples may be deemed better than a random one, or a random sample may not be a feasible plan of action.” (Bryman, 1989, p.116)

Indeed, in the BA research field in the US and the UK practical reasons restrict the feasibility of random samples, and, therefore, most researchers rely on convenience samples (Freear et al., 1994a; Aram, 1989; Mason, 1993; Gaston, 1989; Haar et al., 1989; Stevenson & Coveney, 1994; Coveney, 1996). The reason for this is that BAs are generally very difficult to locate due to their ‘invisibility’ (Wetzel, 1983; Mason &

Rogers, 1996), and, therefore, “the total population of informal investors is unknown and probably unknowable.” (Wetzel, 1983, p.26)

3.1.6(A) - The Invisible Business Angel Marketplace

Identifying BAs and firms which have raised finance from BAs is very troublesome (Wetzel, 1982b; Haar et al., 1988; Mason, 1996a; Gaston, 1989). This is primarily because: there are no directories of BAs, BAs prefer anonymity to avoid being deluged with investment proposals, the subject matter of BA investments is often private and personal, BAs come from a diverse and dispersed population of wealthy individuals, and there are no public records of their investment transactions (Freear et al., 1996; Wetzel, 1982b; Mason & Rogers, 1996; Freear et al., 1996; Haar et al., 1988; Harrison & Mason, 1992b). In fact, even in this research study it was clear that BAs preferred their anonymity, especially compared to VCs. In setting up the interviews, BAs usually required extensive explanation of the purpose of the research project and who referred me to them for assistance, whereas only minimal explanation was required by the VCs. Indeed, a number of BAs refused to participate in the interviews without a reason, whilst only a few VCs declined. The same pattern is evident when the anonymity of the returned postal questionnaires is analysed. Guarantying full confidentiality, this study asked respondents to write their postal address on the return envelope so that a copy of the research results could be sent to them. As a result, only 36% of BAs, and 53% of VCs, identified themselves, which is a statistically significant difference at the 1% level. Conversely, Coveney (1996) found that 72% of the BAs in his UK study identified themselves, although his study used access to Oxford-Cambridge rugby tickets as an incentive.

Due to this invisibility of BAs, Harrison & Mason (1992b) conclude that it is not possible in the BA market “to undertake any survey that is based on a representative sample of investors.” (p.462) However, Mason & Rogers (1996) state that due to these research limitations in the BA market, a group of randomly selected BAs would not necessarily be more ‘representative’ than one collected with a convenience sample.

Thus, researchers in the BA field generally utilise four different kinds of convenience samples to reach BAs (Harrison & Mason, 1992b). First, large-scale sample surveys of high net income individuals are undertaken from purchased mailing lists in the hope that some of them may have engaged in BA investments (Haar et al., 1988; Postma & Sullivan, 1990). Second, BAs are contacted through their investee firms, who act as intermediaries in the questionnaire distribution process (Aram, 1989; Gaston, 1989). Third, since BAs are often closely associated with each other through personal networks, a snowball technique can be employed where the identification of one BA will lead to the identification of others (Neiswander, 1985; Short & Riding, 1989; Postma & Sullivan, 1990). Fourth, BAs registered with BISs can be reached through the assistance of these introduction services (Stevenson & Coveney, 1994; Mason et al., 1995; Mason, 1993), as was primarily done in this research study.

Due to this invisible nature of BAs, attempting to gather data through focus groups or ethnographically through real-time observation of actual investment processes would be difficult, if not unfeasible, especially on a large scale. Clearly, available approaches to sample collection are limited for the researcher and Freear et al. (1996) accurately state:

“The reliability of data collection techniques need improvement. Identifying a representative sample of the entire angel population is a challenge that remains unmet.”
(p.3)

Summary

This section showed that the methodology of this research project consists of: prescribed theory, adoption of the functionalist paradigm, both the qualitative and quantitative approaches, both the case study and the survey approaches, and the use of a convenience sample to obtain BAs for analysis.

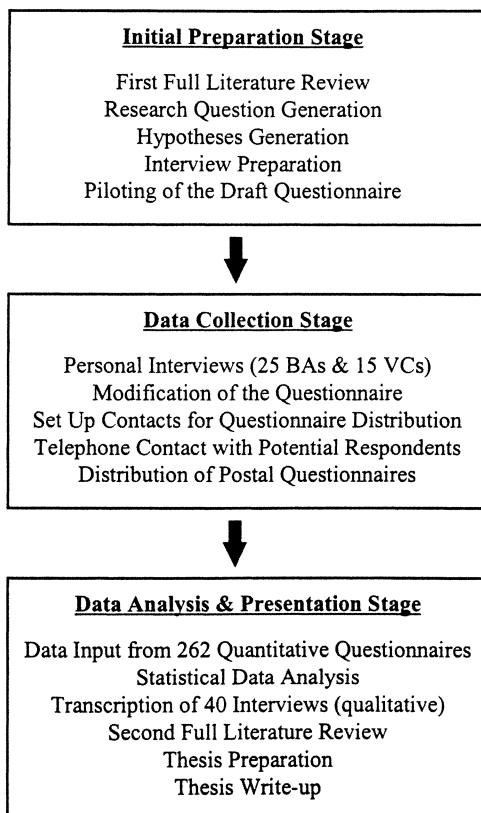
3.2 - Method

In this research, BA and VC respondents were asked to focus on a recent investment they had made (i.e. within the last 3 years) in an unquoted entrepreneurial firm (preferably early-stage) and then to answer questions specific to that particular investment (Haar et al., 1988; Sapienza et al., 1996). This section will review the three main methods which this study utilised to collect this data: a review of existing literature, face-to-face interviews, and a postal questionnaire. Thus, in a similar fashion to Muzyka et al. (1995) and Tyebjee & Bruno (1984), the literature was initially reviewed to identify important issues and investment criteria which could be applied in the interview process and to the postal questionnaire. Primarily, the information obtained from the in-depth personal interviews with the 25 BAs and 15 VCs, and their comments on an earlier version of the postal questionnaire, highlighted the items which should be, and were, finally included in the large-scale postal questionnaire. This approach has also been successfully employed in both the BA (Landstrom, 1990) and the VC (Robbie et al., 1997; Alvarez et al., 1997; Muzyka et al., 1995; MacMillan et al., 1985) research fields.

Although this approach (of using interviews to generate guidance for subsequent questionnaires) has been used by only a limited number of researchers in the BA and VC fields, its use of both qualitative and quantitative data does render 'triangulation' of the research methods (Murray, 1995b; Hofer & Bygrave, 1992). Triangulation is the utilisation of multiple data-gathering methods, usually complementary qualitative and quantitative approaches, to study the same phenomenon. This renders the research greater validity and reliability than a single method, if these different approaches reach

the same conclusion (Gill & Johnson, 1991; Easterby-Smith et al., 1991). Hofer & Bygrave (1992) stress that utilising this approach to obtain more accurate and complete descriptions of data is especially important in the dynamic entrepreneurial field. In this research study, therefore, literature reviews, theory generation, interviews, and postal questionnaires were all used to 'triangulate' information on the phenomena under study. Chart 3.3 shows a full overview of the methods utilised in this study's complete research process.

Chart 3.3 - Review of the Methods Utilised in this Research Study



A closer look at the data collection process will now be undertaken.

3.2.1 - Selection of Target Groups

Given the invisibility of BAs and the constraints of the BA market place for research purposes, this research utilised a convenience sample of BA investors, as was aforementioned. Thus, for the interviews, two BISs allowed me to talk to some of their BAs who had made investments within the last one to two years. In addition, Coveney (1996) provided this research with a list of active BAs who do not use BISs, out of whom three were also interviewed. However, for the distribution of the postal questionnaire 15 BISs in total were contacted out of which ten agreed to forward this study's postal questionnaire to their BA members who had made unquoted investments within the last three years. As advocated by Mason & Harrison (1997), this research also sought to deliberately draw a sample "from a variety of different sources in the hope that any biases in individual sources would be cancelled out." (p.2) Indeed, Mason & Harrison (1997) claim to also have used ten BISs and personal contacts for their sample collection, with each source providing no more than 20% of their sample. In contrast, they claim that 75% of Stevenson & Coveney's (1994) sample was in some way connected to Venture Capital Report (VCR), which they claim makes it less representative. Table 3.1 shows the relative disbursement and geographic diversity of the BAs targeted in this study with a postal questionnaire across the BA contact sources.

Table 3.1 - Distribution of Participating Business Introduction Services and the Number of Active BAs Each Provided for Postal Questionnaire Distribution

Source of Active BAs Targeted	Location of source	Number of BAs targeted*	% of All BAs targeted	Number of Interviews Conducted
TEChNVEST	Cheshire	55	22%	17
Venture Capital Report Ltd.	Oxfordshire	49	19%	
Gloucestershire Business Angels Scheme	Gloucestershire	25	10%	
SouthWest Investment Group (SWIG)	Cornwall	19	8%	5
Capital Match	West Sussex	15	6%	3
Informal Register of Investment Services	Yorkshire	14	6%	
Kidsons Impey	Scotland	12	5%	
IDJ Ltd	London	10	4%	
Capital Access	Cheshire	6	2%	
Capital Connections	Lancashire	5	2%	
Another researcher's database of active non-BIS angels	Primarily in the South	42	16%	
Total number of questionnaires sent to BAs		252	100%	+25 interviews

* Note: to qualify, the BA must have made an investment within the last three years. This also does not include second mailings to the VCR and the non-BIS BAs.

In contrast, the selection of the VC sample was less painstaking. To obtain a representative sample, this study used the comprehensive listing of UK VCs in *The Venture Capital Report Guide to Venture Capital in the UK & Europe*, which was written by this study's non-academic advisor, Lucius Cary (i.e. Cary, 1995). Out of the 98 VC entries listed, the 56 firms who stated that they had done at least a few start-up/early stage deals were contacted by postal questionnaire, this comprised 57% of all VC firms listed. Luckily, at the time of mailing, the next VCR guide was being compiled and so an additional 8 VCs were located. Thus, in total, 64 different VC firms in the UK were sent a postal questionnaire, however, if one includes separately the 17 regional offices of 3i (the largest VC firm in the UK) then a total of 81 different VC firms were reached. Including those VCs interviewed, this means that on average 2.5

VCs were contacted per VC firm, whilst the response rate was (including the interviews) on average 1.5 VCs per firm. Since all those identifiable VC firms in the UK which claimed to have made some start-up/early stage investments were contacted in this study, it is hoped that the sample used is relatively representative of those UK VCs who sometimes invest at the early end of the investment spectrum.

3.2.2 - Face-to-Face Interviews

Since the literature on the investment procedures of BAs and VCs along the full investment process is rather limited, especially pertaining to UK investors, this study sought to conduct some initial exploratory research on the important issues and variables. One-to-one personal interviews were conducted, usually lasting about 60-90 minutes each, with BA and VC investors. It was decided that focused interviews (i.e. semi-structured) would be most appropriate since it was necessary to guide the data collection to those topics hypothesised, whilst also giving the interviewee the liberty to fully express their thoughts on the issues (Yin, 1989; Frankfort-Nachmias & Nachmias, 1992; Alvarez et al., 1997). A crib sheet of questions was, therefore, used to render guidance, and particular attention was paid to the wording and order of the questions so as to avoid potential interview biases (Bryman, 1989; Easterby-Smith, 1991). In addition, it was decided that the interviews should be tape recorded so that they could be transcribed. This, of course, may make respondents more hesitant about answering sensitive questions, but interviewees were told at the beginning of each interview that the tape could be turned off at anytime, and over the five months of interviews some interviewees elected to use this option. After piloting the questions with the three research

supervisors, employees of VCR, and two BAs known personally, BAs were contacted through referral from two BISs.

In total, 25 BAs from around the UK were interviewed face-to-face in their homes or places of employment, after which, 15 VCs were interviewed in London, as Table 3.2 shows. (Also see Appendix B for these investors' characteristics.)

Table 3.2 - Location of the 40 Investors Personally Interviewed

Location in UK	Number of BAs interviewed	Number of VCs interviewed
London	9	15
Devon	5	0
Oxfordshire	2	0
Essex	1	0
Hampshire	1	0
Kent	1	0
Middlesex	1	0
Somerset	1	0
Suffolk	1	0
Surrey	1	0
West Sussex	1	0
Worcester	1	0
Total	25	15

Although invaluable in rendering a deep understanding of BA and VC investment processes, conducting the interviews was time consuming and involved over 3000 miles of travel around the UK. However, the interviews gave the opportunity to test the draft version of the postal questionnaire which was originally formulated using variables identified in the literature, and subsequently modified by the interview responses. The formulation of the questionnaire is now analysed in greater depth.

3.2.3 - Questionnaires

To further test the research hypotheses, postal questionnaires, with mostly structured questions, were distributed to 252 BAs and 192 VCs. Due to the large-scale of the distribution and the low response rates of past US and UK surveys, particular care was taken in formulating and distributing the questionnaires.

3.2.3(A) - Generating the Questionnaire

The first draft of the postal questionnaire was based on the variables of importance identified in the BA and VC literature. Although the respective variables tested and their literary sources will not be analysed here, when each variable is discussed in detail in Chapters 4-7, the literature in which it was mentioned previously will be clearly addressed. After piloting the postal questionnaire to BAs and VCs interviewed, their recommendations were used to extensively modify the questionnaire to ensure a healthy postal response rate. In particular, it was decided to measure the investment criteria of investors by utilising a 5 point Likert-scale, which is one of the most common scales used in questionnaires (Easterby-Smith et al., 1991), and has also been employed in past VC research studies (Carter & Van Auken, 1994; MacMillan et al., 1985; Duxbury et al., 1996; Manigart et al., 1997). To check for consistency, this study also asked respondents to rank their two most important investment criteria (MacMillan et al., 1985), and the order of the variables was changed on half the questionnaires distributed. For the rest of the questionnaire, it was ensured that the questions were short, concise, clear, and usually close-ended to encourage accurate responses (Jobber, 1989; Fowler, 1993; Freear & Wetzel, 1989). A copy of the questionnaire can be seen in Appendix A.

3.2.3(B) - Piloting the Questionnaire

Before the final postal questionnaire was distributed, it was pilot tested. This is of particular importance to ensure a high response rate and to allow questions to be refined until the researcher is convinced of their validity (Easterby-Smith et al., 1991). In fact, Muzyka et al. (1995) stress the need to build upon existing knowledge in preparing questions for a postal questionnaire and to make sure that they have been appropriately vetted. They claim that this is of particular importance in the VC research field since many VCs have been saturated with questionnaires which “appear to be: less than comprehensive, using ‘inappropriate’ (not practitioner-based) concepts and/or language, repeating the collection of information which they believe to be in the literature.” (p.16) Since this study’s postal questionnaire had been pilot tested on the 40 interviewees, the staff of a BIS, and on the three research supervisors (including one who has been an entrepreneur, a BA, and is now a VC), its readiness for postal distribution was assured.

3.2.3(C) - Encouraging the Target Group to Respond

Since the VC community in the UK (and to a lesser degree, the BA community associated with BISs) has already been overwhelmed with postal questionnaires, this study wanted to present the research in such a way that it might avoid the low response rates many BA & VC researchers have experienced in the past (Haar et al., 1988; Stevenson & Coveney, 1994). Therefore, recommendations from Jobber (1989), Bryman (1989), Easterby-Smith et al. (1991), and Emory (1976) were followed to encourage questionnaire responses. In particular, they emphasise the inclusion and adoption of: a cover letter (preferably personalised), brief instructions, double-sided printing, sponsorship, good format and design, perceived usefulness to target respondent, good

content, and minor time perception for completion. Thus, this study employed the following:

- A personalised cover letter was enclosed with each questionnaire, clearly expressing:
 - the research need,
 - the difficulty of finding respondents,
 - the minor time commitment required,
 - full confidentiality and/or anonymity ,
 - a promise for a copy of the research results (to be distributed after completion of doctorate),
 - the researcher's and the supervisor's telephone numbers in case the respondent had any questions.
- Financial backing received from the British Venture Capital Association (BVCA) (The Tony Lorenz Memorial Trust Fund) was promoted in the cover letter and on the cover to the questionnaire.
- The Oxford University name and the logos of the business school and the researcher's college were prominently displayed to gain the respondent's attention.
- BISs were utilised as a referral mechanism to gain BA participation.
- The actual questionnaire was printed on a single page of paper (double-sided) to appear shorter and less time-intensive.
- The questions were short, concise, and clear.
- A pre-stamped and pre-addressed return envelope was enclosed.
- A number of BA investors were telephoned at the time of mailing, told about the research study, and asked for their co-operation on the postal questionnaire.

These methods were successful, as the healthy response rate, described next, attests.

3.2.3(D) - Response Rates

Due to the confidential nature of many investments, the time consuming nature of survey instruments for the respondents and researchers, and the expense of conducting large-scale research, “financial research on entrepreneurial firms has traditionally used small sample sizes and related methodologies, producing for the most part clinical studies on entrepreneurial finance.” (Brophy & Shulman, 1992, p.67). This research study, however, was fortunate to receive relatively high response rates, producing a large sample for analysis, as Table 3.3 shows.

Table 3.3 - Response Rates and the Composition of the Research Sample

	Number of BAs	BAs' response rate	Number of VCs	VCs' response rate	Total
Postal Questionnaire					
Total number of investors targeted	252	100%	192	100%	444
(Those receiving a second mailing)	(59)*	(23.4%)*	(117)	(60.9%)	176
Total number of responses received	130	51.6%	113	58.8%	243
Number of unuseable responses	12	(4.7%)	9	(4.7%)	21
Total number of useable questionnaires	118	46.8%	104	54.2%	222
Interviews					
One-to-one interviews conducted** (those interviewed also filled out an earlier version of the postal questionnaire)	25		15		40
Total number of Investors in this study	143		119		262

* Since the questionnaires were distributed through business introduction services, it was usually not possible to send a second mailing to those BAs not responding. In addition some respondents were from another researcher's database of past respondents, these 21 non-BIS BAs may also partially help to account for the high response rate.

** Note: further one-to-one interviews were conducted with BIS staff and academics in the field.

However, those targeted investors which did not respond may create a non-response bias. To determine whether these investors are in general different from those responding, Chapter 7.1.1 conducts a comparison between early and later respondents and finds little evidence of material differences between the two.

With such a healthy response rate from both investor types it would be easy to attribute this to the survey methods employed. However, the responses to a survey must also reflect the environment at the time of the survey (Brophy & Shulman, 1992). This survey may have been fortunate to have been distributed at a relatively non-turbulent time of the year in the UK financial environment and at a time of healthy economic prosperity (October 1996). Yet, even with this in mind, this study's response rate exceeds most of those of past academic studies, especially those in the BA field, as Table 3.4 shows.

Table 3.4 - Summary of the Questionnaire Response Rates and Sample Sizes of Past BA Studies*

Academic Business Angel Studies (and method of postal questionnaire contact of BAs)	Country of Study	Total Questionnaire Response Rate %	Number of BA Respondents
<u>BJSs as Referrer to BAs</u>			
Van Osnabrugge (1998)	UK	52%	143
Coveney (1996) & Stevenson & Coveney (1994)	UK	10%	220 active & non-corporate BAs
Mason & Chaloner (1992)	UK	33%	78
Mason et al. (1991b) & Mason & Harrison (1993b)	UK	17%	53
<u>Survey of Wealthy Individuals</u>			
Freear et al. (1992a) (1994a)	US	5%	146
Haar et al. (1988)	US	10%	130
<u>Snowball Technique of BAs</u>			
Landstrom (1995)	Sweden	56%	58
Short & Riding (1989)	Canada	44%	25
Wetzel (1983)	US	---	133
<u>Investee Firms as BA Informants</u>			
Aram (1989)	US	multi-stage % (reported by BAs)	55
Ehrlich et al. (1994) (as part of a BA/VC comparison study)	US	49% (investee firms reporting on BAs)	25 investee firms
Freear et al. (1994b);	US	?% (investee firms reporting on BAs)	124 investee firms
Freear & Wetzel (1988) (1990)			
Freear & Wetzel (1989)	US	26% (investee firms reporting on BAs)	83 investee firms
Harrison & Mason (1992a) (as part of a BA/VC comparison study)	UK	?% (investee firms reporting on BAs)	36 investee firms
<u>Multiple Methods to BA Contact</u>			
Fiet (1991)(1995a,b) (as part of a BA/VC comparison study)	US	10%	83
KPMG (1992)	Scotland	---	38
Landstrom (1993)	Sweden	42%	52
Mason et al. (1991a)	UK	24% (only 1-5% were BAs)	86

* Note: some additional studies which used investee firms as respondents were omitted

In the UK and US VC markets, however, the response rate to postal questionnaires has generally been higher than those in the BA market, as Table 3.5 shows.

Table 3.5 - Summary of the Questionnaire Response Rates and Sample Sizes of Past VC Studies*

Academic Venture Capital Studies	Country of Study	Total Questionnaire Response Rate %	Number of VC Respondents
Van Osnabrugge (1998)	UK	59%	119
Manigart et al. (1997) (just UK study)	UK	58%	66
Manigart et al. (1997) (full 5 country study)	Europe	24-58%	208 from 5 countries
Murray & Lott (1992)	UK	53%	40
Muzyka et al. (1993)	Europe	52%	31
Robbie et al. (1997)	UK	71%	77
Sapienza et al. (1996)	UK	43%	76
Wright & Robbie (1995) (1996)	UK	58%	66
Wright et al. (1997)	UK	49%	55
Carter & Van Auken (1994)	US	26%	72
Fiet (1991) (1995a,b) (as part of a BA/VC comparison study)	US	57%	141
Gorman & Sahlman (1989)	US	49%	49
MacMillan et al. (1985)	US	68%	102
MacMillan et al. (1987)	US	30%	67
MacMillan et al. (1988)	US	18%	62
Norton & Tennebaum (1992) (1993)	US	33%	98
Robinson (1987)	US	38%	53
Tyejee & Bruno (1984)	US	??%	41
Ehrlich et al. (1994) (as part of a BA/VC comparison study)	US	49% (investee firms reporting on VCs)	25 investee firms
Harrison & Mason (1992a) (as part of a BA/VC comparison study)	UK	??% (investee firms reporting on VCs)	156 investee firms

* Note: some additional studies which used investee firms as respondents were omitted

One additional explanation for this study's healthy response rates may be the fact that only active investors were targeted. They may have more interest in the research than inactive angels and so may be more prone to completing the survey (Coveney, 1996). Many past studies, especially in the BA field, have targeted investors regardless of their investment activity and may, therefore, have experienced less interest and lower response rates than this study.

3.2.3(E) - Scale of the Research

This research study was fortunate to also have a large number of respondents. As Table 3.4 shows, this research study may possibly be the third largest study conducted on BAs, and the second largest conducted in the UK. The scale of the BA aspect of this research may be further clarified by Mason & Sackett's (1996) finding that 385 BA investments were conducted through BISs over two years from 1 July, 1994 to 30 June, 1996. Since this study collected data from 124 BAs who have invested through a BIS on average 1.38 years ago (from collection date of 1996), it may be 'guesstimated' that this study has data on about 32% (124/385) of those BIS deals of the last two years. However, this assumes that no co-investing existed amongst the BA respondents, which is unlikely, so this percentage will probably be lower, but still significant since all the BAs in this study invested a combined total of £7.8M. Just for the BIS-assisted investments, this study may have data on almost 18% of the total amount funded by BAs through BISs over the last two years (Mason & Sackett, 1996).

The VC aspect of this research was also of a sizeable scale. As Table 3.5 shows, this research study may possibly be the largest academic VC-targeted research study conducted in the UK, and possibly the third largest internationally. However, this does not consider the annual data collected by national VC organisations, such as the BVCA (British Venture Capital Association) in the UK. In addition, if one considers that the VC investments in this study were made, on average, within the last 1.52 years, and they were almost all in the early stage, then their combined investment total of £112.5M may represent almost 70% (£112.5/£161) of the total investment VCs made in early stage firms over the last two years on record (Bank of England, 1996).

Summary

In this section the different methods utilised to collect the research data were discussed, in particular, the use of face-to-face interviews and postal questionnaires. In addition to receiving a healthy response rate on the postal questionnaires, it was shown that the scale of this research study was somewhat notable in comparison to past studies in both the BA and VC fields and in comparison to national BA and VC investment data.

3.3 - Strengthening of the Methodology & Method

To improve upon some deficiencies of past studies, this study employed a number of approaches.

3.3.1 - The Full Investment Process

Unlike past studies, this study analyses and compares the full investment procedures of BAs and VCs. Two studies, Ehrlich et al. (1994) in the US and Harrison & Mason (1992a) in the UK, compared BAs and VCs, but both only concentrated on the post-investment monitoring stages and gathered the information from the investee firms, rather than from the actual investors, as was done in this study. In addition, Fiet (1991; 1995a,b) compare BAs and VCs with data collected from the actual investors, but these studies only analyse their risk preferences and network reliance, rather than their investment procedures.

3.3.2 - Theory Driven

As was previously documented in Chapter 2.2.1, unlike most studies in the entrepreneurship field, this one is heavily based on a theoretical framework. Only a few other studies have utilised agency theory for their BA and VC studies (Fiet, 1991, 1995a, 1995b; Landstrom, 1992; Sapienza et al., 1992; Norton, 1995), but never before for a BA/VC comparison on investment criteria and procedures or by comparing the two agency risk reduction approaches, instead all concentrated on just the principal-agent approach. However, Sapienza et al. (1996) claim in their VC study that adopting such a theoretical framework is most beneficial:

“VC involvement behavior might also be more fully explained and predicted by approaching the issues from new perspectives. For example, one route might be to examine VCs as agents in addition to considering their positions as principals.” (p.466)

This was followed in this study’s theory development, as detailed in Chapter 2.

3.3.3 - Process-Based Analysis

Most BA research, in particular, has in the past focused on the investor rather than on their investment processes, deal or investee firm characteristics (Mason & Harrison, 1996b; Mason et al., 1995). Most studies in the field, therefore, analysed the significance of BAs and their value-added contribution (Mason et al., 1995). Not until recently, a few researchers have started to adopt a more process-based view where the focus is often more on the investment, the investment process and/or the investee firms (Mason & Harrison, 1996b; Mason & Rogers, 1996; Lumme et al., 1996; Mason et al., 1995). This study also took this approach.

3.3.4 - Deal-Specific Analysis

With a greater emphasis on process-based studies, and so greater emphasis on the deal, it is important to collect accurate data which is deal-specific, rather than generalised by an investor across a number of investments (Mason & Rogers, 1996; Lumme et al., 1996). Mason & Harrison (1994) state that:

“the factors which have been identified as ‘deal killers’ have been based on generalised rather than deal specific information. As a result, it is not possible to differentiate between criteria at different stages of the evaluation process (...) it is only with such deal specific information that sensible and appropriate advice can be offered to entrepreneurs seeking to raise finance from the informal venture capital market.” (p.5)

Even in the VC field, Tyebjee & Bruno (1984) and Sandberg et al. (1987) claim that deal-specific research is needed. Thus, this research study adopted the deal-specific approach and asked each respondent to evaluate just one investment they recently made.

3.3.5 - Actual Investments Made (Not Just Preferences)

But to conduct deal-specific and process-based research on entrepreneurial investors, it is also important to analyse actual investments conducted, rather than investment preferences (Mason et al., 1995). Many past research studies have concentrated on investor expectations rather than outcomes (Mason & Harrison, 1996b) and Mason & Harrison (1997) quite accurately state: “as preferences are not a reliable guide to behaviour, it cannot be assumed that the actual investments made by these investors will reflect their preferences.” (p.4) A manager of a BIS supported the importance of interviewing active angels about their actual deals by stating: “A lot of people like to talk a good game, but they don’t actually put money into investments.” (AC1, 25/3/96) In particular, Coveney (1996) also found that active BAs tend to be wealthier and more

entrepreneurial than inactive BAs and so combining the two may render particularly unrepresentative findings. Thus, unlike many studies in the BA and VC fields, this study analyses in great detail the investment characteristics of entrepreneurial opportunities actually funded.

3.3.6 - Triangulation of Research Methods

This research study utilised a number of different approaches to collect information, in particular, a review of the literature, face-to-face interviews, postal questionnaires and guidance from a theoretical framework. As aforementioned, to take such a 'triangulated' approach is not common in the entrepreneurial research environment (Hofer & Bygrave, 1992), especially in the BA field, where many past studies utilised, more often than not, either interviews or questionnaires, rather than both, and the scarce application of theory.

Summary

This section highlighted aspects of this research which hopefully will correct upon some deficiencies of past studies. In particular, its focus on the comparison of BAs and VCs throughout the investment process, its theoretical framework, process-based and deal-specific analysis, concentration on actual investments (rather than preferences), and its triangulation of research methods.

3.4 - Limitations of the Methodology & Method

In order to aid the interpretation of the empirical data presented in the next four chapters, this section will assess a number of limitations of the research approach which need to be considered.

3.4.1 - Post Hoc Rationalisation

First, since investor respondents were asked to think back to the time of investment, the *ex post facto* data gathering techniques (i.e. post hoc rationalisation) used in this study may allow inaccuracies in the recall abilities of their thought processes (Sandberg et al., 1987; Cable & Shane, 1997; Mason & Rogers, 1996) and, therefore, the number and importance of certain factors may be overstated or understated (Sandberg et al., 1987; Hall & Hofer, 1993).

To lessen this potential recall bias, respondents were asked to respond based upon their most recent investment made in an early stage entrepreneurial firm, providing it was made within the last three years. In addition, many of the VCs interviewed physically referred to the extensive records and notes they made at the time of investment, so as to refresh their minds for the interview questions, although it is doubtful that the questionnaire respondents would have taken this approach.

3.4.2 - Self Reporting of Data

Asking respondents to evaluate their own actions and performance clearly has inherent problems (Hall, 1988; Sullivan, 1991). Self-reporting investor respondents could be

influenced by their perception of what is an appropriate or desired response (MacMillan et al., 1985; Landstrom, 1995), and may concentrate more on successful investments, rather than their most recent, as asked (Sandberg et al., 1987; MacMillan et al., 1987). Indeed, a VC who has made 15 investments has potentially more successful deals to choose from than a BA who may have made only 1-2 investments. This is a potential limitation, but it was hoped that cross-examination and guaranteed confidentiality in the interviews and additional anonymity on the postal questionnaires may have lessened any self-reporting biases.

3.4.3 - One-Sided View of the Process: Investors Only

Since this study only collected data from the investors, the full accuracy of the data they provided, especially in regards to their involvement and relationship with the investee firm/entrepreneur, may be circumspect. This may particularly be the case if conflict should exist between the investor and the firm. Harrison & Mason (1992a) state, therefore, that studies from the investors perspective may not be directly comparable with those from the investee firm's perspective. This important factor should be considered whilst analysing the results.

3.4.4 - Comparison with Other Studies

Certain factors may further impede the comparability between different studies. In particular, the 'average' response of comparable studies will differ when they are conducted: in different time periods, with different methodologies, different categorisation of responses (Tyebee & Bruno, 1981; Landstrom, 1993), in different geographical locations (Harrison & Mason, 1992b; Freear et al., 1994a), from different

perspectives (i.e. entrepreneur vs. investor) (Lumme et al., 1996), and with different degrees of heterogeneity within each group (Landstrom, 1993). Thus, inconsistencies between the findings of different studies may at least be attributed to these differences in measures (Sapienza, 1992), the generalisability of the results may be uncertain, and therefore the data comparisons highlighted throughout the data presentation in this research study should be analysed with care. Indeed, this is why the national origin of most of the research studies is clearly cited in this study for the reader.

3.4.5 - Interview and Questionnaire Responses

Both data gathering methods used may create potential biases. In interviews, the appearance and demeanour of the interviewer may create biases in the responses given (Easterby-Smith et al., 1991; Bryman, 1989). Although these may not be present in the postal questionnaire, the self-reporting of data in an unmonitored fashion may create prejudiced responses. In addition, the non-response bias should be considered in postal responses (Freear et al., 1994a). Therefore, Chapter 7.1.1 compares the early questionnaire respondents with the late ones so as to extrapolate information from the latter to those which did not respond at all (Armstrong & Overton, 1977). This comparison found no significant differences for both the BA and VC investors. Despite their advantages (over interviews) of low cost, accessibility, and anonymity, postal questionnaires clearly also have some limitations. However, the adoption of a triangulated data collection approach potentially reduced the biases of both methods in this study.

3.4.6 - Limited Representativeness of Selected Samples

In addition to the actual research methods used, the representativeness of the sample (and therefore also its generalisability) may be limited. First, as has already been addressed in this chapter, the BA sample in particular was one of convenience and, therefore, the accuracy of its data may be restrictive (Freear et al, 1994; Short & Riding, 1989; Landstrom, 1992; Harrison & Mason, 1992b). Second, since BISs were employed to create these convenience samples, the vast majority of BAs in this study utilise these matching networks and, thus, may differ in investment preferences and procedures from the majority of BAs who do not utilise these services (Coveney, 1996; Mason et al, 1995; Harrison & Mason, 1996a). The differences between the BIS and non-BIS BAs in this study will, therefore, be fully addressed in Chapter 7.2.1. Third, there is heterogeneity within both the BA and VC populations which may preclude, to some degree, the generalisation of the research findings (Sweeting, 1991; Landstrom, 1992). To account for this, Chapter 7 will be completely devoted to analysing these intra-group variations, partially to render more insight into the inter-group variations between BAs and VCs which will be presented in Chapters 4-6. Fourth, it should be stressed that most VCs in the UK seldomly invest in early stage entrepreneurial ventures, as Chapter 1.1.3(D) addressed. Therefore, the investment characteristics of the VCs in this study may not necessarily be representative of those of the 'average' VC, who probably conducts MBOs and MBIs, rather than small deals in risky un-established ventures (Robbie et al., 1997). Indeed, it may therefore be possible that what a VC considers early stage, may be considered established by the average BA. More clarity will be rendered to this issue in Chapter 4.4.1 using some empirical data.

Summary

As with all research studies, this one has a number of limitations to consider when analysing the empirical findings. In particular, recall bias, self-reporting of data, the one-sided view of the investment process, and limitations of both the interview and questionnaire approaches were addressed. Additionally, care should be taken to compare the data from this study with that of other works, and the limited representativeness of the research sample should also be considered. Now that the data collection methodology and methods have been reviewed, the data analysis methods will be addressed.

3.5 - Statistical Tests Utilised

To analyse the raw data, this study utilised SPSS statistical software to conduct univariate tests/regressions (parametric) and multivariate regressions (logistic and multiple). Each of these will be described in more detail in this section. In addition, factor analyses, correlations, and basic descriptive statistical tests were employed and their results are shown throughout the data presentation in Chapters 4-7.

3.5.1 - Appropriateness of Parametric Tests

Literature in the entrepreneurship field contains much ambiguity and conflicting evidence as to the appropriateness of parametric versus non-parametric statistical tests (Robinson & Hofer, 1997; Hofer & Bygrave, 1992; Carter and Van Auken, 1994). Consequently, a number of studies rely on the former approach (Carter & Van Auken,

1994; Carter et al., 1997; Norton & Tennebaum, 1992, 1993; Manigart et al., 1997) whilst others rely on the latter (Robbie et al., 1997; Sandberg, 1986; Duxbury et al., 1996), whilst still others utilise both (Ehrlich et al., 1994; Singleton et al., 1997). The primary reason for this disparity is that, although parametric tests tend to be more robust, their theoretical foundation calls for the underlying distribution of their variables to be normal (Robinson & Hofer, 1997). Since this may be a difficult condition to fulfil, especially in the turbulent entrepreneurial environment, some argue that, despite its advantages, parametric tests should be avoided (Hofer & Bygrave, 1992). In addition to the requirement of normal distributions, parametric tests call for the dependent variables to have: equal variances for each sampled population, continuous distributions, independence of observations, and symmetric distributions. Non-parametric tests, however, only require: continuous distributions, independence of observations, and measurement on at least an ordinal scale (Robinson & Hofer, 1997).

Despite their stringent assumptions, parametric tests are often utilised since they are much more robust. Indeed, in the field of psychology, an area of study which has been established for much longer than the entrepreneurship research field and which also examines uncertain and dynamic environments, it is standard practice to use parametric tests (Winer, 1962; McRae, 1994; Long & Manstead, 1997; Wagstaff et al., 1996). In particular, it is accepted custom to utilise parametric tests for likert scale data, even though the psychology field acknowledges that the underlying distributions may not always be normal. In fact, Bryman & Cramer (1990) also advocate the use of the more robust parametric tests, especially since:

“values of the statistics used to analyse samples drawn from populations which have been artificially set up to violate these conditions (of normal distribution and equal variances) have been found not to differ greatly from those for samples which have been drawn from populations which do not violate these conditions.” (p.118)

Thus, following the accepted custom of the field of psychology, and the method adopted in the VC field by Norton & Tennebaum (1992) (1993), Carter & Van Auken (1994), Manigart et al. (1997), and Carter et al. (1997), this research study also utilised parametric tests to analyse the data. Therefore, t-tests were adopted as the primary tool to test inter-group differences.

However, to appease any potential critics of the parametric approach, this study also analysed the data using non-parametric tests (the chi-square) to test for differences in the empirical results between the two approaches, just as was done in Carter & Van Auken (1994). The results show that out of the 67 variables employed to measure differences between BA and VC investors, the non-parametric approach found that two of the variables which the parametric approach claimed significant at the 5% significance level, were in fact only significant at the 10% level. In addition, the non-parametric approach identified an additional four variables as being significantly different between the investor groups. Although none of the variables which differed in statistical significance between these two approaches was central to validating the hypotheses, the use of the non-parametric approach would clearly render even more support to this study's hypotheses. Thus, adopting the parametric approach for this research study could possibly even be perceived as the utilisation of the more conservative approach. Just as was found in Carter & Van Auken (1994), very few differences in this study occurred

between the results generated by the parametric and non-parametric tests, and, therefore, the adoption of the more robust approach was warranted.

Furthermore, throughout the results chapters, the standard deviation of the results is also presented to provide “an indication of the degree of consensus amongst the sample as to the importance of each factor.” (Hall, 1988, p.35) This is another approach taken in this study to present the empirical findings in a understandable and un-ambiguous manner.

3.5.2 - Logistic and Multiple Regressions

In addition to conducting univariate parametric tests throughout the results presentations, Chapters 4-6 will each conclude with a logistic regression (i.e. a logit model) in order to determine which variables of the investment process identified in each chapter can best be used to classify investors as BAs or VCs. This multivariate prediction method, therefore, highlights which variables are most significant in differentiating between the two investor types, and results in a model which can predict, of any sample respondent, the probability (0-100%) of that respondent being a VC. Then in the conclusion of Chapter 7 a multiple regression (ordinary least squares) will be used to determine whether certain heterogeneous factors within both investor types may have affected the overall BA and VC comparisons results. Thus, a logitistic regression may best be employed when the dependent variable (BA or VC) is dichotomous (as in Chapters 4-6), whereas the multiple (OLS) regression is more appropriate when the dependent variable is non-dichotomous (as in Chapter 7) (Gujarati, 1995). To aid the reader, this section will outline the logistic regression analysis and how it differs from the multiple regression method.

In order to determine which independent variables are most significant in predicting the dependent variable, a number of multivariate statistical techniques can be employed (Norusis, 1994). However, when the dependent variable has only two values (i.e. 0 for BA, and 1 for VC), the assumptions necessary for hypothesis testing are necessarily violated. In particular, it is unrealistic to assume that the distribution of errors is normal, and furthermore, with a multiple regression, for instance, the predicted values can not be interpreted as probabilities. However, the logistic regression model can be employed since it is a multivariate technique which requires far fewer assumptions to be satisfied in order to estimate the probability of an event (i.e. dependent variable) occurring.

In a logistic regression model, the probability of an event occurring (i.e. the logistic distribution function) is:

$$\text{Prob (event)} = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X_1 + \dots + \beta_n X_n)}}$$

where β_0 , β_1 , and β_n are coefficients derived from the data, the X_s are the independent variables, and e is the base of the natural logarithms (i.e. 2.718).

For ease of exposition, we can write the logistic distribution function as:

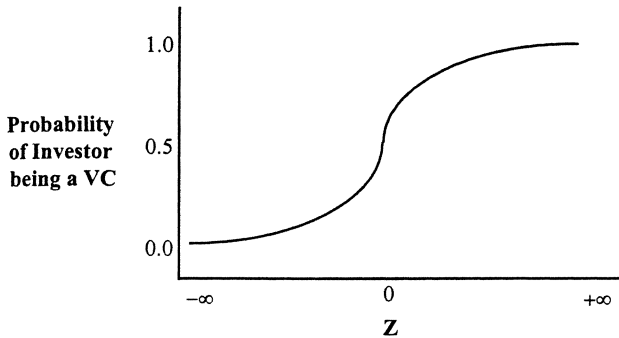
$$P_i = \text{Prob (event)} = \frac{1}{1 + e^{-z}}$$

where $z = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$ (this is also called a logit, as will be described)

In this model, z ranges from $-\infty$ to $+\infty$ and is nonlinearly related to P_i (the probability of an event occurring, in this instance that an investor is a VC) which ranges from 0 to 1.

This relationship is presented in the plot of the logistic regression curve (Sigmoid curve), as shown in Chart 3.4. This non-linear curve is S-shaped and closely resembles the curve obtained when the cumulative probability of the normal distribution is plotted (Norusis, 1994).

Chart 3.4 - Plot of the Logistic Regression Curve



However, although the logistic distribution function is non-linear, this is more apparent than real because it is intrinsically linear (Gujarati, 1995). When one places the probability of an event (P_i) over the probability of an event not occurring ($1 - P_i$), then the resulting fraction: $\left(\frac{P_i}{1 - P_i} \right)$ is called the odds ratio.

If one takes the log of this odds ratio, something interesting happens:

$$L_i = \ln \left(\frac{P_i}{1 - P_i} \right) = z = \beta_0 + \beta_1 X_1 + \dots + \beta_n X_n$$

Here, L_i is the log of the odds ratio and it is linearly related to both X and the parameters. L is called the logit, and hence the model is called a logit model. Thus, although L is linear with X , the probabilities themselves are not. By taking the log of the odds ratio,

the logistic distribution function changes what appears to be a nonlinear model into a linear model which can be estimated in the ordinary least squares (OLS) framework.

However, in this logistic regression, the parameters are estimated using the maximum-likelihood method where the observed results that are most 'likely' are chosen. Conversely, in a linear (OLS) regression the parameters of the model are estimated using the least squares method where regression coefficients are selected which result in the smallest sums of the squared distances between observed and predicted values of the dependent variable (Norusis, 1994).

Empirical examples of the logistic and multiple (OLS) regressions will be presented in the next four chapters in order to render further insight into BA and VC differences in the investment process.

Summary

Although some ambiguity exists in the entrepreneurship literature about which form of statistical tests is most appropriate, the parametric or the non-parametric approach, this study followed the former method since it has been utilised by a number of notable studies in the VC field and is the more robust of the two. However, this study also conducted a comparison between the results of the two approaches and found only minor differences. In addition, the logistic regression model was described, and briefly compared with the multiple linear regression model. The application of both these multivariate models is intended to add more clarity to this study's findings.

3.6 - Conclusion

This chapter has analysed the methodology and methods employed by this study to collect empirical data which addresses the research hypotheses formulated in the last chapter. In particular, it was shown how: prescribed theory, the functionalist paradigm, both qualitative and quantitative approaches, the case study and survey approaches, and the use of convenience samples comprised the methodology. But to actually collect the data, a literature review, face-to-face interviews, and postal questionnaires were the methods employed. However, in addition to listing some of the limitations of past approaches which this study aims to avoid, the research limitations of this study were also addressed. Lastly, the suitability of parametric statistical tests was detailed, as well as the application of two multivariate regression models, the logistic regression and the multiple linear (OLS) regression.

Now that the methodology and methods of the data collection have been documented, the next chapter will use the resulting empirical data to address the first three research hypotheses.

Chapter Four

Testing the Research Hypotheses: Deal Origination, Screening, and Due Diligence Differences Between BAs and VCs

Introduction

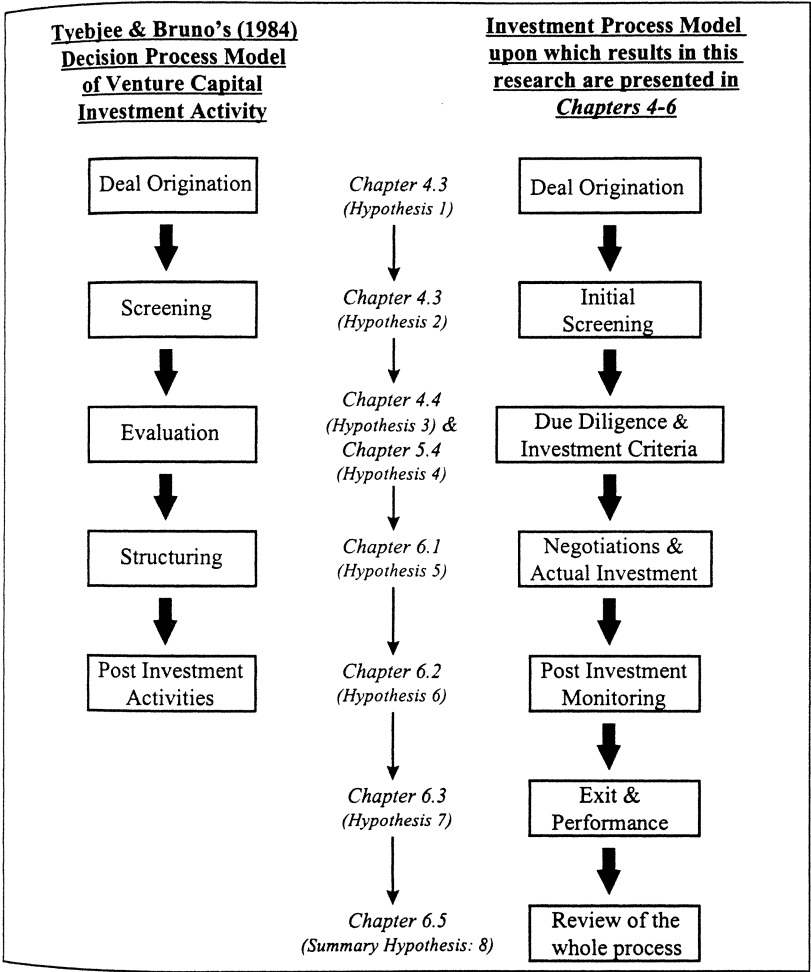
This chapter and Chapters 5 & 6 will analyse the differences between BAs and VCs, as they go through the investment process, to test the hypotheses that the former employ an incomplete contracts approach and the latter a principal-agent approach to deal with agency problems. The stages of the process will act as a convenient framework upon which to address the eight hypotheses that were formulated in Chapter 2. Hypotheses 1-3 will be answered in this chapter, whilst hypothesis 4 and hypotheses 5-8 will be covered in Chapters 5 & 6 respectively. Chapter 7 will then analyse each investor type's intra-group variations. Thus, the first part of the investment process will be addressed in this chapter in the following sections:

- 4.1 - Procedural Investment Model on which Results are Presented
- 4.2 - Differences of the Investors' Characteristics
- 4.3 - Deal Origination and Initial Screening Differences (*Hypotheses 1 & 2*)
- 4.4 - Due Diligence Differences (*Hypothesis 3*)
- 4.5 - Multivariate Analysis of the Investor and Due Diligence Variables
- 4.6 - Conclusion

4.1 - Procedural Investment Model on which Results are Presented

The investment process model that this research study utilised to structure the hypotheses, and will use to present the findings, resembles the one used by Tyebjee & Bruno (1984) and Norton (1995). Essentially, the model they employed followed the deal flow of a venture capital firm, namely the stages in the consideration, scrutiny and disposition of venture investment deals. As this research will show, this framework can also apply to BAs and, therefore, serves as a good structure for a comparison between the two investor types. The following chart gives a detailed comparison of Tyebjee & Bruno's (1984) model and the one used here, and also states where each stage of the model (and each of the eight hypotheses) will be addressed in the next three chapters.

Chart 4.1 - Comparison of Tyebjee & Bruno’s Investment Model to the One Used in this Research to Present the BA and VC Results in Chapters 4-6



4.2 - Differences of the Investors' Characteristics

Before conducting a detailed comparison of the BA and VC procedural investment differences, more insight into the differences between the characteristics of the investor types should be undertaken. More knowledge about their backgrounds may add more insight into their investment practices. Although, for instance, VCs operate within a framework of organisational policy, their subjective judgement as individuals is also important (Wright & Robbie, 1997). Therefore, an analysis will now be conducted of the investor differences in the following:

4.2.1 - Culture

4.2.2 - Education and Age

4.2.3 - Business Background

4.2.4 - Entrepreneurial Experience

4.2.5 - Investment Experience

4.2.1 - Cultural Differences Between UK and US Investors

A number of studies in the BA and VC fields do not overtly consider the subject of culture in their analyses of empirical results. This results in findings from different countries being intermingled without regard to their possible cultural differences. This study will, therefore, now address these differences, and throughout the next three results chapters state the national origin of the research literature that will be compared to this study's empirical UK findings. Hopefully, this approach will add more insight into both the new findings and the past research literature.

In the BA research literature, a number of cultural dissimilarities between BA investors have been noted. In particular, compared to US BAs, UK BAs have been labelled as less sophisticated and professional (Harrison & Mason, 1991a), have slightly higher return expectations (Harrison & Mason, 1992a), are insufficiently inexperienced in identifying worthwhile investment opportunities (Harrison & Mason, 1992a; Mason & Harrison, 1993a), and have different criteria and motivations (Hisrich & O'Kinneide, 1989). Harrison & Mason (1991a) point out:

“it would be foolhardy in view of the different entrepreneurial traditions, fiscal climates and wealth distributions to assume that UK business angels necessarily exhibit similar characteristics, motivations and investment behaviour (as those in the US).” (p.470)

However, a number of cross-cultural similarities have been identified, in particular, that UK BAs are richer than previously thought, invest more, and are more similar to their US counterparts than previously believed (Stevenson & Coveney, 1994).

In the VC research literature, Sapienza et al. (1996) have cautioned that VC comparisons between different markets should be viewed with extreme caution. Whilst, Sapienza et al. (1992) stress that “researchers of venture capital do indeed need to differentiate between markets and cultures in order to take into account the striking dissimilarities of context and practice.” (p.369) But in addition to cultural differences, a number of VC researchers have identified similar investment practices between European and US VCs (Muzyka et al., 1993) and US and UK VCs (Sweeting, 1991). A VC attested to the UK-US similarities: “The fact that an industry sector has been a success in America seems to be a common thread of quite a few things that I have done, I checked it out in America first.” (VC7, 7/6/96)

In addition to the investor differences between countries, the entrepreneurial differences must not be ignored since the investors in part depend upon them. One past problem of the UK VC industry was that there were too few experienced entrepreneurs, capable of turning ideas into growing businesses, willing to risk leaving a secure job to start a new firm. The Bank of England (1990) stated that:

“this reluctance is probably as much cultural as financial. In the United States for example, those who take business risks are often held in high regard, whether they succeed or not; and to have tried and failed is deemed better than not to have tried at all. In European countries, the negative effects of failure are given most weight.” (p.83)

However, Murray (1994) believes that this attitude is slowly changing and that the increasing status of entrepreneurs in the UK in the 1980s was one of the most important factors promoting the growth of the venture capital industry.

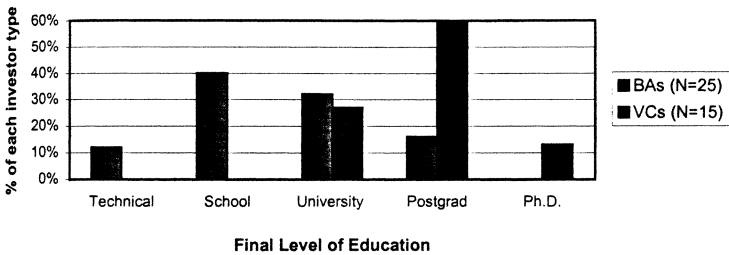
Clearly, cultural differences are important to consider throughout the analysis of the empirical results and past literature.

4.2.2 - Education and Age of the Investor

Due to its potentially sensitive nature on a postal questionnaire (and its potentially adverse effect on the response rate), the education and age of investors was only obtained in the 40 personal interviews conducted. In addition, ‘gender’ was also omitted, partially due to its potentially sensitive nature but also because it is well known that the investment market is male-dominated (only one VC and one BA interviewed were female).

The results show that this sample's VCs have a significantly higher level of formal education than BAs. This might be explained by the agency theory presented in Chapter 2 (i.e. to gain the confidence of VC fund providers). In particular, every VC had a college education, with 60% claiming postgraduate degrees (i.e. MBAs) and 13% PhDs. In comparison, only 16% of BAs had a postgraduate degree and none had a PhD., whilst 40% had school as their final education level. In fact, many of the BAs interviewed were self-made men who left school early to enter business. Chart 4.2 depicts these results.

Chart 4.2 - Final Level of Formal Education for Each Investor Type*



* The difference between the means of the investor types is statistically significant at the <2.5% level.

In addition, the VCs in the sample were significantly younger (at the 1.5% significance level) than BAs, with 43.2 and 49.7 as their respective average ages (median: 44 & 52). However, one limitation of these results may be elaborated by Gorman & Sahlman (1986) who found that more senior managers in a VC firm tend to be more involved in the post-funding process, whilst mid-level managers are generally more involved in the pre-funding process. Although mostly senior managers received questionnaires, they may have passed these on to more junior managers who would be more able to answer the primary focus of the questionnaire - the pre-funding process. Based on a sample size

of 40 (25 BAs and 15 VCs), the results are mentioned here only for background purposes and should be analysed with care.

In contrast to these findings, both the literature in the UK and the US found that BAs were well-educated, whilst the ages of the investors were comparable. In the UK, 74% of BAs were found to be university educated, and, on average, 48-53 years of age (Mason et al., 1991a; Harrison & Mason, 1992b; Stevenson & Coveney, 1994). Due to the influence of higher UK tax rates on the rate of capital and wealth accumulation, Harrison and Mason (1992b) claim that UK BAs, who are predominantly male, are significantly older than their US counterparts.

In the US, BAs are also primarily male, with an average age of 48 years (Wetzel & Freear, 1994, Freear et al., 1991, 1994), and most are well-educated. Different studies found that anywhere from 40% (Aram, 1989) to 94% (Wetzel & Seymour, 1981) of BAs had college degrees, and anywhere from 42% (Aram, 1989) to 56% (Haar et al., 1988; Freear & Wetzel, 1991, 1994) had a graduate education. Canadian and Finnish BAs also have high education levels (Duxbury et al., 1996; Short & Riding, 1989; Lumme et al., 1996). The age and education levels of the VCs in this study are well supported by UK literature (Cary, 1995).

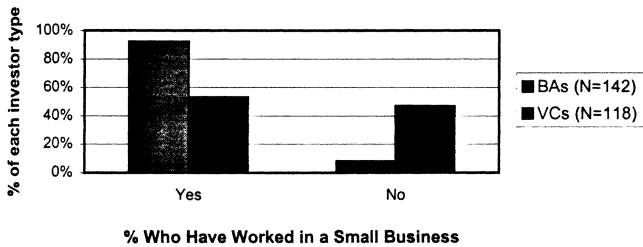
One explanation for this divergence of education findings in this study with those of the literature may be due to the fact that active BAs in the UK have statistically lower education levels than those less active BAs (Coveney, 1996). Since this survey dealt only with active angels who have actually invested, whilst some of the past studies dealt

only with angel preferences (whether they actually invest or not), more light may be thrown upon this divergence.

4.2.3 - Business Background/ Training

Since both investors invest in small firms, this study wanted to attain an impression of how much actual hands-on small business experience each type of investor had. BAs were found to have significantly more small business experience than VCs, with 92% and 52% respectively having worked in a small firm, as Chart 4.3 shows.

Chart 4.3 - Prior Work Experience in a Small Firm?*



* The difference between the means of the investor types is statistically significant at the <1% level.

A number of BAs and VCs supported this by believing that the majority of VCs in the UK were accountants with no experience in running a business. One academic in the area even stated:

“Many venture capitalists in the UK are really bankers and you have to ask where is the general manager experience in all this. I don’t think that you see it. What you see is most venture capitalists doing MBOs and MBIs and that is all pretty good money because they are established businesses and it is all just financial play.” (AC2, 31/5/96)

Both the UK and US literature agree with these findings. In both countries, BAs were found to have experience in small business (Mason & Harrison, 1993b; Wetzel, 1987; Freear & Wetzel, 1989). In fact, Freear & Wetzel (1991) found that 87% of their 38 BA investors had moderate to substantial general business experience. Indeed, contrary to popular belief, few lawyers, doctors, and other professionals (lacking small business experience) are actually BAs (Mason & Harrison, 1990). Even in Sweden, Landstrom (1993) found that 69% of BAs had been business managers of small- or medium- size firms. However, a Finnish study claims that this experience may not actually be that advantageous. Lumme et al. (1996) found that successful BA investors tend to have spent more time working in top and middle management positions in large and medium-sized companies, whilst unsuccessful investors originate more from top management positions in small companies.

Although the UK VC literature lacks in this aspect, the US VC literature clearly shows that VCs typically have little experience in small business, but rather are often recruited straight from a top graduate school in their late twenties and then trained as investors, rather than as business managers (Rea, 1989; Bygrave & Timmons, 1986). Indeed, Rosenstein et al. (1990) found that the entrepreneurs' high expectations of their VCs were often met with disappointment:

"Venture capital board members have great credentials (...) but have no operating experience (...) A typical VC has zero operating experience. Only 40% of their time is working with their portfolio companies once or twice a month. That is not enough time to understand the workings and intricacies of a start-up business." (p.245)

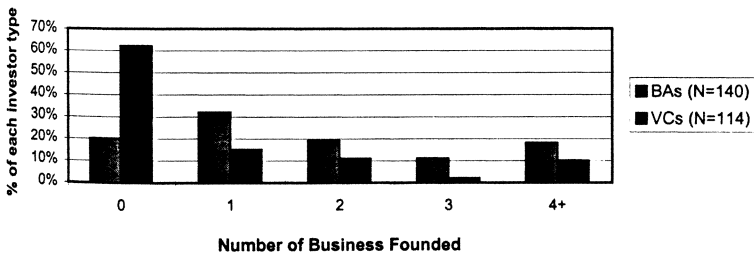
Thus, in general, BAs tend to be more experienced than VCs in managing small firms.

4.2.4 - Entrepreneurial Experience

BAs were found to be significantly more entrepreneurial than VCs with 80% and 38% respectively having started a small firm as an entrepreneur (this excludes firms they invested in as angels, or VC firms they may have started). In fact, as Chart 4.4 shows, 48% of BAs were multiple entrepreneurs, whereas only 27% of VCs were. On average, BAs had started 2.3 firms (median: 1), whilst it was 1 firm (median: 0) for VCs. Indeed, 75% of the BAs interviewed claimed that their principal source of wealth was from their own past business, whilst the remaining 25% earned it from quoted investments. This was also evident by the sizeable number of the BAs who stated that they had started and sold successful firms and had then invested in an unquoted firm to be involved in the entrepreneurial process again. One BA stated his reason for making angel investments:

“Because I have started a number of businesses myself and have never worked for anyone else, I am completely unemployable. So I can understand what is involved in starting a small company since I have done it so many times.” (BA7, 23/2/96)

Chart 4.4 - The Number of Businesses Founded as an Entrepreneur*



* The difference between the means of the investor types is statistically significant at the <1% level.

Both the UK and US literature support this sizeable difference. In the UK, Mason and Harrison (1991) found that 75% of BA had founded at least one firm, and two thirds of

these (i.e. 50% of the total) were multiple founders. Coveney (1996) found that 70% of BAs had started a firm, whilst Stevenson & Coveney (1994) claimed that half had founded at least two or more ventures. In the US, Wetzel & Freear (1994) found that more than half of BAs have entrepreneurial experience, whereas Wetzel & Seymour (1981) and Gaston & Bell (1988) found this number to be higher at 75% and 83% respectively. These percentages are even higher in Finland (Lumme et al., 1996) and Sweden (Landstrom, 1993). Indeed, this experience (i.e. "street smarts") (Freear et al., 1992a, p.379) of starting, managing, and harvesting a successful entrepreneurial firm may render BAs with more empathy for a fellow entrepreneur starting a firm (Freear et al., 1992a; Sullivan, 1991, Wetzel, 1981). It may also explain why those with entrepreneurial experience prefer investing in very early stage ventures (Aram, 1989) and why virgin angels tend to have significantly less entrepreneurial experience (Coveney, 1996). Furthermore, Sullivan (1991) found that entrepreneurs, in general, perceive their downside risk to be less and are more likely to support start-ups.

Unfortunately, the VC literature is very scarce on the entrepreneurial backgrounds of VCs, although there is some indication that VCs have very little entrepreneurial experience. This study's findings are supported by Sapienza et al. (1996) who state:

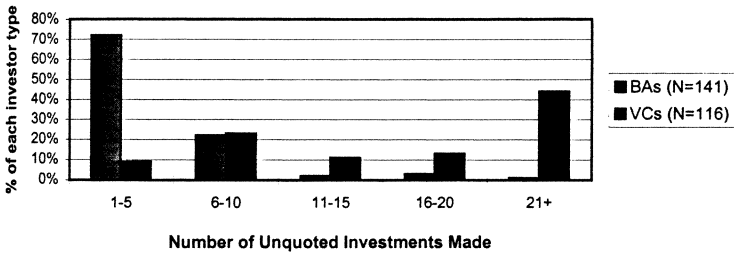
"Anecdotal evidence suggests that if VC's greater experience is as a financier of new ventures rather than as a practitioner in the venture's industry, the danger of resentment on the part of the CEO is great (Sapienza, 1989). Indeed, we heard complaints in interviews with both VCs and entrepreneurs about VCs who were 'financial MBA-types' or who 'never started any business of their own'." (p.448)

Clearly, the literature supports this study's findings that BAs are much more entrepreneurial than VCs.

4.2.5 - Investment Experience

The empirical results show that VCs have made significantly more unquoted investments in their careers than BAs. Excluding outliers in the sample, VCs have invested on average in 23.48 unquoted ventures (32.44 including outliers) (median: 20) and BAs in 4 unquoted ventures (5.26 including outliers) (median: 3). In fact, 55% of BAs had made three or less investments, whereas only 3% of the VCs had. Clearly, BAs tend to be relatively infrequent investors, in contrast to VCs who invest for a living. As Chart 4.5 demonstrates, the differences between the two investors are quite significant.

Chart 4.5 - The Number of Unquoted Investments the Investors Have Made*



* The difference between the means of the investor types is statistically significant at the <1% level.

Both the UK and US literature agree that BAs lack experience and invest infrequently (Mason et al., 1995; Wetzel, 1987; Harrison & Mason, 1991a, 1992b). However in a UK study, Mason & Harrison (1996b) found that about one-third of BAs made just one investment, whereas 71% had made only two. This is a much lower result than was found in this study where the results are 14% and 21% respectively, and the remaining 65% of BAs had made more than two investments in their careers. However, another UK study, Coveney (1996), found that BAs invest on average in 2.4 firms every three years. This higher rate of investment lends more support to this study's findings.

In the US, Freear & Wetzel (1991) found that the mean number of informal investments made over the last five years by BAs was 2.45, and Arum (1989) and Gaston (1989) claim that BAs typically make between 2-3 investments every three years. In Sweden, Landstrom (1993) found that the mean BA portfolio was 3.8 investments, and 35% had made four or more investments over the last 3 years, whereas 28% had made only one or no investments. These studies clearly lend more support to this study's findings.

Unfortunately, no literature exists on the number of unquoted investments made by venture capitalists. However, in the US, Gorman & Sahlman (1989) and MacMillan et al. (1988) found that the average number of years of venture capital experience for VCs was less than 6 years, and 11 years respectively. Clearly, with so many years of average experience, VCs would have been able to invest significantly more than BAs.

Summary

The empirical results show that compared to VCs, BAs have less formal education, more small business and entrepreneurial experience, but less investment experience in unquoted firms. This renders the impression that BAs tend to be more entrepreneurial-manager types, whereas VCs tend to be more financial-investor types. Table 4.1 summarises these primary differences.

Table 4.1 - Summary of the Differences Between the Investors' Characteristics

Investors' Characteristics	BAs	VCs	BAs' S/D*	VCs' S/D*	Statistical Significance Level of Differences between Investors
Age (average) (N=40)	49.8	43.3	9.98	8.79	More for BA at <5% level
Education Level (1=School, 4=PhD)	2.12	3.0	1.30	.79	More for VC at <2.5% level
Worked in small business?(% yes)	92%	53%	.28	.50	More for BA at <1% level
Number of firms founded (avg.)	2.3	1	3.16	1.96	More for BA at <1% level
Number of unquoted investments done (average)	5.2	23.4	6.45	38.32	More for VC at <1% level

*Note: S/D = Standard Deviation

Now that the characteristics of the investors have been analysed, their differences throughout the investment process will be examined next.

4.3 - Deal Origination and Initial Screening Differences

In this first stage of the investment process, investors must find a myriad of potential investments opportunities to screen in order to find one or two which are feasible and match their investment criteria. Only after this deal origination and initial screening can more thorough due diligence ensue. The effectiveness of this initial screening process will, thus, affect the comprehensiveness of the later due diligence process. However, investors in unquoted firms face a number of problems at the initial screening stage. First, unlike quoted securities, unquoted investments rarely have any historic data on dividend level and price movements which may aid in assessment (Dixon, 1991). Second, these investors do not have any firm-specific knowledge (Dixon, 1991). Third, attempts to fix investee firms post-funding appear to rarely work, making the importance of funding top quality firms paramount (Busenitz et al., 1997). To protect their limited resources, investors will, therefore, make sure that filtration only lets through deals which closely match their investment criteria and have a good chance of reaching completion.

Since deal origination and initial screening relate so closely, this section will see if BAs and VCs deal with potential agency risk differently (at these early stages of the investment process) by addressing the following together:

Hypothesis 1: VCs generate and maintain a greater deal flow than BAs

Hypothesis 2: VCs are more selective in their initial screening of investment opportunities than BAs

To thoroughly assess the deal origination and initial screening differences, qualitative interview results and research literature will be used to address the following sections:

4.3.1 - Deal Origination and Initial Screening

4.3.2 - Attrition Rates of Investment Opportunities

4.3.3 - Influence of Referrers

4.3.4 - Sector Specialisation

4.3.1 - Deal Origination and Initial Screening

Since the majority of BAs in this research study were identified through the BIS they used to make an unquoted investment, they were not asked how they acquired initial information about the investment opportunity. Nor was this asked from the VCs since it is well documented that they have extensive referral networks to identify potential investments. Instead, investors interviewed were asked to pick out of two options the one that best described their investment scanning process. The first option asked whether they usually scan investment proposals until they find a good investment, then electing to stop their search to concentrate just on that one proposal. The second inquired whether they continue looking at other proposals even after finding a suitable one, so that they can compare that proposal to others coming in.

The interviews showed that BAs tend to employ the former approach, whilst VCs tend to do a mixture of both. This finding has not yet been detailed in the literature. Thus, BAs tend to scan investments until they find one they like and then conduct little serious comparison with others coming in, partially because they only have a limited deal flow.

This may explain why a number of BAs stated that the first investment proposal they seriously considered was the one they funded. One BA stated: "The investments you might like never come at once, so you just scan them until there is one you like." (BA5, 16/2/96) Whilst another asserted: "When I am looking at one investment, I guess that I am not really open to other ideas, unless they are utterly tantalising." (BA7, 23/2/96)

On the other hand, VCs generally scan investments and compare suitable ones to new opportunities coming in. Since VCs have a greater investment deal flow than BAs, they have the option to conduct such comparisons. Their years of day-to-day experience also enables them to more easily identify a suitable new opportunity when it passes their desk. Of course, VCs are full-time employees and it is their job to make perhaps 3-6 investments per year and, therefore, have to look at several deals at once.

Unlike the BAs identified in this study, most BAs do not utilise business introduction services. Coveney (1996) estimated that only 13% of all BA deals in the UK were done through a BIS, although the actual percentage in the UK may be unknowable (Mason & Harrison, 1997). Instead, informal investors in the UK and the US look for investment opportunities in an ad hoc, unscientific manner, electing to use friends and business associates as referrals, rather than adopting a pro-active search (Mason & Harrison, 1992, 1993b; Wetzel, 1981; Atkin & Esiri, 1993). This may be, in part, because BAs invest only on a part-time basis (Mason & Harrison, 1994). Thus, there appears to be a large degree of 'serendipity' (Mason & Harrison, 1993b, 1996), resembling what Gaston (1989) calls a "giant game of hide-and-seek with everyone blindfolded." (p.4) Studies have, therefore, found that BAs learn of investment opportunities through a network of

friends and family, business associates, accountants, lawyers, and directly from entrepreneurs (Freear & Wetzel, 1991). Because BAs tend to be linked by informal networks of friends and business associates, they are the most effective source (Wetzel, 1983; Freear & Wetzel, 1989, 1991; Haar et al., 1988; Mason & Harrison, 1994; Landstrom, 1993). Bill Wetzel believes that such ad hoc reliance on friends makes the market mechanism for BA financing:

“really very inefficient and random: who knows whom, who mentioned something on the golf course, who talked to his or her accountant lately and who’s looking for money. That marketplace is horribly time-consuming. Next to capital, time is the scarcest resource entrepreneurs have.” (Mason, 1996a, p.27)

In contrast to BAs, VCs have extensive networks of referrers to gain an extensive investment deal flow (Fiet, 1991). Sweeting (1991) states that their “most popular approach was to wait passively for deal proposals to be put to them.” (p.603) These networks may consist of their portfolio companies, their investors, and other venture capital firms, especially those with whom they are interconnected by co-investments (Bygrave & Timmons, 1986). In fact, Murray (1995a) found that:

“Several BVCA survey respondents referred to the industry as a ‘club’ in which everyone knows everyone else (...) and physical concentration of many of the larger organisations within the City of London had meant that the level of inter-firm communication is high.” (p.1084)

In the US, Tyebjee & Bruno (1984) found that the VC community was also highly inbred and that this gave many entrepreneurs the impression that there was substantially less competition between suppliers of capital than would be indicative by the number of funds in the market.

VCs, therefore, have much better information networks than BAs through which they receive a flow of investment proposals. Unfortunately, this flow's inefficiency restricts the amount and quality of the proposals BAs receive.

4.3.2 - Attrition Rates of Investment Opportunities

Regardless of the efficiency of networks and the level of investment deal flow, only a limited number of investments can be made. Each type of investor will experience a rate of opportunity attrition as he/she tries to find one suitable venture which matches his/her investment criteria.

This study's interviews show that by the end of the initial screening and the full due diligence process, VCs have much higher attrition rates than BAs. Although there was some attrition rate variance amongst the BAs, most invested in a minority of the investments seriously considered, although this was still a higher percentage than that of the VCs interviewed. Indeed, the BA responses varied from "I looked at over 300 opportunities to invest in this one investment" (BA18, 27/3/96) to "I don't always have the time to review too many business proposals, so we invest in about half we seriously consider." (BA25, 18/4/96)

In contrast, the study found that most of the VCs interviewed invested in only about 1-3% of investment proposals received. One VC from a small firm summed this up: "We got 300 approaches last year, 150 of those in writing, we met about 15, then about 10 for a second meeting, of those we only did one or two." (VC6, 6/6/96) However, another

VC quickly pointed out that times exist when the quality of the deal flow is higher, so timing can be a concern.

These qualitative findings are supported by the UK and US literature. Conveney (1996) found in a UK study that BAs typically receive 36 investment proposals per year, are interested in about 8 of those, and offer to invest in 2 of them. Whilst, Harrison and Mason (1992b) discovered that BAs in the UK actually invest in almost 7% of investments opportunities received. However, studies in the US and Sweden have shown even higher acceptance rates (Gaston, 1989; Landstrom, 1993). In the VC market the initial screening process is even more severe (Sweeting, 1991). Dixon (1991) found in a UK study that 75% of proposals were rejected at the initial screening stage, with a further 20% rejected during the due diligence process. On average, only 3.4% of the proposals received obtained funding.

Clearly, compared to BAs, VCs have a greater deal flow of investment proposals and a lower acceptance rate as a result.

4.3.3 - Influence of Referrers

Since BA and VC investors face poorly defined environments within which to locate investment deals, the typical venture they seek is often too small to be readily identifiable. For this reason, intermediaries play an important role in matching investors with ventures seeking funds (Tyebjee & Bruno, 1984). Thus, the impact of different types of referrers on the deal acceptance and funding rates of proposals is important.

In this study, a number of BAs stated that they trusted their BIS as a referrer whilst others trusted friends and other BAs more as sources of investment opportunities. A number of BAs met other BAs through deals and now preferred to co-invest with them on other investments they referred to each other. One BA stated that he invested in a venture because "it was referred to me by someone whom I trusted from the introduction service. If I had studied that balance sheet more closely, I would not have invested in it, but then I would have lost 3 years of quite good fun." (BA16, 16/3/96)

Similarly, VCs place much more weight on referrals from people they know and trust, and also tend to invest mostly in proposals passed on by those referrers. Proposals from anonymous referrers (i.e. cold calls) are rarely even considered, and almost never funded. Since most of these are ignored from the start, this may help explain the high attrition rates (i.e. 1-3% of proposals receive funding) detailed in the last section. The importance of different referral sources seemed to vary amongst the VCs interviewed. Some preferred referrals from entrepreneurs with whom they have worked before, corporate financiers, and accounting firms, whilst others favoured those from banks, lawyers and even from industrialists. The dispersion in reliance on accounting firms seemed to be considerable. One VC emphasised that the referral source is clearly a means of self-selection:

"Obviously, when someone who you have known for quite a while and you respect their judgement, refers something to you, you tend to put more credibility on that than some business plan that just arrived from an accounting firm or law firm who probably don't understand the business anyway." (VC10, 10/6/96)

The literature confirms that the referral source influences the BA's and VC's impression of the investment opportunity (Mason & Rogers, 1996; Hall & Hofer, 1993). The BA literature noted to some degree that the rejection rates at the initial screening stage are associated with the referral source (Riding et al., 1995), implying that the closer the referee is to the referrer, the more likely that they will invest (Haar et al., 1988). In a US study, friends, business associates and lead investors were seen as the three most productive sources for BAs, whilst attorneys, accountants, bankers and gatekeepers were the least productive sources (Freear et al., 1992a; Freear & Wetzel, 1991). These results were similar in the UK context (Harrison & Mason, 1991a).

In addition to their usefulness in screening the business as a whole, Norton (1995) believes that BAs used these networks of trust for agency cost concerns about the entrepreneur. However, despite their benefits, these social networks are also inefficient in nature (Mason & Harrison, 1993b). Coveney (1996) found that due to their inefficiencies, 32% of BAs cited the lack of reliable information flows as restricting their activity, whilst KPMG (1992) believed their ineffectiveness restricts the level of BA investment in Scotland.

In the VC literature, the importance of referrals as a positive 'signal' of quality to VCs has been well documented (Wilson, 1985; Tyebjee & Bruno, 1984; Norton, 1995). Both in the UK and the US, referrals from other VC firms and accountants are the primary referral sources (Tyebjee & Bruno, 1984; Murray, 1995a).

Both BAs and VCs, thus, rely on networks (formal and informal) of referrers to gain and screen investment proposals. However, the networks that VCs employ are much more efficient and formal than those used by BAs.

4.3.4 - Sector Specialisation

In addition to referral networks, another way to screen investment proposals is to specialise in a limited number of areas and screen only opportunities in those areas (of expertise). This reduces the amount of initial screening necessary (Tyebjee & Bruno, 1984).

The interviews showed that BAs are usually quite open-minded about the industry sectors in which they consider investment. Their 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.

Conversely, VCs are usually only interested in investing in one or two areas, and many felt that they were more constrained in what sectors they could invest in by what was prescribed by their fund. Many VCs stated that their specialisation strategies allow them to assess proposals with a better information base of the particular industry. In addition, most referrals from colleagues were for opportunities in their field(s) of specialisation.

One VC stated:

“Because we are specialists within the market, we have strong prejudices about where we should and shouldn’t be putting money, and because we have points of view, it is like magnetism, because people know we have a certain point of view. Very few biotech firms call us up, we get almost nothing here that is not on target in principle. 99.9% of things that come across our desk are within scope. To me that shows how specialisation works well.” (VC9, 10/6/96)

In the BA literature, Mason et al. (1995) also discovered much industry sector diversity in their UK research, whilst Freear et al. (1996) believe that BAs in the US, and Canada prefer investing in high technology and manufacturing ventures. However, in a Swedish study, Landstrom (1993) found that BAs who work on a specialisation strategy receive fewer investment proposals, accept a higher percentage of those, and rely less on an evaluation of the entrepreneur than on an evaluation of the firm’s market and technology, compared to more diversified investors. Thus, some uncertainty appears in the literature as to the degree of specialisation by BAs.

Conversely, the VC literature in the UK and US documents quite thoroughly that the majority of VCs tend to specialise according to geographical area, industry, and financing stage (Norton & Tennebaum, 1993a; Norton, 1995; Tyebjee & Bruno, 1984) and their portfolios tend to be narrowly focused rather than well diversified (Bygrave, 1987; Norton & Tennebaum, 1993a; Busenitz et al., 1997). Although, Landstrom (1995) found that Swedish VCs tend to specialise to a much lower degree.

Unfortunately, one consequence that Gupta & Sapienza (1988) found of employing a specialisation and lower diversification strategy in early stage financing of small firms

was a lower level of performance. Inability to diversify the risks of small high-risk firms across a well balanced portfolio was the clear reason. However, in practice, most VCs do not attempt to actively diversify their portfolios and 83% of a UK sample were found to evaluate a new project's risk in isolation, rather than in terms of the effect on the portfolio's risk (Hall, 1988).

Although both BAs and VCs do not usually employ a diversified investment strategy, VCs tend to specialise much more than BAs. By building themselves a stronger knowledge base upon which to evaluate the viability of investment proposals, a specialisation strategy is one of the ways in which VCs try to ease the initial screening process in order to select higher quality proposals for the subsequent due diligence process.

Summary

VCs are much more efficient than BAs in the deal origination and initial screening processes. Compared to their informal counterparts, formal venture capital investors have more structured networks of referrers to render them a greater deal flow that is also of a higher quality. Thus, VCs have more and better proposals to choose from compared to BAs, and, therefore, have a higher attrition rate (after the full due diligence process is completed). To further increase their effectiveness in the initial screening process, VCs also tend to specialise more in certain industry sectors than BAs, which benefits their selection procedures. As agency theory might predict, VCs are much more professional and efficient in the deal origination and initial screening processes than BAs. We may conclude that both of the following are *true*:

Hypothesis 1: VCs generate and maintain a greater deal flow than BAs

Hypothesis 2: VCs are more selective in their initial screening of investment opportunities than BAs

We will now look at the next screening stage (the due diligence stage) to see whether these differences between VCs and BAs persist.

4.4 - Due Diligence Differences

In this section, a number of different components of the due diligence process will be compared between BAs and VCs so that the third hypothesis can be addressed:

Hypothesis 3 - VCs conduct more pre-investment due diligence than BAs.

However, before a detailed comparison can be conducted of its components, a brief overview of the due diligence process will be undertaken.

The due diligence stage aims to verify the facts of the business opportunities which successfully got through the initial screening stage. This verification process consists of checking the accuracy of business plans, audited accounts and management accounts, getting replies to warranty and other standard questionnaires, patent searches, and technical studies. Clearly, unpublished accounting information and subjective information are important (Wright & Robbie, 1996). These data are collected by ringing customers, suppliers, solicitors, bankers, and checking trade journals. It emphasises understanding and quantifying the risk of the proposed deal rather than the upside (Rigby, 1997).

The due diligence process clearly intends to be tough on investment proposals. Dixon (1991) estimated that for VC investment, only about 10% of proposals make it past the initial screening stage to the due diligence process, and that only 10% of those thoroughly investigated received funding. Indeed, the whole point of this practice is to discover potential problems and so eliminate unsuitable proposals from further

contention. This may be especially important in a start-up situation where the venture has no track record or asset base and the market opportunity and competitive advantage of a product or service needs to be verified. In large transactions of more established firms, external third parties (such as an accounting firm) might be utilised to prepare a due diligence report. Such a report would be underwritten by the accountant's professional indemnity insurance which is an important mitigation of risk for a potential investor who is accountable to others (i.e. VCs) (Rigby, 1997). But VCs primarily use these accountant's reports to verify and validate information in their own due diligence reports (Wright & Robbie, 1996).

Most investors realise that conducting thorough due diligence can be a long and difficult process and therefore conduct it only when they are very serious about a proposal. One BA summed up this troublesome nature:

"It is fair to say that the due diligence process is the hardest thing that you have to do, to actually check out everything they say is true, that the market is there, that they have the necessary skills and background to do what they say they are going to do, that is the hardest bit and that is general regardless of what you invest in." (BA11, 19/3/96)

Yet, despite its difficulties, avoiding bad investments is still more important than hitting 'home-runs' in order to achieve attractive investment rates of return (Benjamin & Margulis, 1996). Thus, the importance of the due diligence process can not be over-emphasised. One of the VCs interviewed summed this up:

"Venture capital is a bit like a marriage. You can do as much as you can beforehand to try to minimise the risk, but obviously you can't. But if you are fairly sure that you are not going to get along with someone, it would be fairly silly to go in, because you can't get out again and get your money back." (VC11, 10/6/96)

Therefore, investors often build many filters into their venture capital investment processes. It is the differences between a number of these individual filters used by BAs and VCs that will now be analysed in the first such direct-comparison study of its kind. This will give further insight into whether BAs and VCs employ different approaches to reduce agency problems when investing in small firms. The comprehensiveness of each investor's due diligence process will be assessed on the following criteria:

- 4.4.1 - Stage and Size of the Venture
- 4.4.2 - Sector Experience of Investor
- 4.4.3 - Sector Research by Investor
- 4.4.4 - Extent of Pre-Investment Contact with Entrepreneur
- 4.4.5 - Independent References on the Entrepreneur
- 4.4.6 - Analysis of Financial Projections
- 4.4.7 - Business Plan Comprehensiveness Demanded before Investment
- 4.4.8 - Research Costs Incurred
- 4.4.9 - Documentation by Investor
- 4.4.10 - Size of Investor's Decision-Making Group
- 4.4.11 - Time and Length of Investment Process

4.4.1 - Stage and Size of the Venture

Early stage firms have many inherent risks which the due diligence process needs to expose. For instance, these firms are less likely to have established relationships with buyers, distributors, suppliers, and other business associates. They may operate with skeleton staffs, positions unfilled and responsibilities undefined, and the CEOs

(entrepreneurs) may still be untested in the industry (Sapienza, 1992). Clearly, investigating early stage business opportunities can be challenging.

One way to ease the due diligence process and partially reduce uncertainty is to invest in less-risky ventures, whose characteristics are more easily verifiable. Thus, funding later-stage entrepreneurial firms with greater total capitalisation values might be employed. Technically, these two criteria might be followed earlier in the initial screening process, but they are analysed here to add more insight into the firms on which due diligence is conducted.

Since this research study concentrated on start-up and early stage entrepreneurial firms, investors were asked to assess their last investment of this type. Therefore, it must be noted that although a preference for these early stage firms is inherent for BAs, it is unusual for VCs. This will be further addressed later.

The majority of the BAs interviewed preferred start-up and early stage financing, although responses varied across the whole spectrum. In particular, a number of BAs stated that they preferred early stage firms because it was really the only stage "in which they can get a piece of the action, before being priced out of the market." (BA2, 8/2/96)

Another rationalised his preference by stating:

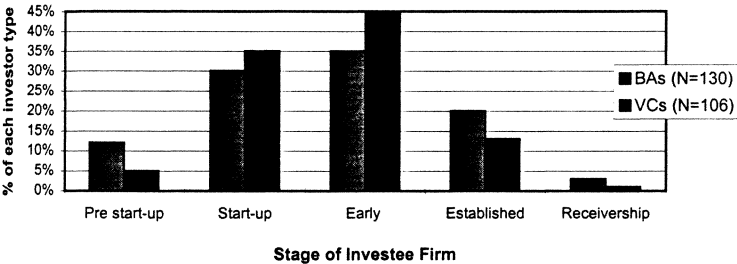
"I prefer start-ups and early stage firms because they are more of a gamble, more speculative. I suppose that I also have doubts how anyone who is quite advanced in their business can't raise money from their bank. If it is a sufficiently good business, anyone should be willing to give them money, and business angels are usually of last resort." (BA24, 11/4/96)

However, another BA expressed his dislike of early stage investments:

“I prefer established businesses because they have entrepreneurs that are committed to it and have gone through the tough times and stuck with it. Besides, I am not really looking for high risk, high return investments, I don’t need that type of risk or that type of return. I already have more than enough funds, so if I were to double my assets, it wouldn’t make any difference to my lifestyle.” (BA20, 29/3/96)

Despite this divergence, most BAs preferred non-established firms. Chart 4.6 shows that 30% of BAs invested in start-up firms and 35% in early stage firms.

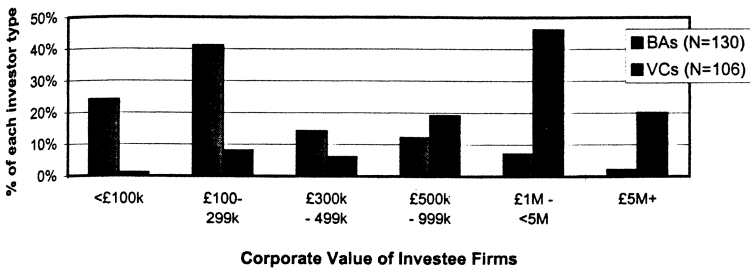
Chart 4.6 - The Stage of the Investee Firms in this Study per Investor Type*



* Note: the postal questionnaire specifically asked respondents to preferably discuss a start-up/early stage investment (which is why there is no significant difference between the two investor types in this sample). Thus, these data on the investment stages are especially not representative of typical VC investments.

Contrary to BAs, the majority of VCs do not invest in start-up and early stage firms, and when they do (as is shown in Chart 4.6) these firms are much larger than those of BAs (as is shown in Chart 4.7). This may add limited support to the concern (mentioned in Chapter 3.4.6) that BAs and VCs may hold different views of the typical stages a company’s development. Indeed, the average corporate value of firms funded by BAs was £288,819 (median: £200,000) (£625,659 including five outliers), whilst it was £3,254,936 (median: £1,537,000) for VCs.

Chart 4.7 - Full Corporate Value of the Investee Firms*



* The difference between the means of the investor types is statistically significant at the <1% level. (Each firm's corporate value was calculated by dividing each investor's investment value by their equity percentage in the firm)

Due to the early stage emphasis of this research study, many VC funds listed in *The Venture Capital Report Guide to Venture Capital in the UK & Europe* (Cary, 1995) had to be omitted from the study. In fact, many of the 15 VCs interviewed expressed surprise that I was able to find any VCs at all (apart from them) who were not exclusively involved in later-stage investments and MBOs. Actually, only a few of the VCs interviewed specialise in early stage investments, whilst most in this survey elect to invest across the range. Most of these firms prefer not to invest in too many early stage firms, especially when the investment fund has been established for some years and the funds realisation is not too far away. One VC summed this up:

“The stage that we prefer to invest in really depends on the life of the fund. In the early years of a new fund, we will consider many more early stage investments than later on. You could start another fund for early stage investments, but then you get a conflict of interest deciding what fund to put the investment into, so people tend not to do that.” (VC5, 6/6/96)

Furthermore, as was addressed in Chapter 1.1.2(D), many of the VCs interviewed stated that early stage deals were unattractive to them for a number of reasons, including their:

disproportionately large appraisal costs, more difficult profit generating opportunities, poor trackrecords, smaller size relative to larger funds, heavy reliance upon one person (entrepreneur), and the VCs' inexperience with these types of investments.

The literature in the UK and the US also acknowledges the BA's preference for investing in seed, start-up, and early stage ventures (Freear & Wetzel, 1989; Mason & Harrison 1996b). In fact, the stage of financing can be a very important non-financial consideration factor for BAs willing to invest (Freear et al., 1994a) and BAs become less likely to pursue investment in a firm as its size (i.e. sales and employees) increases (Wetzel & Wilson, 1985). UK evidence shows that around 50-60% of BAs invest in start-ups, or other early stage ventures (Mason & Sackett, 1996; Mason & Harrison, 1996b), which is similar to the 55-72% found in the US (Freear et al., 1995b; Freear & Wetzel, 1989, 1991; Haar et al., 1988; Aram, 1989). However, in Sweden, Landstrom (1993) found that BAs prefer to finance established firms.

Compared to BAs, VCs in both the UK and the US literature have a lower propensity to finance non-established firms (Freear & Wetzel, 1990; Wetzel, 1996; Woolfman, 1993; Ehrlich et al., 1994; Haar et al., 1988, Freear et al., 1995b) and appear to have a shorter exit horizon and more risk aversion than BAs (Freear & Wetzel, 1990). However, Sapienza et al. (1996) found in their research sample that VCs in the US tend to have a higher percentage of early stage ventures (43%) than VCs in the UK (27%). However, this percentage for VC investors in the UK appears very high since the Bank of England (1996) found that only 4% of VC funds in the UK are invested in early stage ventures.

BAs and VCs tend to serve different stages of firms and distinctly different size categories of growth firms (Wetzel & Wilson, 1985), as was shown in Chapter 1. Freeear et al. (1991) found in the US that with respect to total company revenue, 32% of VC-funded firms estimated revenues between \$5-20M, as opposed to only 16% of BA-funded firms. Chart 4.7 also clarifies this relationship. Furthermore, although VCs in this study were asked to, and did, give responses based on their early stage investments, the average corporate value of their 'early stage' deals still overwhelms that of the BAs. This discrepancy probably increases if the more established ventures that VCs usually fund are considered. These findings, therefore, indicate that BA and VC investors may play a complimentary role in the funding of entrepreneurial firms, where BAs fund the start-up ventures that VCs will eventually finance when they are more established (Freeear et al., 1995b). This was also echoed with some frustration by one of the BAs interviewed:

"Venture capitalists will stand at the edge of the swimming pool with you, let you and some other private investors jump in first to test the waters, then once we are all swimming comfortably, the venture capitalists will come in with one heck of a splash!" (BA14, 25/3/96)

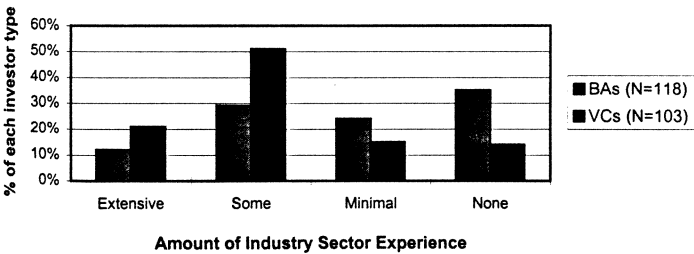
Clearly, compared to BAs, VCs elect to finance ventures which are larger and more established. This may imply that VCs tend to finance less risky firms, which may also be more easily researched for funding purposes.

Now that the characteristics of the firms upon which due diligence is conducted have been clarified, a closer look at different components of the due diligence process will be undertaken.

4.4.2 - Sector Experience of Investor

The experience of the investors in the industry sector of the investee firm was measured to determine how strong an information base they have upon which to conduct due diligence. The results show that VCs have significantly more prior industry sector experience than BAs, with 89% and 41% of the investors respectively claiming to have ‘some’ or extensive’ experience, whilst 36% of the BAs and only 14% of the VCs admitted to having no sector experience. Chart 4.8 depicts this. One possible explanation may be that because VCs tend to specialise more than BAs, they also have more experience. However, many of the BAs stated that they will invest in a firm if they understand just the core/generic workings of the business, rather than the specific sector area. One BA even stated his apathy about the industry sector: “Although I have invested in widely differing markets, the companies all seem to have similar problems. I don’t necessarily need experience in the (company’s sector), as long as I think that I can add value.” (BA4, 16/2/96)

Chart 4.8 - Amount of Investor’s Experience in the Investee Firm’s Industry Sector*



* The difference between the means of the investor types is statistically significant at the <1% level.

Since it has been well documented in the literature that BAs have a preference for investing in sectors in which they have experience (Harrison & Mason, 1990, 1992a;

Mason et al., 1991a), and that they believe this experience to be one of their most important investment contributions (Mason et al., 1995; Coveney, 1996), we might have expected BAs to have high levels of experience in the industry sectors of the ventures they finance.

However, there are a number of contrasting views on this in the literature. A number of UK and US studies found that BAs possessed industry sector experience in only about 30-35% of their investments (Mason et al., 1995, Mason & Rogers, 1996; Kelly & Hay, 1996; Stevenson & Coveney, 1994; Haar et al., 1988). Yet, in the US, Wetzel (1983) noted that BAs' principal investment criterion was to invest in sectors they understood well, Freear et al. (1995b) claim that BAs may tend to invest in fields with which they are familiar, and Aram (1989) found that BAs tend to have worked in ventures similar to the ones in which they invest. In Sweden, Landstrom (1995) found that BAs' investment decisions relate highly to their familiarity with the venture's sector, whilst in Canada, MacDonald (1991) claims that two-thirds of BAs who were entrepreneurs invest in the same industry in which they founded a company. These contrasting views are even evident in BA/VC comparison literature. Ehrlich et al. (1994) claim that both BAs and VCs prefer to fund ventures in which they have experience, whilst Haar et al. (1988) found that this is much less appealing to BAs.

In contrast to the BA research, the literature supports the findings that VCs have experience in the sectors in which they invest. This may be for different reasons. Bygrave & Timmons (1986) believe that this is due to higher levels of VC specialisation as the technology of their investee firms becomes more complex, whilst Sapienza et al.

(1996) contend that this experience allows the VC to add more value to the investee firm. However, Norton (1995) believes it might be for reputation reasons, as was documented in Chapter 2. He states:

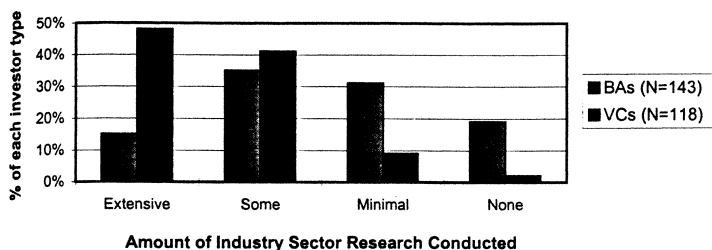
“By examining only those deals related to the general partner’s expertise, efforts are better focused on uncovering and examining deals in which the general partner has an information and skill advantage. Venture capitalists increase their reputation capital in the venture community by their expertise in certain technologies and industries.” (p.21)

Clearly, VCs have higher levels of experience than BAs in the industry sectors of their investee firms. This may give them a higher knowledge base from which to conduct more thorough due diligence.

4.4.3 - Sector Research by Investor

The amount of research an investor conducts in the investee firm’s industry sector should render a good indication of how much due diligence that investor employs. The results show that VCs conduct a significantly greater amount of sector research than BAs, with 48% of VCs and only 15% of BAs doing ‘extensive’ research. In total 89% of VCs and 50% of BAs perform ‘some’ or ‘extensive’ research, whilst 2% and 20% respectively admit to no research at all, as Chart 4.9 shows. This difference is especially meaningful if we consider that VCs have significantly more experience in the sectors (i.e. they might specialise in the sector) and, therefore, might not need to conduct as much sector research.

Chart 4.9 - Amount of Research Investor Conducted on Investee Firm's Industry Sector*



* The difference between the means of the investor types is statistically significant at the <1% level.

Many of the BAs stated that they did very little research and most of them greatly regretted not doing so. One BA said "I did very marginal research; research would be a very grand word to use!" (BA15, 25/3/96) Instead, many BAs relied blindly on the projections that the entrepreneur put in front of them. One BA stated:

"I let the entrepreneur do the research for us. I probably didn't do enough research into the potential sales figures because I was led on by the fact that I thoroughly enjoyed the subject matter and wanted to go into the market anyway. I just went on a feeling. I sadly regard it now as a learning curve, this soiled investment turned out to be a rather expensive training course." (BA10, 19/3/96)

In contrast, the VCs interviewed detailed their sector research efforts extensively and many of them mentioned that they often shared this responsibility with other VC firms with whom they co-invest. Many of the VCs claimed that they had many contacts across a number of industries with whom they always check before making an investment. An academic in the field said:

"Venture capitalists get on the phone and they then talk through the infrastructure and gather lots of 'scuttlebutty' information. They sit at the centre of these networks and they swap and gather these bits of information. What they pick up is not what you can rationally put

together, and they pick up all these little bits and this helps them to gain a feel for the business.” (AC2, 31/5/96)

Indeed, as one VC stated, all VCs are qualified for this:

“We actually employ people who are used to digging this type of information out. Practically everyone here on early stage stuff is an ex-consultant, ex-MBA, and used to looking at markets and competitors and are specifically recruited for that kind of purpose.” (VC2, 5/6/96)

These qualifications were also witnessed in the education levels of the VCs in Chapter 4.2.2.

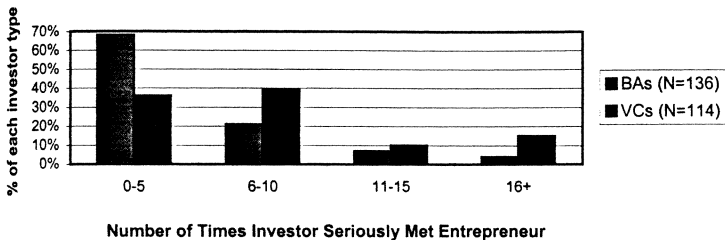
Although the BA literature mentions little about the investor’s research practices, Mason & Harrison (1995) also found in a UK study that BAs “act independently, confident in their own ability to make good decisions, place considerable emphasis on the need to understand the investee business and rely more on instincts and character than on research.” (p.36) Similarly in the US, studies have shown that BAs rarely rely on professional advisors for research, electing to rely on trust in a few close referees instead (Haar et al., 1988; Freear & Wetzel, 1991). However, Landstrom (1993) found that Swedish BAs conduct serious independent evaluations. The literature also supported the extensive use of information networks by VCs (Sweeting, 1991; Wright & Robbie, 1995).

Clearly, VCs conduct a significantly greater amount of industry sector research than BAs, who tend to rely more on the information provided by the entrepreneur and on a gut feeling.

4.4.4 - Extent of Pre-Investment Contact with Entrepreneur

When asked how many times the investor met with the entrepreneur before investing, only 32% of BAs and 64% of VCs stated that they met more than five times, as Chart 4.10 shows. On average, BAs met their entrepreneurs 5.4 times (median: 4), whilst it was 9.5 times (median: 6) for the VCs.

Chart 4.10 - Number of Times Investor Seriously Met Entrepreneur Before Investing*



* The difference between the means of the investor types is statistically significant at the <1% level.

Thus, VCs have significantly more pre-investment contact with their investee firms. This may partially be because of the VCs' longer and more extensive investment process. The interviews also highlighted that BAs usually only meet an entrepreneur if they are considering an investment opportunity seriously, whilst for VCs this may not mean serious consideration, but just an early stage in the vetting process. One BA even admitted during the interview: "I never met the entrepreneur, I talked to him on the phone twice." (BA5, 16/2/96) In stark contrast to this, one VC stated: "We worked with them (the investee firm) for six months before we invested" (VC11, 10/6/96), and claimed to have met the entrepreneurs countless times to screen them:

“We usually split up the people (entrepreneurs) so that we can talk to them one-to-one because ultimately we try to evaluate the people and how they work, and sometimes they don’t say the same thing when they are in front of a co-entrepreneur.” (VC11, 10/6/96)

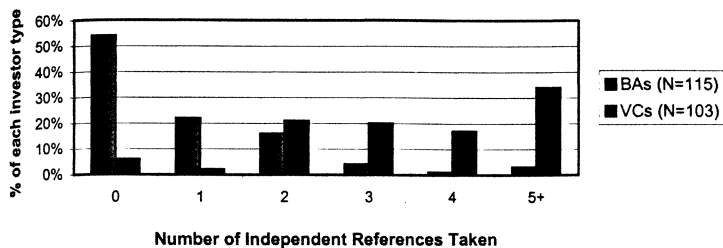
To date, no literature details the amount of pre-investment contact that BAs and VCs have with their entrepreneurs. The literature only states that due diligence and investment processes are shorter for BAs (Freear et al., 1991, 1995b).

Clearly, compared to BAs, VCs have significantly more contact with their entrepreneurs before they invest.

4.4.5 - Independent References on the Entrepreneur

To thoroughly assess the personal credibility of the entrepreneur, independent references may be taken on the entrepreneur during the due diligence process. The results show that over half of BAs (54%) take no independent references on the entrepreneur, whilst the figure is only 6% for VCs. The interviews indicated that this 6% may be partially due to VCs investing in entrepreneurs with whom they have previously grown another venture (Wright et al., 1997). In addition, a meagre 8% of BAs and a healthy 71% of VCs take three or more independent references. On average, BAs took 0.96 references (median: 0), whilst it was 4.2 references (median: 4) for the VCs. The results in Chart 4.11 clearly show a startling difference between these two investor types.

Chart 4.11 - The Number of Independent References Taken on the Entrepreneur*



* The difference between the means of the investor types is statistically significant at the <1% level.

The majority of the BAs interviewed stated that they met the entrepreneur a few times and just went on gut feeling rather than getting independent references. Looking back on their investments, this mistake was one of the major regrets for many. One BA jokingly stated:

“I took a few references, but they were not very formalised. And I have to say that this was one of my regrets actually. In one of my investments, if I had checked out the individual, we would never have made the investment.” (BA6, 23/2/96)

Others, however, didn’t feel the need to take references since the entrepreneur had been referred by someone they trusted or it had already been backed by co-investors. One BA even admitted: “The entrepreneur offered me some references, but I didn’t take them.” (BA7, 23/2/96)

Conversely, VCs are usually meticulous in getting their references, some even claimed that they never get less than six. One VC expressed this care:

“Most references passed on by the entrepreneur are usually glowing. I prefer to enquire about the companies that failed and ask people about the

entrepreneur's biggest weakness rather than his assets. This is much more enlightening." (VC7, 7/6/96)

The literature also states that BAs usually just rely on informal and intuitive judgements on the entrepreneur, rather than on detailed investigation (Mason et al., 1995; Mason & Harrison, 1991, 1993, 1995, 1996b). Mason & Harrison (1996b) found that only 33% of BAs investigated the entrepreneur, contrasting the 46% found in this study. In addition, BAs are more likely to operate independently and rely on themselves for information (Fiet, 1991; Mason & Harrison, 1995). In fact, Fiet (1991) found that compared to VCs, BAs trust networks much less as a means of getting information. With so much information asymmetry in the funding of small ventures, Wetzel (1994) even advises that both investors and entrepreneurs should take references on each other.

Clearly, independent references are yet another part of the due diligence process for which VCs are more meticulous than BAs.

4.4.6 - Analysis of Financial Projections

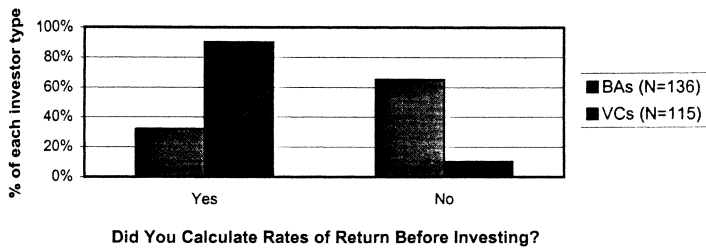
In addition to gaining an impression of the industry sector and entrepreneurial due diligence that investors conduct, this study wanted to assess to what degree the financial figures of the investment proposals were analysed.

4.4.6 (A) - Use of Financial Projections

BAs and VCs were asked whether they calculated expected rates of return for their last early-stage investment. As Chart 4.12 shows, only 30% of the BAs claimed to have estimated return percentages, whilst the majority had not, and were unable to give return

estimates. Yet, 90% of the VCs made these calculations and the financial measurements most often used were IRRs, discounted cash flows, and sometimes NPVs (net present values).

Chart 4.12 - Did the Investor Calculate the Investment's Expected Rates of Return Before Investing?*



* The difference between the means of the investor types is statistically significant at the <1% level.

Many BAs stated that they had not based the investment decision even remotely on financials, instead they trusted their gut feeling. One BA stated: “I don’t use percentages. If it does succeed, it goes big. When they go, they go!” (BA10, 19/3/96)

Whilst another BA stressed:

“In a situation where it is almost a new business, you can’t possibly know what the returns will be or anything you put down on paper. I think it is a mistake to get wrapped up in projections which are new, because with 30 kinds of independent data, none of which you can be confident are accurate, the number of possibilities you have are millions. It is different with MBOs of established businesses with track records.” (BA6, 23/2/96)

On the other hand, most VCs refused to say that they based their decision on gut feeling, instead stating it was based on rational evaluations of the entrepreneur and the business concepts of the investment, as their extensive due diligence outlined. Although some VCs were sceptical of the validity of many financial projections, most did conduct

financial analysis. One VC summed this up: “We almost always ignore the entrepreneur’s financials and do our own. I can’t state that more strongly. We often ignore their numbers in these small early stage investments.” (VC12, 13/6/96)

4.4.6 (B) - Realism of Projections

Indeed, the lacking realism of entrepreneurs’ financial projections often troubles both BA and VC investors. BAs often complained about unrealistic entrepreneurs over-inflating small firm projections. One BA vented his frustration: “When I see an overoptimistic business plan, I think: unrealistic, greedy, people - next proposal please.” (BA9, 15/3/96) However, even though BAs didn’t place much weight on these financial projections, most stated that they had to be present in the business plan, if only to show that the entrepreneur had thought about the business. One BA echoed this point:

“Cash flow projections are never going to be remotely realised, but they do indicate what the potential might be and do point out the areas where problems might be. You should be sure that the guy (entrepreneur) has thought about it. He must have done them, but don’t rely on them.” (BA10, 19/3/96)

VCs also viewed many of the entrepreneurs’ projections with a “sceptical eye” (BA17, 26/3/96), but seemed to place more emphasis on these calculations (especially the projected cash flows) than BAs did. VCs felt that they must make the most of the available information to best formulate a decision on whether to invest. One VC stated:

“We have to satisfy that the projections are credible, knowing that it is very likely that what is projected will not turn out to be reality. But remember that in saying that, all we know is that it will not be as they say, it could be better, but usually it is worse. We have to accept a basis for going forward.” (VC4, 6/6/96)

4.4.6.(C) - Gut Feeling

Since BAs rely very little on financial projections and view them with severe suspicion, they claim to rely more on 'gut feel' to make the investment decision. One BA stated: "It is about 70% just gut feeling and 30% financial analysis" (BA6, 23/2/96), whilst another BA claimed that because he usually invested on gut feeling, it was like "Putting your finger in the air and hoping that the wind is blowing in the right direction." (BA1, 14/12/95) However, BAs rationalised their emphasis on gut feel by stating that it is based on many years of experience in, and empathy with, the entrepreneurial field: "The decision was primarily a gut feeling for the principals of the business. I could see a lot in them that I could see in myself perhaps 20 years ago." (BA21, 2/4/96)

Conversely, almost all VCs claimed that "gut feeling shouldn't enter into (the investment decision)" (VC13, 13/6/96) and "gut feeling is temptation to follow your own ego, which can be very dangerous." (VC7, 7/6/96) Instead, VCs stated that their decisions were almost completely based on comprehensive due diligence. As was predicted using agency theory in Chapter 2, VCs clearly have to base their investment decisions on hard and verifiable facts in order to show investment competence to their fund providers. Not surprisingly, none of the VCs admitted to using gut feel. One VC exclaimed:

"We just can't invest on gut feeling alone, everything has to be checked out. If something does not check out, we have checks and balances in our organisation that will ensure that the deal is cut. That is probably the big difference with a business angel, no one person can make the decision to invest, whereas a business angel can." (VC14, 17/6/96)

However, one BA remarked that VCs may also not rely on gut feel for their investment decisions because they do not have the entrepreneurial background with which to make such intuitive judgements.

The literature lends support to these empirical findings. Both in the US and the UK, BAs tend to invest in an opportunistic, rather than a scientific way, rely much on gut feeling, and do not calculate IRRs, payback, and the like (Timmons, 1990; Baty, 1991; KPMG, 1992; Mason & Harrison, 1996b). However, Coveney (1996) found that 85% of BAs considered their investment decision to be ruled by their 'Head', rather than by their 'Heart'. However, the ambiguous wording of this 'Head/Heart' question on Coveney's (1996) postal questionnaire, and the lack of additional interview data on the question, might explain this unusual (quantitative) result. The VC literature also acknowledges the VC's extensive use of financial projections. In fact, Hall (1988) found that 93% of VCs evaluate investment proposals in terms of internal rates of return (IRRs), and others also utilised sensitivity analyses (Hall, 1988; Wright & Robbie, 1996).

Compared to BAs, therefore, VCs tend to rely much less on gut feeling and elect to conduct more thorough analyses of an investee firm's financial projections as part of the due diligence process, and, thus, as a basis for the investment decision.

4.4.7 - Business Plan Comprehensiveness Demanded Before Investment

Since entrepreneurial ventures are usually at an early stage of development, it is unlikely that all the relevant factors which need discussion in a business plan can be thoroughly and convincingly addressed (Rea, 1989). Therefore, investors were asked to discuss their

attitudes towards this problem and whether they rectify it before investing. The results show that BAs are usually not turned off by business plans which are incomplete and do not put a stringent requirement on the entrepreneur to fully work out the incomplete factors before investment. Two of the BAs even stated that there was no business plan before they invested in their investee firms.

However, VCs want all the uncertainties fully addressed and worked out as well as possible by the entrepreneur before funding. One VC remarked upon a common practice amongst VCs: “(The entrepreneur and I) both worked on the business plan so that we were both happy with it.” (VC10, 10/6/96) This requirement for a meticulous business plan may be because VCs want to show their fund providers that every care was taken in selecting an investment. Thorough business plans and their projections can then also be used as means of monitoring the entrepreneur’s progress in growing the venture.

In the scarce literature on this topic there appears to be some contrast. Both Haar et al. (1988) and Landstrom (1993) found that BAs do not require as thorough a business plan as VCs, whilst Mason & Harrison (1994) stress that BAs do require a detailed business plan which is fully worked out. Furthermore, Aram (1989) found that BAs who invest more often and in earlier stage firms tend to demand more detailed business plans. VCs, however, rely heavily on well detailed business plans as valuable sources of information (Wright & Robbie, 1996).

Clearly, compared to BAs, VCs tend to demand more thorough business plans from their entrepreneurs before they invest. This requirement gives VCs a more ‘worked out’

scenario of the factors that can affect the venture's performance and shows that VCs require a higher level of due diligence than BAs before they invest.

4.4.8 - Research Costs Incurred

The investors in the sample were also asked how much in research/due diligence expenses they incurred on their last early stage deal. The results show that 83% of BAs and 36.3% of VCs claimed that they did not incur any research expenses. For these VCs, this may imply that in addition to their normal staff and office expenses, they did not incur additional outside research costs which are not covered by their administrative budget. However, for BAs, the size of their investments often does not make it financially economical to conduct extensive research and the cost of outside assistance can be prohibitive. KPMG (1992) found in Scotland that "(BA) deals are simple with a minimum of due diligence which means low cost deals." (p.41) One BA in this study noted:

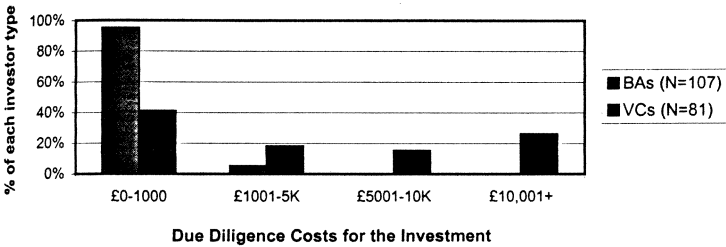
"What puts people off from these types of investments is the active due diligence that is needed - how do you check these people out, and the cost of doing it. Most (BAs) can't afford to do it themselves and the little company they are investing in doesn't want to finance it either. You have to decide about your own personal due diligence - am I prepared to put my money in and go with my gut feeling, because that is ultimately what it is. There are a lot of solicitors and accountants on the circuit now. They are always saying: you should use a professional accountant, you should use a solicitor to do your due diligence. But nobody does, there are too many, we can't afford to pay for them all. It is really a 'do it yourself' thing." (BA11, 19/3/96)

However, only a few BAs do perform this themselves. As Chart 4.13 shows, only 11% of BAs spent £1,000 or more on research costs, with only one spending up to £5,000.

However, 63% of VCs spent £1,000 or over, with 37% spending £10,000 or over, and

even 4% spending £100,000. On average, BAs spent £206 (median: £0) on research, whilst VCs spent £12,000 (median: £3,000). These differences are statistically significant at the <1% level.

Chart 4.13 - Total Research Costs Incurred in the Investment Deal*



* The difference between the means of the investor types is statistically significant at the <1% level. However if these costs are taken as a proportion of the total amount invested, then the difference is only statistically significant at the <10% level (p=.057).

Since many of the due diligence costs are fixed regardless of the size of investment and VCs invest significantly more per investment than BAs, these research costs were also computed as a proportion of the invested amount to determine whether VCs also spend more than BAs proportionately. On average, BAs spent 0.67% (median: 0%) of their investment on research, whilst for VCs it was 1.3% (median: 0.5%). Interestingly, out of those who do spend on research (17% of BAs and 64% of VCs), BAs, on average, spend 3.98% of their investment, whilst VCs spend 2%. However, the results still show a significant difference between the two investors at the <10% significance level (p=0.057). This means that as a proportion of their total investment, VCs, on the whole, still spend significantly more on research than BAs. However, the actual average due diligence cost for an investment may be even greater because as one VC stated: “We shared the due diligence with another venture capitalist co-investor.” (VC8, 7/6/97)

The literature is almost non-existent on the due diligence costs of BAs or VCs. However, Mason & Harrison (1996a) do point out that the evaluation costs (i.e. initial accountancy and legal fees) and monitoring costs are a significant fixed cost element that are unlikely to be less than £50-70,000, regardless of investment size. In fact, one of the VCs stated: "After the initial negotiations, we did £50-60,000 in due diligence." (VC15, 19/6/96) This highlights why it is often not cost-effective for VCs to invest in small firms.

Clearly, VCs incur greater due diligence expenses than BAs, even as an average proportion of their investment amount.

4.4.9 - Documentation by Investor

As another indication of how thoroughly investors conduct the due diligence process, they were asked if they tend to document their research and their investment decision process. None of the BAs stated that they documented their analyses or decisions, whilst the VCs stated that they are required to do so by the UK's Financial Services Act 1986, as was documented in Chapter 2.2.5(B)(i). One VC stated:

"Business angels don't feel obliged, I imagine, to carry out the same sort of formal due diligence because they don't get IMRO (Investment Management Regulatory Organisation) visits. IMRO is a financial regulator who goes through our files to make sure that we are doing proper due diligence and valuation, and it is properly recorded." (VC5, 6/6/96)

VCs, therefore, keep accurate records from the time leading up to the investment decision that are checked by a financial regulatory organisation to ensure that proper due

diligence was conducted before they invested their fund providers' money. Due to these requirements and their responsibilities to the fund providers, VCs tend to have firm-wide policies for screening and due diligence.

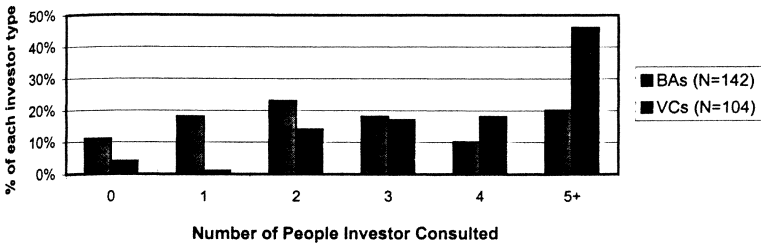
The VC's documentation of the due diligence process may be another indication that VCs conduct a more thorough analysis of prospective investments.

4.4.10 - Size of Investor's Decision-Making Group

Another measure of how thoroughly the investor verified the viability of an investment proposal may be the number of additional people the investor consulted before investing in the venture. In the BAs' case, this would include spouses, family members, friends, accountants and lawyers. Whereas for the VC this would include the total number of people on the VC firm's investment committee minus the investor surveyed. Also note that in addition to the investment committee members, a number of other people in the VC firm, as well as referrers and industry associates, may also appraise the investment opportunity.

The results show that BAs consult with significantly less people than VCs. In fact, 11% of BAs did not consult anyone, whilst only 4% of VCs did not. Furthermore, only 47% of BAs and 81% of VCs consulted three or more people, as Chart 4.14 shows. On average, BAs consulted 3 (median: 2) other people, whilst this was 5.4 (median: 4) for the VCs.

Chart 4.14 - The Number of People the Investor Consulted Before Making the Investment Decision*



* The difference between the means of the investor types is statistically significant at the <1% level.

Possibly because BAs are only accountable to themselves for their financing activity, they tend to invest rather independently. One BA summed this up: "I work mostly on gut feel. I sometimes show my accountant, but you pay accountants to be pessimistic, not optimistic - to keep you in line." (BA15, 25/6/96)

VCs, however, have an obligation to invest prudently and so can not make the investment decision without having it approved by an investment committee, which every VC firm has. In VC firms the funding decision must be approved by senior members of the firm, whereas, for instance, in a bank a junior member (a loan officer) often has that power to some degree (Hisrich & Jankowicz, 1990). Of course, such a committee may also be a means of spreading the accountability for a particular investment decision. One VC described the structure of an investment committee:

"Once the deal is accepted (for due diligence) we appoint an Approval Committee, consisting of three senior directors of the firm, who meet about 2-3 times during the due diligence process. Then the director supporting the proposal argues for it and another committee, the Investment Committee, which has an external chairman, has the final say - a final sanity check before the investment." (VC15, 25/4/96)

Although no similar comparison study has been conducted, the BA and VC literature provide a little support to these investor findings. In the US, Freear & Wetzel (1991) found that 84% of BAs rely solely on their own investment evaluations, whilst Landstrom (1993) found that 53% of Swedish BAs did so. In the UK, Harrison & Mason (1992b) found that over two-thirds of BAs usually, or always, make investment decisions independently, and just under two-thirds stated that they were rarely or never influenced by recommendations from others. Indeed, Freear et al. (1995b) hypothesise that the investment deliberation process is shorter for BAs than VCs because BAs have a smaller number of people involved in the decision process.

Assuming that most people in a VC firm are consulted about an investment proposal, Gorman & Sahlman (1989) found that the median number of partners in a US VC firm is four. Whilst, in the UK, Murray (1995a) states that the median number of VC investment professionals is seven.

Although the BAs in this study appeared to consult more with others than BAs in past studies, the stark differences between BAs and VCs are still just as apparent. Clearly, VCs consult more people about an investment proposal than BAs before taking the investment decision.

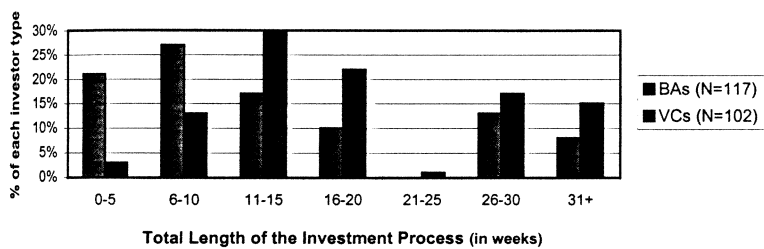
4.4.11 - Length of Investment Process

Assuming that those investors conducting a more thorough due diligence process will take longer to reach an investment decision, the investors were asked the total length of their investment process (from first seeing the investment to signing the cheque for the

funds) and the length of time between first meeting the venture's entrepreneur and the decision (in principle) to invest.

The total length of the investment process was significantly longer for VCs than for BAs, with each taking on average 19.9 weeks (median: 16) and 14.8 weeks (median: 12) respectively. In particular, 54% of the VC deals and 25% of the BA deals took 16 weeks or longer, as Chart 4.15 shows.

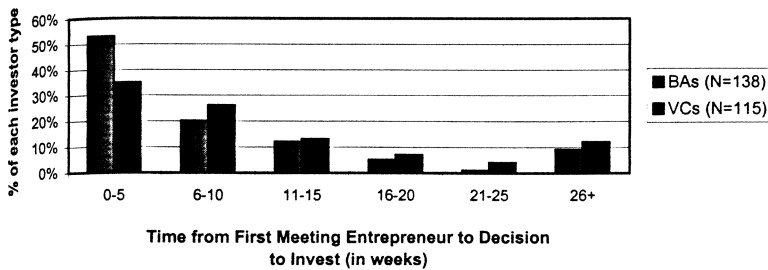
Chart 4.15 - The Total Length of the Investment Process*



* The difference between the means of the investor types is statistically significant at the <2.5% level.

When asked how long it took from first meeting the entrepreneur to an investment decision (in principle), VCs again took longer than the BAs, with each taking on average 12.3 weeks (median: 8) and 8.8 weeks (median: 4.5) respectively. Indeed, 39% of the VCs and 27% of the BAs took 11 weeks or more, as Chart 4.16 shows.

Chart 4.16 - Time From First Meeting Entrepreneur to Decision (In Principle) to Invest*



* The difference between the means of the investor types is statistically significant at the <5% level.

BAs interviewed agreed that time was of the essence and only so much due diligence could be done, so why waste time getting more information when you could be following your gut feeling and actually making the investment and running the firm. One BA echoed this:

“There is no substitute for saying: I have got 80% of the data that I need, I will have to trust the other 20% since it will take another two years to get the other 20%. By then the window will have closed on the opportunity. If you want to feel that you have belt and braces on everything you do, then you should not be in these kind of operations, you should work for the government or something.” (BA12, 22/3/96)

VCs, however, felt that drawing out the investment process when funding early stage firms with no trackrecord was wise. One VC summed this up:

“Early stage investments usually take longer because there is no track record, lots of things to check and sub-contract. To an extent the process is deliberately strung out, we want to sit beside these guys (the entrepreneurs) to see how they behave when things get stressful. Just get comfortable with them, because once you invest, you are stuck with it for 4-5 years. Chances are you are going to be on the board of the thing and it won’t go like the business plan and chances are we are going to fall off somewhere along the line, so you have to be comfortable with these guys.” (VC15, 19/6/96)

One VC even stated that he conducted four years of due diligence on a small risky start-up firm before he invested.

The literature supports that BAs reach an investment decision quicker than VCs, primarily due to their less thorough evaluation of potential investments (Timmons, 1990; Baty, 1991; Mason & Harrison, 1994, 1996b). In the UK, BAs and VCs have not been directly compared on this dimension, but Mason et al. (1995) found that the investment time of BAs is significantly less than that of financial institutions, with 48% of BAs taking less than a month from first meeting the entrepreneur to deciding (in principle) to invest, whilst 85% of the BAs took less than 3 months. For this study, the figures are 50% and 83% of BAs respectively. In the US, Wetzel & Freear (1994) found that the medium time from first meeting the entrepreneur to the actual investment was 2.5 and 4.5 months respectively for BAs and VCs, and that it takes longer to meet with a managing partner of a VC firm (1.75 months) than with a BA (1 month). Similarly, Freear et al. (1990) found that the medium time between first meeting and receipt of funds was 2.5 and 4.5 months respectively for entrepreneurs funded by BAs and VCs. However, Carter & Van Auken (1994) found that it takes a VC only 8.91 weeks from seeing the initial proposed presentation to the decision to invest in a firm.

Clearly, VCs take much longer in the investment process than BAs. This may be due to the greater amount of (time-consuming) due diligence the VC undertakes and also due to intentional prolonging of the investment process as a means of further entrepreneur observation and due diligence. Not surprisingly, a common criticism of VCs is the amount of time they take to finalise details and funding (Bank of England, 1996).

Summary

In this section the empirical results have shown that for each one of the dozen variables used to measure the due diligence processes of BAs and VCs, VCs conduct significantly more due diligence than BAs (see Table 4.2). Particularly, compared to BAs, VCs: invest in larger firms, have more sector experience, conduct more sector research, meet the entrepreneur more often before investing, take more independent references on the entrepreneur, analyse the financials more thoroughly, demand a more comprehensive business plan from the entrepreneur, incur more research costs (as a percentage of invested amount), document their investment process more, consult more people before investment, and take longer to invest.

This evidence is clearly in line with what was hypothesised in Chapter 2 by comparing the two theoretical approaches for dealing with potential agency problems. Thus, we may conclude that the following is probably *true*:

Hypothesis 3 - VCs conduct more pre-investment due diligence than BAs

Apparently, although the literature has assumed that the entire professional careers of BAs have prepared them to conduct due diligence (Freear et al., 1992a), BAs in the UK tend to be less sophisticated and more ad hoc in their due diligence activities than VCs and possibly BAs in other countries. Since, unlike VCs, BAs are not accountable to others for their investment decisions, they can invest on a gut feeling rather than based on comprehensive research.

A summary of the due diligence measures is given in Table 4.2.

Table 4.2 - Summary of the Due Diligence Differences Between BAs and VCs

Due Diligence Measures	BAs' Mean	VCs' Mean	BAs' S/D*	VCs' S/D*	Statistical Significance Level of Differences between Investors
Size of firms funded (corporate value)	£288,819	£3.2M	2,346K	5,505K	More for VC at <1%
Sector experience of the investor ^a	2.83	2.2	1.05	.93	More for VC at <1%
Sector research conducted by investor ^a	2.5	1.6	.97	.72	More for VC at <1%
Times met the entrepreneur before investing	5.4	9.5	5.61	7.88	More for VC at <1%
Number of independent references taken on the entrepreneur	.96	4.2	1.80	3.49	More for VC at <1%
Calculation of expected rates of return before investing? (% yes)	31.6%	90.4%	.46	.29	More for VC at <1%
Documentation of the investment process	---	---	---	---	More for VC (based on qualitative data)
Comprehensiveness of business plan demanded	---	---	---	---	More for VC (based on qualitative data)
Cost of due diligence as a % of amount invested (average)	.67%	1.3%	2.58	1.7	More for VC at <10%
Number of people investor consulted before investment decision	3.0	4.4	2.68	2.44	More for VC at <1%
Time from first meeting entrepreneur to investment decision (in weeks)	8.8	12.3	12.8	12.9	More for VC at <5%
Time of total investment process (in weeks)	14.8	19.9	15.97	13.64	More for VC at <2.5%

^a These variables were rated on a 4 point likert scale (1=extensive, 4=none)

* Note: S/D = Standard Deviation

To shed even more light on these findings, one additional, and more broadly applicable, explanation for this difference in due diligence procedures was identified in the interviews. In particular, some interviewees stated that individual VCs often conduct such extensive due diligence in order to protect themselves from blame in case an investment turns sour, as was hinted to in Chapter 2.3.2(D). One VC echoed this when he told me off-the-record (he actually made me stop the tape recorder) that VCs often

'over do' due diligence to cover their backs and to sanitise the investment decision. He mentioned that one of his past investments on which he had done the most due diligence actually didn't turn out that well and this was related to a number of factors which could not be covered by due diligence. He believed that due diligence can not assess all the possible risks, but it is the best that you can do with what you are presented: "Just covering your back is what due diligence is all about." (Anonymous)

Conversely, the evidence shows that BAs make little attempt to reduce the negative correlation of risk and return in the same manner that VCs do. This more 'laissez faire' approach unfortunately often had negative consequences. Many BAs confessed that they had been naïve concerning the due diligence and had experienced a steep learning curve in their first BA investment: "With my first investment, I took too many things at face value. I took the business plan at face value." (BA12, 22/3/96) In particular, many BAs regretted not conducting more research and taking a more realistic look at the investments risks. One BA stated with some remorse:

"I should have done a lot more due diligence because a lot came out of the woodwork in the balance sheet in a very short time which put the business in a very different light and I would never have invested. Which is venture capital's risk. After years and years in the business, I should kick myself for not doing that. If I had to do it again, I would have dug deeper and not been in such a rush to put the money in." (BA3, 14/2/96)

Clearly, BAs are more inexperienced investors than VCs and don't have the same agency pressures, resources, or expertise to have placed themselves as high upon the 'learning curve of due diligence' as VCs have. BAs, therefore, may follow their gut feeling and emotions more rather than unbiased research when making an investment.

4.5 - Multivariate Analysis of the Investor and Due Diligence Variables

To shed more light on the variables discussed in this chapter, this section will analyse them in a logistic regression, as highlighted in Chapter 3.5.2. The resulting model may then be used to classify and predict, based upon the characteristics of an investor's investment process, whether a certain investor is a BA or a VC. Those variables with the greatest predictive power in making such a classification are also identified.

For this chapter, the resulting model, which has a prediction accuracy of 94.9%, reads:

$$z = -.0115 + .333 X_1 - .9239 X_2 + .0007 X_3 + .5417 X_4 - 2.3798 X_5$$

where the variables in order of greatest predictive power (p -values in parentheses) are:

X_1 = Number of unquoted investments done (.0003)

X_2 = Number of firms founded (.0004)

X_3 = Cost of due diligence (.0017)

X_4 = Number of independent references taken on the entrepreneur (.0019)

X_5 = Sector research conducted by investor (1=extensive, 4=none) (.0019)

The resulting estimated probability of an investor being a VC = $\frac{1}{1 + e^{-z}}$

To test this model, an investor was chosen randomly from the database (number 42) and this investor's responses on the five model variables were inserted into the model equation. The investor's ratings were as follows: $X_1 = 5$, $X_2 = 3$, $X_3 = 0$, $X_4 = 0$, $X_5 = 2$. Putting these into the equation, $z = -5.8778$, and the estimated probability of this investor being a VC = 0.2793%. Indeed, this investor was a BA.

Interestingly, notice the change in the probability of this investor being a VC (listed in brackets) if this investor had: invested in one more unquoted investment (0.11%), founded one less firm (0.42%), taken one independent reference (0.2%). Of course, this BA was a rather stereotypical BA and so lies on a relatively flat area of the logistic regression curve, resulting in only small probability changes when the variables change (see Chart 3.4). A BA who is more similar to VCs (and has a z value closer to 0), will render greater changes in probability (of being a VC) when the measurement variables are slightly changed.

Another investor was also randomly picked (number 194) whose ratings were the following: $X_1=0$, $X_2=15$, $X_3=10,000$, $X_4=4$, $X_5=2$. Putting these into the equation, $z = 9.3907$, and the estimated probability of this investor being a VC = 99.99%. Indeed, this investor was a VC.

But these predictions were made using variables which were included in the building of the model. To further test the robustness of the model, 5 BA and 5 VC samples were randomly removed from the sample, so that a new model could be built.

Closely resembling the original model, the new model reads:

$$z = -.3741 + .3558 X_1 - .9651 X_2 + .0006 X_3 + .4994 X_4 - 2.1704 X_5$$

So, to further determine the robustness of the model's predictive ability, two of the ten omitted investors were placed into the new model. The first investor (number 103) had

the following ratings: $X_1 = 2$, $X_2 = 0$, $X_3 = 0$, $X_4 = 0$, $X_5 = 2$. The resulting $z = -4.0033$, and the estimated probability of being a VC = 0.69%. Indeed, this investor was a BA. The second investor (number 167) had the following ratings: $X_1 = 30$, $X_2 = 0$, $X_3 = 20,000$, $X_4 = 2$, $X_5 = 1$. The resulting $z = 21.8765$, and the estimated probability of being a VC = 99.99%. Indeed, this investor was a VC.

These logistic regressions have shown that the variables which contributed the most to the overall differences between the two investor types (i.e. those with the greatest predictive power) pertained to the characteristics of the investors, supporting the notion that VCs are more professional investors (almost by definition) and BAs tend to be more entrepreneurial. The next three variables of importance highlighted the higher degree of due diligence conducted by VCs. This adds some support to the overall finding that VCs conduct significantly more pre-investment research than BAs.

4.6 - Conclusion

This chapter has shown that BAs tend to have more entrepreneurial small business experience than VCs, whilst the latter tend to have more investor experience. When compared through the first few stages of the investment process, it is apparent that VCs have greater deal origination and conduct more due diligence than BAs. This appears to suggest that BAs may employ more of an incomplete contracts approach, whilst VCs may employ more of a principal agent approach, to deal with potential agency problems.

Since BAs don't have the additional agency pressure from fund providers to behave competently and they invest their own money, BAs may take a less analytical approach (ex ante) to investing. VCs, however, must show professional behaviour in the investment process, and so may conduct more screening and due diligence as a means of reducing potential agency risks more ex ante investment. One BA captured this difference between investor types when he stated:

"My investment decision was made in more of an 'upside down' fashion to that used by the venture capital industry. I rely less on the numbers, but more on the subjective impression of the entrepreneur - it has to feel right and I have to believe in it. I don't have to be analytical, I can go on instinct unlike the venture capitalist. I don't have to rationalise my investment decision to a boss at the end of the day." (BA6, 23/2/96)

In the next chapter, the investors' investment criteria will be analysed to determine which variables attracted BAs and VCs to fund their respective investments.

Chapter Five

Testing the Research Hypotheses: **Investment Criteria Differences Between BAs and VCs**

Introduction

To shed more light on the due diligence process which has just been reviewed and provide further support for the hypothesised notion that BAs and VCs may use different approaches to deal with potential agency costs, this chapter will analyse the investors' investment criteria. These criteria are the actual characteristics of the investments that attracted the investors to invest. It is these factors of attraction (such as the entrepreneur's expertise, or a market's growth potential) which initially tempt the investor and are later verified in the due diligence stage. Once verified, these criteria will be reviewed again to render a possible investment decision. Of course, each investor is influenced differently by personal criteria and investment characteristics. The main focus of this section, therefore, will be to conduct a detailed comparison of a number of these investment preferences to determine how they differ between BAs and VCs. Thus, the fourth hypothesis will be addressed:

Hypothesis 4: BAs Place More Emphasis on Investment Criteria Related to Ex-
Post Involvement and VCs Place More Emphasis on Investment
Criteria Related to Initial Screening

The analysis of the investors' investment preferences and criteria will be undertaken over the following sections:

- 5.1 - Investment Motivations
- 5.2 - Stages of the Investment Process
- 5.3 - Overall Ranking of Investment Criteria Within Each Investor Group.
- 5.4 - Comparison of Particular Investment Criteria Between Investor Groups
- 5.5 - Multivariate Analysis of the Investment Criteria
- 5.6 - Comparison of the Influential Investment Criteria of those Firms Funded to those Firms Only Seriously Considered.
- 5.7 - Pre-Investment Hesitations of those Firms Funded
- 5.8 - Conclusion (*Hypothesis 4*)

5.1 - Investment Motivations

Since it was assumed that an investor's motivation for investment influences that investor's investment criteria, both BAs and VCs were asked their main reason for funding entrepreneurial firms. As might be expected, all the VCs responded that financial profitability was their primary concern. BAs, however, were more varied in their interview responses. Nevertheless, analysis of the BAs' verbal replies clarified that they fit neatly into the three main categories of investment motivations identified in the BA literature (and documented in Chapter 2): an opportunity for financial gains, to play a role in the entrepreneurial process, and for non-financial factors. The 25 BAs

interviewed were also asked to rank five possible investment motivations on a questionnaire, the results of which are shown in Table 5.1.

Table 5.1 - Ranking of Different Investment Motivations by the BAs Interviewed

BA Investment Motivations	Mean Ranking* (1-5)	S/D**	N
Expected financial rewards	1.91	1.06	22
To play a role in the entrepreneurial process	2.32	0.99	22
Fun and satisfaction	2.32	1.22	25
To create a job/income	3.19	1.28	16
Sense of social responsibility	4.00	1.04	14

* Note: Respondents ranked variables: 1 = most important motivation; 5 = least important motivation. ** S/D = Standard Deviation

Interestingly, most BAs believed that their motivations and criteria would be different from other BAs, and were rather surprised to learn that other BAs had given similar replies. The three investment motivations will now be addressed in turn.

Mason and Harrison’s (1995) comment: “Business angels are motivated first and foremost by the opportunity for high capital appreciation” (p.36) was certainly supported by most of the BAs interviewed. A few BAs structured an income stream into their investment contract for their assistance provided, whilst most hoped to sell the investment (i.e. through trade sale or stock listing) in the future to attain financial returns.

The second most influential motivation was to play a role in the entrepreneurial process. One BA summed up this sentiment: “I want to be part of the entrepreneurial process. Though my main motive is not financial, I don’t want to loose either though.” (BA5,16/2/96) Indeed, many BAs spoke about the fun they have when investing in early stage firms. One BA stated: “I am an experienced uncle that the entrepreneurs can trust,

I am not in it for a fast buck. Besides, it is cheaper and more fun than buying a yacht" (BA16, 26/3/96), whilst another said: "I enjoy investing in companies and getting involved, it is a real buzz. I enjoy the pleasure of building companies, when it becomes too administrative and established, I get out." (BA14, 25/3/96). Although investing is a part-time activity for most BAs, for others, getting involved is the best alternative to retirement. Some BAs complained that retirement was boring and that they wanted to use their years of business experience to help entrepreneurial firms. One BA stated:

"I invested because I wanted something to do, because I found myself walking around the streets looking at potholes and thinking of complaining to the council about them, and that sort of nonsense. It just gets yourself into such a state if you have been very active and all of a sudden you don't have anything to do. It is extremely hard to start up again from zero (...) I am just interested in business, it's the thing that turns me on. (...) I don't really have any hobbies. My hobby is getting up in the morning and coming to work, I absolutely love it. I was unhappy when I was retired. I am a worker and I happen to have some cash. I like to help other people and get a tremendous buzz with this firm." (BA19, 28/3/96)

Clearly, enjoying the involvement in the entrepreneurial process is the common element amongst these BAs. One BA, in particular, summed up this enthusiastic attitude to investing that many BAs take:

"I feel this is a fantastically exciting sport - seeing the potential new start-ups, and get-ups, at a time of their development when they have made their plans and brought themselves to presentations. Some laugh at the idea of calling it a sport, but to me it seems like the gladiators in the Coliseum fighting for favours with their working lives, against heavy odds, for colossal rewards - and we can even join in." (in a letter attached to a postal questionnaire)

However, this yearning by BAs to get involved was seen by one VC as not being just for fun: "Business angels are to some extent having fun and satisfying their egos. Most of

these business angels have pretty high egos, but it is a worthwhile function they do, but it sure as heck is not what venture capitalists do.” (VC15, 19/6/96)

Lastly, a number of BAs also mentioned non-financial factors as motivations. Altruism was echoed by one BA: “I tend to be altruistic in my investments. It is more like: I was lucky to be successful in business, now I would like to pass those skills on to others who also want to be successful in business.” (BA7, 23/3/96) Another BA was also heavily influenced by altruism:

“My main motivation is to create jobs in the Devon area. I mean, I don’t need the money, but I wouldn’t do it either if it didn’t make money. When I was 18 I had to leave Devon to find a job, and how I hated doing that, I wouldn’t want others to have to do that too.” (BA15, 25/3/96)

However, similar to what Mason et al. (1994) found in the UK, altruism did not strongly motivate the BAs interviewed and tended to lack importance on the whole. Yet, the term ‘business *angel*’ conjures up the impression that altruism is a major investment motivation. Therefore, most of the BAs interviewed believed the term to be a bit of a misnomer, and some even resented its use. One BA complained: “It is not a term that I particularly like. Angel implies that someone floats along and bestows money on people and wonders off and disappears into the sunset.” (BA25, 18/4/96) Another BA stated:

“We are not all pure and good and don’t wear a halo, the trouble is that we may be perceived as a divine person coming along to create miracles when all other avenues are lost, rather as if you were parting the Red Sea.” (BA16, 26/3/96)

Instead, one BA suggested that they be called: “Professional investors, or rather, not so professional investors!” (BA12, 22/3/96) However, others suggested a myriad of more

serious alternatives: “private equity investor” (BA13, 25/3/96), “business uncle” (BA16, 26/3/96), “risk takers” (BA17, 26/3/96), “privateer” (BA17, 26/3/96), “business investor” (BA20, 29/3/96), “pro vita investor” (BA22, 2/4/96), “risk capital investor” (BA22, 2/4/96), “business partner” (BA23, 3/4/96), and “business speculator” (BA23, 3/4/96).

Yet, most BAs were not offended by the ‘business angel’ term, and do see some humour in it. One BA was asked towards the end of the interview what she did right after making the unquoted investment, her reply was: “Not much, I was too busy polishing my halo!” (BA24, 11/4/96)

Although BAs don’t really live up to the altruistic motivations suggested by their name, their motivations consist of financial appreciation (most important), to play a role in the entrepreneurial process, and for non-financial reasons.

5.2 - Stages of the Investment Process

Before an overall evaluation is undertaken of the investment criteria of BA and VC investors, it should be mentioned that studies have found that different criteria have different weights of influence at various stages of the investment process (Riding et al., 1993; Mason & Rogers, 1996; Rigby, 1997). Although this study did not look at the influence of factors at different stages, it is mentioned here as a note of interest. In fact, a stage study can only be undertaken if the researcher is with the investor throughout an investment process, but getting such access is difficult and not possible on a large scale.

Alternatively, a verbal protocol analysis can be conducted on the early stages of an investment process to capture the initial screening variables (as done by Mason & Rogers, 1996). In such a procedure, investors are asked to think aloud as they scan investment opportunities. However, such an approach only measures preferences in the early stages, not the variables in actual investments completed. Rather, this study concentrated on an overall evaluation of the factors and uses some of the qualitative interview data to render insight into stages. Although the quantitative questionnaire only captures the overall criteria, it employs the same technique used by two of the most cited VC criteria articles in the literature, MacMillan et al. (1985, 1987).

In the BA literature, Mason & Rogers (1996) and Riding (1993) found that in the initial screening stages of the investment process, the market and product are the most important consideration, followed by the entrepreneur/management team and financial considerations. Although the financials are in the initial stage of only secondary importance, they increase with subsequent stages. This study also found this when one of the BAs interviewed stated:

“These are the main criteria I invest on, in order: 1) the product in its environment, 2) degree to which my skills add to the company, 3) my reading of the entrepreneur, and 4) the financials, which are the last check in the process.” (BA2/4/96)

However, this research study will capture the overall importance of each one of these variables overall, rather than on a time line. This overall measurement of the criteria will give a good impression of the factors entrepreneurs should have to attract funding.

The meagre VC literature on this topic also found that the management team, like the financials, is not of primary importance initially, but more critical later (Sweeting, 1991; Hall & Hofer, 1993; Zacharakis & Meyer, 1995). However, the entrepreneur is still the most important decision factor (MacMillan et al., 1985, 1987). Sandberg et al. (1987) even believe that the initial impressions of the venture's feasibility influences a VC's subsequent evaluation of the entrepreneur. However, Rigby (1997) believes that the entrepreneur is of primary importance in the initial screening stage. More research may be warranted on this in the future.

Now that possible stage variations in the importance of some general investment criteria have been highlighted, a thorough evaluation of the investors' overall investment criteria will be conducted.

5.3 - Overall Ranking of Investment Criteria Within Each Investor Group

This section will rank the various investment criteria in importance within each investor group, quite independently of each other, whilst the following section (Chapter 5.4) will directly compare the criteria between the two investor groups. However, the presentation of the intra-group findings in this section is important because according to Sweeting (1991) and Tyebjee & Bruno (1984) it demonstrates the heterogeneity within an investor group. This will be explored further in Chapter 7.

5.3.1 - The Overall Ranking of the BAs' Investment Criteria

In the following table (Table 5.2) it is clear that, overall, the entrepreneur is the criterion that most attracted BAs to the investment opportunities they actually funded. This was followed by the Product/Market, and then by the financial factors. Although past studies have not used such detailed criteria for each criteria group (i.e. entrepreneur, market/product, etc.), they do support the overall relative importance of the different groups identified in this study (Mason et al., 1995; Mason & Rogers, 1996; Stevenson & Coveney, 1994). Furthermore, the interviews also support these quantitative results. Notably, one factor usually does not commit a BA to an investment, rather it is a combination of many. In fact, one BA stated: "I had enough 'ticks' in my mental picture of what a company should look like, so I invested." (BA5, 16/2/96) What now follows is the relative ranking of attraction for each investment criterion rated by the BAs.

Table 5.2 - Criteria that were Important in Attracting Business Angels to their Actual Investments

*The following Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

BAs' Investment Criteria <i>(in order of importance)</i>	Mean*	Standard Deviation	Valid N
Enthusiasm of the entrepreneur(s)	1.31	.54	143
Trustworthiness of the entrepreneur(s)	1.34	.59	143
Product's Sales Potential	1.49	.63	141
Expertise of the entrepreneur(s)	1.60	.80	141
Investor liked entrepreneur(s) upon meeting	1.67	.92	141
Growth potential of the market	1.80	.96	139
Quality of product	1.81	.83	132
Perceived financial rewards (for investor)	1.85	1.00	140
Niche Market	2.02	1.17	135
Trackrecord of the entrepreneur(s)	2.12	.96	138
Expected rate of return	2.25	1.07	136
Product's informal competitive protection (know-how)	2.38	1.03	126
Investor's involvement possible (contribute skills)	2.42	1.41	138
Investor's strengths fill gaps in business	2.44	1.32	134
High margin of the business	2.47	1.13	132
Low overheads	2.48	1.14	134
Nature of competition	2.52	1.05	134
Ability to reach break-even without further funding	2.55	1.17	129
Low initial capital expenditures needed	2.56	1.22	128
Size of the investment	2.58	1.24	126
Product's overall competitive position	2.61	1.24	110
Low initial cost to test the market	2.68	1.24	100
Venture is local (geographically close)	2.80	1.46	137
Investor understands the business/industry	2.88	1.45	136
Potential exit routes (potential liquidity)	2.88	1.34	138
(Potential) co-investors present	2.93	1.51	124
Product's formal competitive protection (patents)	3.20	1.44	95

A ranking of these criteria in the VC context now follows.

5.3.2 - The Overall Ranking of the VCs' Investment Criteria

At first glance, the quantitative VC results in Table 5.3 give the impression that a certain amount of similarity exists between the BA and VC rankings of investment criteria. VCs also appear to be most attracted by the entrepreneur, then the product/market group, although the financials appear to be more important for them than for the BAs. As with the BA literature, few VC studies exist which use such detailed criteria for each criteria group. In fact, Sandberg et al. (1987) states:

“These researchers have tried to identify the criteria used by venture capitalists. Some also have tried to assess the weighting attached to each criterion. For the most part, though, these criteria have remained general or vague (e.g., ‘the quality of management’).” (p.394)

However, the US literature supports the relative importance of the criteria groups found in this study (MacMillan et al., 1985; Hall & Hofer, 1993; Tyebjee & Bruno, 1981). Unfortunately, little such detailed research exists in the UK literature. What now follows is the relative ranking of attraction for each investment criterion rated by the VCs.

Table 5.3 - Criteria that were Important in Attracting Venture Capitalists to their Actual Investments

*The following Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

VCs' Investment Criteria <i>(in order of importance)</i>	Mean*	Standard Deviation	Valid N
Trustworthiness of the entrepreneur(s)	1.29	.56	118
Expertise of the entrepreneur(s)	1.34	.59	119
Enthusiasm of the entrepreneur(s)	1.36	.55	118
Perceived financial rewards (for the investor)	1.44	.71	119
Product's sales potential	1.57	.72	118
Growth potential of the market	1.63	.86	117
Expected rate of return	1.75	.95	118
Track record of the entrepreneur(s)	1.80	1.04	118
Investor liked entrepreneur(s) upon meeting	1.81	.95	119
Quality of product	1.93	.93	116
Product's overall competitive protection	2.09	.98	114
Potential exit routes (potential liquidity)	2.19	1.02	118
Niche market	2.21	1.08	114
Product's informal competitive protection (know-how)	2.26	1.06	110
High margins of the business	2.29	1.05	114
Nature of competition	2.36	1.01	117
Investor understands the business/industry	2.43	1.08	118
Investor's involvement possible (contribute skills)	2.85	1.37	116
Ability to reach break-even without further funding	2.91	1.25	106
Product's formal competitive protection (patents)	2.96	1.42	107
Low overheads	3.01	1.08	116
Low initial cost to test the market	3.21	1.14	104
Size of the investment	3.28	1.23	117
Low initial capital expenditures needed (i.e. on assets)	3.34	1.22	111
(Potential) co-investors present	3.37	1.53	106
Investor's strengths fill gaps in business	3.47	1.20	111
Venture is local (geographically close)	3.65	1.44	115

Now that the rankings of the two investor types have been documented independently, the investor groups will be compared for each investor criterion.

5.4 - Comparison of Particular Investment Criteria Between Investor Groups

Since little, if any, direct comparison research on the various investment criteria used by BAs and VCs in the US and the UK exists, general comparisons between different BA and VC studies (conducted independently, usually at different times, and in different locations/countries) has given the impression to many academics that BAs and VCs use similar investment criteria.

However, although it may be accurate to state that similarities exist for the *general* criteria groupings between BAs and VCs, this is not the case for many of the specific criteria, and so to equate all BA and VC investment criteria, as some past studies have done, may be misleading. One VC accurately recognised these differences:

“Institutional investors are much more rigorous and our criteria are tougher because we are doing the investment for only one reason, that is to deliver returns to outside investors whose funds we manage. We should not be making investments because we like working with or in a business. Angel investors invest their own money and are entitled to, and they probably, make investments based on very soft financial criteria.”
(VC4, 6/6/96)

To quell some of the uncertainty concerning the individual investment criteria differences between BAs and VCs, a detailed comparison of the criteria will now be undertaken between the two investor groups.

5.4.1 - Entrepreneur(s)

The most important investment criteria identified on the quantitative questionnaire were the characteristics of the entrepreneur. Both investor types also discussed these at length during the interviews.

The majority of the BAs interviewed stated that the entrepreneur was the greatest attraction that they had to the investment. It appeared that many had planned to work with the entrepreneur for a number of future years and, therefore, wanted to make sure that he/she was compatible and qualified. One BA stated: "We invest in people, not sectors" (BA9, 15/3/96), whilst another commented: "It's all people, if the people are wrong, you don't invest." (BA13, 25/3/96). But in addition to choosing a qualified entrepreneur to increase the chances of firm success, choosing one wisely to decrease potential agency risks was also paramount. One BA stated:

"You need to have total confidence in the people. After all, what are you doing? You are taking money out of your bank account and putting it in theirs, and we all know that there are plenty of people around who would run off with the money and profess this and that, and it becomes a terribly expensive legal mess to un-wrangle it. It probably would not be economically viable and there would be a lot of heartache and wasted time and effort. You are really dealing with people." (BA15, 25/3/96)

In addition, most BAs realised that a well balanced management team was often impossible with firms at such an early stage of business formation, and believed that their own skills might help to balance the team.

However, the VC results were less clear. Although the VCs rated the entrepreneur as most important on the postal questionnaire, the majority of their interview responses

gave the impression they were primarily attracted to the concept/idea of the venture first and foremost, and then the abilities and qualifications of the entrepreneur second. However, this does not mean that the management quality was not important, it just wasn't the main motivating factor in many cases. One VC summed this up:

"Entrepreneurs are not who we end up backing generally. We usually invest in technology-based businesses, it is more about the company having an unique proprietary position in what it is doing, a good size market opportunity with good growth prospects, less competition and a very strong management team. The idea and competitive position are of primary interest." (VC10, 10/6/96)

One explanation may be that because the VCs interviewed were proportionately more involved in technology investments than those in the postal questionnaire, they may place more weight on technological concepts than entrepreneurs. Another reason may be that many VCs believe that not enough well qualified entrepreneurs exist to fund and so place more emphasis on the venture's idea. Due to this management gap, VCs may then actively recruit new or additional people to improve the quality of the venture's management team. Thus, whilst BAs prefer balancing a management team through their own input, VCs elect to recruit new management, especially as the firm increases in size. One VC stated:

"This company didn't have a good management, but a great proprietary technology, so we invested and eventually installed a new management group. We were really attracted to the substance of the business and thought we could overcome the management problem." (VC1, 5/6/96)

One VC even stated that they invested in an inventor's new idea and then "recruited some people we knew and introduced them as the management of the company." (VC8,

7/6/96) Another VC even commented that when investing in early stage companies, recruiting management to run the company "is the only way to do it." (VC3, 5/6/96)

The literature also supports the findings that BAs are more attracted to the entrepreneurial qualities than VCs, who place more emphasis on the idea of the business and recruitment when the venture lacks good management. The BAs' primary concern for the qualities of the entrepreneur (Stevenson & Coveney, 1994; Mason & Rogers, 1996; Freear et al., 1996), and the VCs' willingness to invest in a good concept, despite a weakness in the management team (Sweeting, 1991), are both well documented. Indeed, the Government of Ontario (1990) concluded that "informal investors believe in their entrepreneurs, while the formal investors are concerned about them." (cited in Harrison & Mason, 1992a, p.25) Furthermore, the VCs' greater emphasis on recruiting new management and changing the makeup of the team also received some attention in both the US and UK literature (Ehrlich et al., 1994; Harrison & Mason, 1992a; Freear et al., 1996; MacMillan et al., 1985). Rea (1989) even found that investment negotiations with VCs have more success when the entrepreneur agrees to recruit talent gaps, whilst Atkin & Esiri (1993) confirmed that BAs are less interested in funding a firm with such a balanced management team.

However, both BAs and VCs agree that the entrepreneurial team is of paramount importance (Tyebjee & Bruno, 1981; Mason et al., 1995; Haar et al., 1988; Short & Riding, 1989; Muzyka et al., 1995; Robinson, 1987). Perhaps only when VCs can not find ventures with high quality entrepreneurs do they place less emphasis on the

entrepreneur and more on recruiting a more balanced management team. One VC stated the importance of the entrepreneur:

“What we would say is the key criteria, whether we stick to it is another matter, is the quality of the management, i.e. the person. You could produce any numbers, but unless you have someone to carry it out, it is not too worthwhile.” (VC5, 6/6/96)

The importance of management is also eloquently supported in the literature by MacMillan et al. (1985) who note in their study:

“Five of the top ten most important criteria had to do with the entrepreneur’s experience and personality. There is no question that irrespective of the horse (product), horse races (market), or odds (financial criteria), it is the jockey (entrepreneur) who fundamentally determines whether the venture capitalists will place a bet at all.” (p.119)

Indeed, five of the top ten most important criteria for the BAs and VCs in this study concerned the entrepreneur. Table 5.4 shows how these variables compared between the investor types when rated on a postal questionnaire.

Table 5.4 - Importance of the Entrepreneur’s Characteristics as Investor Attractions to the Investment

Entrepreneur’s Characteristics (in order of BA attraction importance)	BAs’ Mean*	VCs’ Mean*	Statistical Significance Level of Differences between Investors
Enthusiasm	1.31	1.36	None
Trust	1.34	1.28	None
Expertise	1.6	1.34	More for VC at <1% level
Liked upon meeting	1.66	1.81	None
Track record	2.12	1.79	More for VC at 1% level

*The Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

Clearly, the entrepreneur’s experience and trackrecord are the only two variables with significantly more importance to the VC than the BA. Since these two variables are the

only two tangible entrepreneurial characteristics listed, which can be supported and documented with 'hard data', VCs may rely more on them than BAs in order to substantiate their investment decision to their fund providers. Such a suggestion may be supported by the agency theory presented in Chapter 2.

Since the entrepreneurial variables are of primary concern to BAs and VCs, each will be briefly addressed.

The entrepreneur's enthusiasm was the most important variable for BAs and the third for the VCs. One BA stated: "The critical thing is whether the guy is really driven and willing to work really hard. Those I am happy to back." (BA10, 19/3/96).

But for the VCs, the entrepreneur's trustworthiness was the most important investment attraction, whilst it was second for the BAs. This "credibility of the management team" (AC2, 31/5/96) is vital to both investors and one BA even stated: "My greatest concern is the integrity of the entrepreneur. I have no interest getting in bed with somebody that I can't trust." (BA8, 23/2/96) Indeed, Coveney (1996) found that a lack of trust in entrepreneurs curtailed the investment activity of both active and inactive BAs.

Concerning the entrepreneur's expertise, a number of BAs expected the technical expertise to be a given and, thus, considered the entrepreneur's commercial expertise to be most important. One BA stated: "The entrepreneur may be technically persuasive, but he has to be commercially persuasive. Being a salesman is essential, and most entrepreneurs are not." (BA5, 16/2/96) However, many VCs were primarily interested in

whether the entrepreneur had founded a firm before and had the necessary management experience. Dixon (1991) states that for VCs “the most important factors were managerial experience in the particular industry sector, and their marketing skills (...) Management quality indicates the potential upside gains of a project, and the extent to which the downside risk may be reduced.” (p.339)

Closely related to expertise, the entrepreneur’s trackrecord can give the impression of whether he/she “will be able to do, and achieve, what they are saying that they will achieve.” (VC4, 6/6/96). Indeed, one of the BAs stated his preference for funding older entrepreneurs (45+) who tend to have a more realistic view of life than younger entrepreneurs. He states: “at the end of the day, (the younger entrepreneurs) have never really lived in the jungle. They think they have, but until they have really been in the jungle, they are scared. They can’t appreciate what you are doing for them.” (BA9, 15/3/96)

The last variable, the degree to which the investor liked the entrepreneur upon meeting, was important because it rendered an impression of how easy the entrepreneur would be to work with. This was especially true for BAs, who prefer more hands-on involvement in their investee firms. One BA stated: “It is all about chemistry. If you are more concerned about financial returns, you are better off not getting involved in the angel scheme at all.” (BA16, 26/3/96), whilst another BA said: “I am financially secure and not looking for aggravation so I would like to enjoy working with people I work with. I must get along with the principals of the firm.” (BA19, 28/3/96) On the other hand, MacMillan et al. (1985) found in their US study that VCs cared little about whether the

entrepreneur had a compatible personality, whilst other researchers found it was a concern (Sapienza, 1989; Cable & Shane, 1997).

Lastly, respondents mentioned a number of other important entrepreneurial characteristics. A few of the BAs and VCs preferred entrepreneurs who have put some of their own savings into the venture. One BA felt that this was crucial because he dislikes "guys that use us to fund their extravagant life style, they need to sacrifice a bit, otherwise it turns me right off." (BA10, 19/3/96). BAs also stated a preference for more than one entrepreneur in the venture, since although 'an ideal committee is a committee of one' (BA20, 29/3/96), having "two brains is better than one." (BA5, 16/2/96) This was not mentioned by the VCs probably because they are used to dealing with larger ventures which have management teams. Finally, the heterogeneity of BAs' investment preferences was highlighted by one BA who stated:

"One of the things that I find most important is whether the entrepreneur's wife is supportive of the venture. If things on the business front start to sour, I don't want him to have trouble on both the home and business fronts. I invested in a firm ten years ago with a solid entrepreneur and wife team. Now he has retired and she is running the whole show." (in a letter attached to a postal questionnaire)

The attraction of the product/market investment criteria will now be evaluated.

5.4.2 - Product/Market

Since a firm's product and the market in which it is sold are quite closely related, this research study combined the two variables into one section. During the interviews, the BAs and VCs were asked what aspects related to the product/market attracted them most to their last early stage investment. Their responses indicate that although the entrepreneurial factors are still of foremost importance, the product and market are also a serious concern.

One of the primary requirements for BAs was the product's presence and uniqueness in a niche market. One BA stated: "The product has to be something that no-one else is doing" (BA11, 19/3/96), whilst another said: "the products have to be unique, not 'me-too' products." (BA18, 27/3/96). In fact, a number of BAs mentioned that theme restaurants were certainly something that they would not touch. However, the uniqueness of the product often resulted from the product itself, or how it was marketed, preferably in a niche market where the nature of competition would be a minor concern. Many BAs claimed that the niche market did not have to be that large to make a profit, although they preferred markets with growth potential. One BA described the market he invested in: "It is a fragmented market that is growing, as the Americans would say: 'get rich on the niche'." (BA20, 29/3/96)

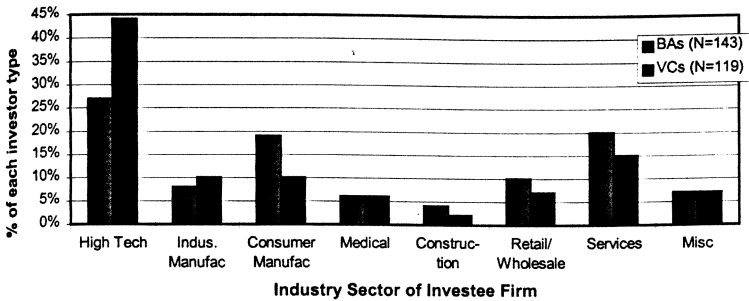
A number of BAs also preferred the presence of distribution channels: "If you have a good product, but no distribution channel, you are whistling in the dark." (BA12, 22/3/96) Yet, most BAs cared little about what the specific product was and the

importance of the industry sector also appeared to be secondary, as one BA stated: "The actual product doesn't matter too much, you can always learn about it." (BA14, 25/3/96)

Like the BAs, the VCs also prefer ventures operating in a true market niche, but one VC cautioned: "What often happens, a product gets invented and it is looking for a niche, but it doesn't quite do it." (VC12, 13/6/96). However, VCs demand much higher growth rates from their investments than BAs do. This means that they are not interested in 'lifestyle firms' which have "sub-critical mass" (VC10, 10/6/96), but ones with huge potential. One VC echoes this: "I am only interested in funding businesses which operate globally, not parochial ones, they are not worth the effort. We would not invest in anything that will not conceivably be worth £25 million within 5 years." (VC6, 6/6/96). In addition, the protection from competition was more important for VCs than for BAs. Lastly, some VCs stated that they prefer opportunities which have been proven but are still undercapitalised, indicating that VCs may prefer less risky ventures than BAs. One VC described his last investment as: "such a good opportunity, it was like selling wheelbarrows at a gold mine." (VC3, 5/6/96)

Clearly, the interviews indicated that compared to BAs, VCs are more attracted to investment opportunities which have very large growth potential and competitive protection for the product. BAs, however, tend to prefer niche markets and are less concerned with the specifics of the product or the sector. To shed further light on these findings, Chart 5.1 shows the industry sectors in which the BA and VC investors actually invested.

Chart 5.1 - Industry Sectors of the Firms Funded*



* Note: Some investee firms within non-technology sectors (above) may also involve high technology and so be considered a high-tech investment by the investor, although it is in a low-tech industry sector.

Compared to BAs, VCs actually invest more in technology firms and less in the manufacturing of consumer goods. Since high technology firms usually have high growth rates and potential, and are in competitive markets, this lends some support to the previous finding that VCs are more attracted to investments which have high growth potential and competitive protection for the product. A more detailed analysis of how these technology investments compare to non-technology investments for each investor type will be conducted in Chapter 7.1.4.

To summarise the questionnaire findings, Table 5.5 shows the product/market variables compared between the investor types.

Table 5.5 - Importance of the Product and Market Criteria as Investor Attractions to the Investment

Product & Market Characteristics (in order of BA attraction importance)	BAs' Mean*	VCs' Mean*	Statistical Significance Level of Differences between Investors
Product's sales potential	1.49	1.57	None
Growth potential of the market	1.80	1.63	None
Quality of product	1.81	1.93	None
Niche Market	2.02	2.21	None
Product's informal competitive protection (know-how)	2.38	2.26	None
Nature of competition	2.52	2.35	None
Product's overall competitive protection	2.61	2.09	More for VC at <1% level
Product's formal competitive protection (patents)	3.20	2.96	None

*The Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

These quantitative results indicate the VCs' preference for high-growth markets and the BAs' preference for niche markets, although none of these significantly differ between the investor types. But the overall competitive protection for the product was found to be significantly more important to VCs, as the interviews indicated.

The meagre BA literature in the US and UK also supports these findings to a certain degree. Some studies in the BA field found that BAs: prefer unique products (Mason & Rogers, 1996; Landstrom, 1995) in a niche market (Drake, 1995), have little interest in the "proprietary nature of the product or service, or knowing the industry in which the venture will compete" (Haar et al., 1988, p.21), and that unlike VC firms, BAs are "not interested in competitive insulation, (...) nor do they care very much about the degree to which the entrepreneur has identified competition." (Haar et al., 1988, p.11) Although BAs feel that the market's growth potential is important (Mason et al., 1991a), Freear et al. (1991) found that despite funding firms which have a similar market share in their

respective industries, VCs finance firms which are forecast to grow much faster than those that are BA-funded.

The more comprehensive VC literature in the US and the UK is also supportive. Studies show that VCs prefer product markets with growth potential (Sahlman & Stevenson, 1985; Robinson, 1987; Riquelme & Rickards, 1992; Rea, 1989; Wright & Robbie, 1996).

In fact, Rea (1989) found that:

“markets that offer unconstrained opportunities for rapid growth are significantly more important (for successful negotiations) than the completeness of the team, a credible business plan, rapid return on investment, or favourable terms (...) Entrepreneurs need not approach venture capitalists if they are not part of a rapidly growing market or cannot create a new one with no constraints on the growth of their companies.” (p.149-150)

Thus, market and product potential are key to the VC's evaluation, and finding a growth market not yet saturated is of great importance since “early birds are not always winners in product markets, but late comers are almost always losers.” (Sahlman & Stevenson, 1985, p.97) Also, the competitive protection of the product and market was found in the US to be the most important product characteristic (MacMillan et al., 1985), whilst in the UK, Sweeting (1991) also stressed its importance.

Lastly, Deakins (1996) can add some insight on why patents were not rated more highly. He found that, due to the time involved and legal complexities of applying for patents, many entrepreneurs are discouraged from entering the lengthy patent process. This minefield of regulation may also not appeal to VCs. Indeed, Tyebjee & Bruno (1984)

found that many VCs believe that “the public disclosure of the product design in the patent application leads to more competitive entry rather than less.” (p.1059)

Now that the importance of market and product characteristics have been documented, the financials will be addressed next.

5.4.3 - Financials

For both the BA and the VC, the financial criteria were rarely stated explicitly as one of the major attractions, although they were sometimes hinted to through investor emphasis on the niche and growth potential of the market. In general, BAs placed very little weight on the amount of specific financial projections and calculations, rather they seem to have a gut feeling that if the investment succeeds, it will succeed very well. One BA even stated: “The financial considerations were not paramount, I think I was bored at the time and I just wanted to do it.” (BA21, 2/4/96) VCs, on the other hand, emphasised more on the financial projections and like the BA, wanted them present in the business plan to show that the idea had been well thought out by the entrepreneur, as was documented in the last chapter. Indeed, it is not wise to consider the financials without keeping in mind who formulated them. One VC wrote on his returned questionnaire: “Once you start separating the financial analysis from the people, you are in trouble. The numbers are only as good as the people who write them.”

The US and UK literature also support that financials are not the main investment criteria of attraction for BAs (Mason et al., 1995; Mason & Rogers, 1996) and VCs (Hall & Hofer, 1993; Sweeting, 1991, McDonald Wood, 1985). In addition, the BAs’ lack of

concern for financial characteristics relative to the VC was supported (Freear et al., 1991, 1995b; Landstrom, 1995). However, a number of studies pointed out that the financials were usually not a very important criterion in the initial screening stage of the investment process, although more important in the due diligence stages (Mason & Rogers, 1995; Hall & Hofer, 1993; Dixon, 1991).

A closer look will now be taken at the two categories of financial variables which a statistical factor analysis procedure identified: those used to screen for potential gains, and those that are more important when actually running the firm in an active 'hands on' manner.

5.4.3(A) - Financials Used to Screen for Potential Gains

Most BAs were not too concerned with calculating financial projections, and when asked about them, many BAs echoed: "The returns will be either high or zero." (BA18, 27/3/96), and: "I place little reliance of trust on projected figures. My investment decision was very subjective, relying on the impression of the entrepreneur and believing in him." (BA6, 23/2/96).

VCs, however, appeared to place much more emphasis on financial projections which screen for potential financial returns. Reliance upon IRRs and NPV calculations was common. One reason given for this concern was due to the financially driven nature of their fund providers. One VC stated: "Most venture capitalists are IRR driven because their investors are IRR driven, those investors investing in venture capital look at IRR as

a measure of performance.” (VC5, 6/6/96) Table 5.6 shows how some of these financial screening variables were rated on the postal questionnaire.

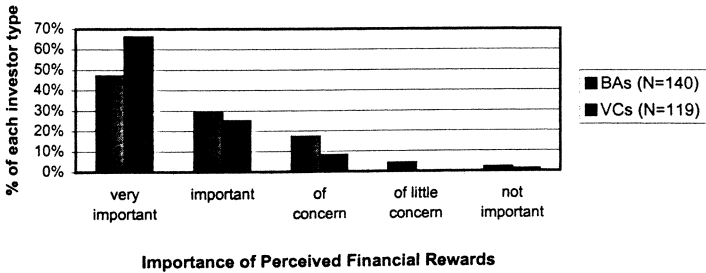
Table 5.6 - Importance of the Financial Profit Criteria as Investor Attractions to the Investment

Financial Characteristics (Used to Screen for Potential Gains) (in order of attraction importance)	BAs' Mean*	VCs' Mean*	Statistical Significance Level of Differences between Investors
Perceived financial rewards	1.85	1.43	More for VC at <1% level
Expected rate of return	2.25	1.74	More for VC at <1% level
High margins of the business	2.47	2.29	None

*The Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

This quantitative data seems to supports the qualitative interview findings that VCs place more emphasis on financial screening variables. In particular, Chart 5.2 shows the respective importance each investor type places on financial returns.

Chart 5.2 - The Importance of the Perceived Financial Rewards as an Investor Attraction to the Investment



* The difference between the means of the investor types is statistically significant at the <1% level.

The literature also supports these findings. Although little BA research on financial screening variables exists, the VC literature certainly attests to the importance VCs place on them (Muzyka et al., 1993, Wright and Robbie, 1996). Indeed, MacMillan et al.

(1988) believe that these variables are of greater importance to the VCs because they “are best suited to the expertise of the venture capitalist and/or because involvement in these activities does not require substantial or continual involvement.” (p.33) The financial criteria that are most important to such active venture involvement will now be addressed.

5.4.3(B)- Financials Used as Cost Concerns to be Monitored

In most of the firms funded by the BAs interviewed, one of the greatest weaknesses was the lack of financial controls and accurate accounts (this is also a major pre-investment hesitation that will be addressed in Chapter 5.7). Most BAs handled this deficiency through their own input in the firm, as one BA stated: “I immediately helped with the accounting system. There were no financial systems but the numbers looked good.” (BA4, 16/2/96) However, the BAs’ concern for the day-to-day financial controls often also stemmed from their lack of trust in the financial abilities of the entrepreneurs they fund. Thus, their active ex post involvement may be one way for them to reduce these agency risks, as was hypothesised in Chapter 2. One BA supported this:

“I have always found that there is never enough money available for a small company, (the entrepreneurs) have never planned ahead for a cash flow crisis when it comes and they always try to fudge the figures to avoid the crisis at least on paper, but if I keep a close eye out on the financials, I can see the crisis coming and help.” (BA10, 19/3/96)

Another BA, who also kept a close eye on the operating financials, reasoned about his active financial involvement in this way: “If an entrepreneur gets money easily, he will spend it lavishly. If he gets it the hard way, he will spend it more wisely.” (BA17, 26/3/96)

Although the firms VCs finance often also do not have extensive financial controls, VCs usually recruit new employees to handle the operating financials. One VC stated: "One of our concerns was that the entrepreneur was not that experienced in running a small business, so we put our man, a financial controller, in there as well as our involvement." (VC12, 13/6/96) Table 5.7 shows how some of these financial operating variables were rated on the postal questionnaire.

Table 5.7 - Importance of the Financial Cost Concern Criteria as Investor Attractions to the Investment

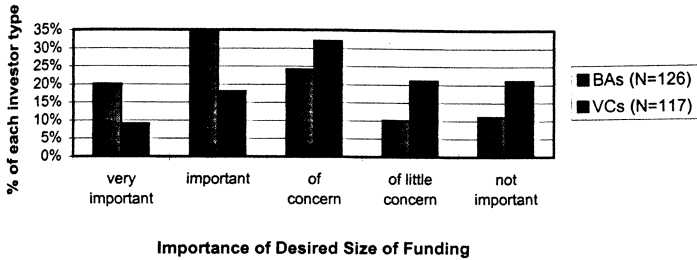
Financial Characteristics (Used as Cost Concerns to be Monitored) (in order of BA attraction importance)	BAs' Mean*	VCs' Mean*	Statistical Significance Level of Differences between Investors
Low overheads	2.48	3.00	More for BA at <1% level
Ability to break-even without further funding	2.55	2.91	More for BA at <5% level
Low initial capital expenses needed (i.e. on assets)	2.56	3.34	More for BA at <1% level
Size of the investment (desired)	2.58	3.28	More for BA at <1% level
Low initial cost to test the market	2.68	3.21	More for BA at <1% level

*The Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

These quantitative postal data appear to support the interview findings that BAs are more concerned than VCs with the financial variables which are important in the day-to-day operations of the investee firm. Thus, BAs more personally and actively ensure that their investment money is spent wisely, possibly since they have less additional financial capital reserves to invest should the firm need it. If such a need did arise, it would force the BA to surrender more equity to attract further funding. Indeed, one BA stated: "The size of the investment I make influences how active or passive I am in the firm" (BA4, 16/2/96), whilst another stated: "The amount of the investment has to be right, otherwise I am not interested." (BA12, 22/3/96) As in this study, Robinson (1987) found such

funding requirements to be relatively unimportant for VCs. Chart 5.3 demonstrates the BAs' concern for financing firms within an acceptable funding-requirement bracket.

Chart 5.3 - Importance of the Desired Size of Investment as an Investor Attraction to the Investment



* The difference between the means of the investor types is statistically significant at the <1% level.

The limited UK and US literature on the area also supports these findings. Mason et al. (1994) document the BAs' concern for the operations of the venture, whilst MacMillan et al. (1988) state that for VCs: "The lowest degree of involvement occurred in those activities concerning the ongoing operations." (p.32) Tyebjee & Bruno (1984) also found that VCs have less concern for day-to-day operations.

It appears that VCs may be more concerned about financial variables used for potential (ex ante) screening of profits, whilst BAs may be more interested in the financial variables important in running a firm (ex post). This may somewhat suggest that BAs may desire more active involvement (ex post) in the running of the firm.

5.4.4 - Business Plan

The business plan only slightly attracted BAs and VCs, although both thought it was crucial to show that the entrepreneur had thoroughly thought through the business proposal, as was shown in Chapter 4.4.7. Indeed, business plans act as reflections of the entrepreneur, as one BA stated: "The guy has to show that he has really thought through the business and show it in the business plan." (BA20, 29/3/96). Whilst another BA stated:

"I like to see professional business plans, the more professional that it is, the more likely I am to invest. If I get a business plan with lots of spelling errors or pages missing or typing doesn't follow through, I will just throw it away. Because if they can't present a business plan, then I don't think that they can run a business properly. Raising money is one of the most important things they will be doing, and if they can't do that right grammatically, I don't bother." (BA23, 3/4/96)

Although most BAs demanded a business plan to show competence, there were still a number who believe that they were useless because the projections are usually unrealistic and undeliverable. One BA stated his frustration:

"I don't have a lot of time for business plans. They are a bit like banks asking us for cash flow forecasts, they are all dreams. (...) Everyone is optimistic when they write it out - a waste of effort." (BA15, 25/3/96)

Conversely, VCs relied slightly more upon a good business plan which was straightforward, honest and realistic. Some VCs stated that because they evaluate business plans for a living, any deception in a business plan will probably be caught and will greatly lessen that company's chances of receiving funding. However, many VCs stated the need for clarity of vision in business plans and a proposition which is "a little

bit different from the usual" (VC9, 10/6/96), especially in untried start-up firms. Such clarity of the business concept was reiterated by one VC who stated:

"You need a balance between presenting the concept of the business clearly and how you are going to maximise the opportunities it presents, and then give sensible financial information." (VC5, 6/6/96)

The BA and VC literature support these findings. Business plans were seen by BAs as necessary, although their importance in the investment decision was limited. Mason & Harrison (1996a) found in a UK study that more than three-quarters of BAs required to see a business plan before investing, whilst Coveney (1996) illustrated that a business plan was the most important investment criterion for only 9% of active BAs. In contrast, VCs place much more emphasis on business plans (Haar et al., 1988; Landstrom, 1995). For VCs, the importance of a business plan as a reflection of the entrepreneurs is apparent (MacMillan et al, 1985; Rigby, 1997), and this is demonstrated in business plans which are: clear (Hall & Hofer, 1993; Zacharakis & Meyer, 1995), professional (Hall & Hofer, 1993), realistic (Keeley et al., 1991), and well balanced (McDonald Wood, 1985; Keeley et al., 1991).

For both BAs and VCs the business plan was not a major attraction to the investment, although its formulation was a requirement.

5.4.5 - Other Attributes of the Business

In addition to the four main categories of investment criteria (entrepreneurs, product/market, financials, and business plan), a number of other important criteria analysed were harder to categorise. These are presented in Table 5.8.

Table 5.8 - Importance of Miscellaneous Criteria as Investor Attractions to the Investment

Other Business Attributes	BAs' Mean*	VCs' Mean*	Statistical Significance Level of Differences between Investors
Investor's involvement possible	2.42	2.85	More for BA at <2.5% level
Investor's strengths fill gaps in business	2.44	3.47	More for BA at <1% level
Venture is local (geographically close)	2.79	3.65	More for BA at <1% level
Potential exit routes (potential liquidity)	2.88	2.19	More for VC at <1% level
Investor understands business/industry	2.88	2.43	More for VC at <1% level
(Potential) co-investors present	2.93	3.37	More for BA at <5% level

*The Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

The first two variables in Table 5.8 may render further support to the notion that the option to be actively involved in the investment is more important to BAs than to VCs.

Since ex post involvement will be analysed comprehensively in Chapter 6, these results

here only show that the possibility of active involvement is a more significant investment

attraction for BAs than for VCs. Indeed, such involvement by BAs can make the

difference between success and failure for their investee firms (Wetzel & Freear, 1994).

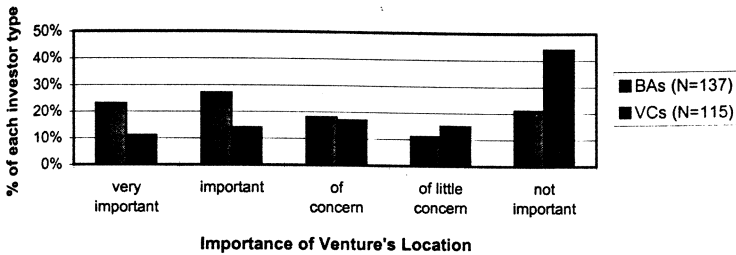
In addition, the degree of attraction of the investee firm's geographical proximity, the

third variable listed in Table 5.8, also renders an indirect indication of the investor's

preference for involvement. Chart 5.4 shows the BAs' greater preference than the VCs'

for more local investments.

Chart 5.4 - Importance of the Geographical Proximity of the Investee Firm as an Investor Attraction to the Investment



* The difference between the means of the investor types is statistically significant at the <1% level.

The fourth and fifth investment criteria listed in Table 5.8 show that VCs are significantly more attracted than BAs to investments which offer potential exit routes and VCs claim that their understanding of the business was a more important investment attraction for them than it was for the BAs. Indeed, these findings might have been hypothesised using the agency theory presented in Chapter 2 since they may lend some support to the earlier assumption that, unlike BAs, VCs must show competence to their fund providers. This notion of exit routes will be dealt with more comprehensively in Chapter 6.

The last miscellaneous investment criteria presented, the potential presence of co-investors, was for some BAs interviewed a motivating investment factor (i.e. they felt more comfortable going in with others), although most BAs stated that they only invest with people they know personally. Investing with people they did not know would limit their ability to exercise a degree of control over the firm through active involvement. One BA echoes this point: "Co-investors attract if I am in it purely for the investment, if it is an investment where I have a hands-on role it doesn't attract,

otherwise you have too many egos involved, it leads to conflict.” (BA14, 25/3/96) Thus, the finding that BAs are more attracted to coinvestors than VCs somewhat contradicts the proposed notion that BAs prefer to deal with agency risks through ex post involvement.

Additionally, VCs, stated that they would only co-invest with other VCs in order to spread the risks, ease the process of finding future funding, and to share the costs of ex ante due diligence. This finding does appear to lend further support to the VCs’ preference for dealing with agency risk ex ante through screening and due diligence.

The literature shows mixed information about the BAs’ preference for co-investors, although few, if any, studies measure to what degree the BA personally knows the co-investors before investment. This study has shown that this is a major influence. However, it might be assumed that if BAs are not investing through a BIS, that they may receive investment referrals from friends with whom they then co-invest. This may explain why a number of US and UK studies (that did not use a BIS as a research source) found that anywhere from 60-92% of BAs prefer to co-invest (Freear et al., 1994a; Wetzel, 1983, 1986; Haar et al., 1988; Aram, 1989; Gaston, 1989; Kelly & Hay, 1996) whilst many of Mason et al.’s studies in the UK (which used a BIS as an information source) found that only 29-44% of BAs usually prefer co-investing (Harrison & Mason, 1991a, 1992b; Mason & Sackett, 1996; Mason & Rogers, 1996; Mason & Harrison, 1993a, 1995). However, Coveney (1996) found in a UK study (heavily dependent upon BIS angels) that 52% of BAs preferred co-investing, although 46% of his study’s sample were in fact inactive BAs. The VC literature, however, supports this study’s findings (Fiet, 1991; Tyebjee & Bruno, 1984; Sapienza, 1992; Keeley & Turki, 1992).

Summary

Although this section found that for the most important investment criteria, the entrepreneurs and market/product, few statistical differences existed, the interviews showed that BAs may be more influenced by the former, whilst VCs more so by the latter. Yet, the investment criteria ranked lower overall in importance showed more statistical differences between the investor types. Indeed, only limited support was rendered to the notion that BAs were more attracted to financial and non-financial variables relevant to potential active ex post involvement in their investments, whilst VCs appeared to prefer those variables which measured potential financial profits ex ante investment.

A summary (including ranked data) of all the criteria which attracted the BA and VC investors to their investments is given in Table 5.9.

Table 5.9 - Summary of the Investment Criteria Differences Between BAs and VCs

*The statistical significance results are based on the likert scale data, not the overall rank data.

Investment Criteria (Number of criteria = 27)	BAs' Overall Rank	VCs' Overall Rank	Statistical Significance Level of Differences between Investors
The People/Entrepreneur			
Enthusiasm of the entrepreneur(s)	1	3	None
Trustworthiness of the entrepreneur(s)	2	1	None
Expertise of the entrepreneur(s)	4	2	More for VCs at <1%
Investor liked entrepreneur(s) upon meeting	5	9	None
Track record of the entrepreneur(s)	10	8	More for VCs at 1%
The Market/Product			
Product's sales potential	3	5	None
Growth potential of the market	6	6	None
Quality of product	7	10	None
Niche market	9	13	None
Product's informal competitive protection (know-how)	12	14	None
Nature of competition	17	16	None
Product's overall competitive protection	21	11	More for VCs at <1%
Product's formal competitive protection (patents)	27	20	None
Financials used to screen for potential gains			
Perceived financial rewards (for the investor)	8	4	More for VC at <1%
Expected rate of return	11	7	More for VC at <1%
High margins of the business	15	15	None
Financials to monitor the 'operating' business			
Low overheads	16	21	More for BA at <1%
Ability to reach break-even without further funding	18	19	More for BA at <5%
Low initial capital expenditures needed (on assets)	19	24	More for BA at <1%
Size of the investment	20	23	More for BA at <1%
Low initial cost to test the market	22	22	More for BA at <5%
Other Business Attributes (vital to hands-on role)			
Investor's involvement possible (contribute skills)	13	18	More for BA at <5%
Investor's strengths fill gaps in business	14	26	More for BA at <1%
Venture is local	23	27	More for BA at <1%
Other Business Attributes (Misc.)			
Potential exit routes (potential liquidity)	24=	12	More for VC at <1%
Investor understands the business/industry	24=	17	More for VC at <1%
(Potential) co-investors present	26	25	More for BA at <5%

5.5 - Multivariate Analysis of the Investment Criteria

To shed more light on the variables discussed in this chapter, this section will analyse them in a logistic regression, as highlighted in Chapter 3.5.2. The resulting model may then be used to classify and predict, based upon the investment criteria, whether a certain investor is a BA or a VC. Those variables with greatest predictive power in making such a classification are also identified.

For this chapter the resulting model, which has a prediction accuracy of 76.88%, reads:

$$z = -1.844 + 1.106X_1 - .6183X_2 + .5542X_3 - .5043X_4 + .8554X_5 - .3560X_6 + .9027X_7 - .4382X_8 - .7525X_9 + .3940X_{10}$$

where the variables in order of greatest predictive power (p -values in parentheses) are:

X_1 = Investors strengths fill in gaps in business (.0000)

X_2 = Investor understands the business/industry (.0014)

X_3 = Low initial capital expenditures needed on assets (.0046)

X_4 = Potential exit routes (potential liquidity) (.0083)

X_5 = Product's sales potential (.0112)

X_6 = Product's formal competitive protection (patents) (.0187)

X_7 = Enthusiasm of the entrepreneur (.0205)

X_8 = High margins of the business (.0331)

X_9 = Trustworthiness of the entrepreneur (.0342)

X_{10} = Niche market (.0418)

Surprisingly, only the first four variables listed here were found to vary significantly between the BA and VC investors in the univariate analysis. Although the others did not show significant differences, their presence here attests to their sizeable marginal contributions in classifying BA from VC investors. It is also interesting to note that those variables which are negative in the equation were all shown by the univariate analyses to be more important for VCs (some significantly), whilst the same is true for the positive variables and their higher rating by BAs.

Thus, the resulting estimated probability of an investor being a VC = $\frac{1}{1 + e^{-z}}$

To test this model, an investor was chosen randomly from the database (number 75) and this investor's responses on the ten model variables were inserted into the model equation.

The investor's ratings (all on a likert scale where 1 = very important attraction, 5 = not important attraction) were as follows: $X_1=1$, $X_2=3$, $X_3=1$, $X_4=1$, $X_5=1$, $X_6=1$, $X_7=2$, $X_8=1$, $X_9=1$, $X_{10}=1$. Putting this into the logit equation, $z = -1.0349$, and the estimated probability of this investor being a VC = 26.21%. Indeed, this investor was a BA.

Since this BA investor is closer to $z=0$ (i.e. the 50% probability ranking dividing the two investor types) than the investor in Chapter 4.5, let's see how the probabilities (of this investor being a VC) change (new probability listed in brackets) if this investor had: rated filling gaps in the business one point less important (51.77%), understood the business more (39.73%), less concern about exit routes (17.66%), less concern about patents (19.92%), and less concern for a niche market (34.50%).

Another investor was randomly chosen (number 104) whose ratings were as follows:

$X_1=2, X_2=3, X_3=2, X_4=2, X_5=2, X_6=5, X_7=1, X_8=1, X_9=1, X_{10}=1$. Putting these into the equation, $z = -1.3503$, and the estimated probability of this investor being a VC = 20.58%. Indeed, this investor was a VC. However, this model is clearly not as robust as the model presented in Chapter 4 and, therefore, has a lower accuracy rate.

To further test the robustness of this model, a new model was built omitting 10 samples. Closely resembling the original model, the new model (with a prediction accuracy of 79.09%) reads:

$$z = -2.0738 + 1.1488X_1 - .6301X_2 + .5580X_3 - .4974X_4 + .8060X_5 - .3411X_6 + .9656X_7 - .4622X_8 - .7461X_9 + .4297X_{10}$$

To determine the robustness of the new model's predictive ability, two of the out of sample investors were placed into the model. The first investor (number 243) had the following ratings: $X_1=1, X_2=2, X_3=3, X_4=2, X_5=2, X_6=2, X_7=1, X_8=3, X_9=1, X_{10}=1$. The resulting $z=-1.3136$, and the estimated probability of being a VC=21.18%. Unfortunately, this investor was a VC, but clearly since this particular VC rated the importance of filling gaps in the management him/herself so highly, it is not surprising that the model believed this investor to be a BA. This may be further evidence that this model is not as robust as the model in Chapter 4, although its predictive ability is still relatively sound. The second investor (number 77) had the following ratings: $X_1=1, X_2=1, X_3=1, X_4=3, X_5=1, X_6=5, X_7=1, X_8=3, X_9=1, X_{10}=5$. The resulting $z=-4.1262$, and the estimated probability of being a VC = 1.58%. Indeed this investor was a BA.

Looking at all these findings, the high statistical importance of the possibility for investors to fill management gaps in the investee firm themselves and the preference for low initial capital expenditures may render some support to the proposed notion that BAs place more emphasis on investment criteria related to ex-post involvement in the firm. Much less support was found for the proposition that VCs place more emphasis on investment criteria relating to initial screening.

To add even further insight to all the overall investment criteria, investors were asked to compare their actual investment with another one only seriously considered, and to state their primary ex ante investment hesitation, as will now be discussed.

5.6 - Comparison of the Influential Investment Criteria of those Firms Funded to those Firms only Seriously Considered

To gain some insight into which variables are crucial in the last stage of the pre-investment process, investors were asked to state which one variable separated the investment actually made from others which were only seriously considered (at a similar or dissimilar time). Certainly for the BA research field, such a compensatory analysis of variables is unprecedented for the final investment stage, and this omission has even been described in Mason & Harrison's (1994) study as a research limitation. In the VC research field, such a trade-off of investment variables was conducted by Muzyka et al. (1995), however, they focused on investment preferences, rather than on actual investments done.

The results show that those BAs interviewed chose one investment over another (in the latter part of the investment decision process) primarily based upon the opportunity to get actively involved in that investee firm. Since involvement means working with the firm's founder, characteristics of the entrepreneur were also found to differ between the two investment opportunities. These interview findings, shown in Table 5.10, may provide some support for the notion that BAs prefer to get actively ('hands on') involved ex post in their investments.

Table 5.10 - Comparison of Ventures Funded by BAs With Other Ventures Only Seriously Considered (But Not Funded) by those BAs to Determine in Which Certain Investment Criteria Were Rated Superior*

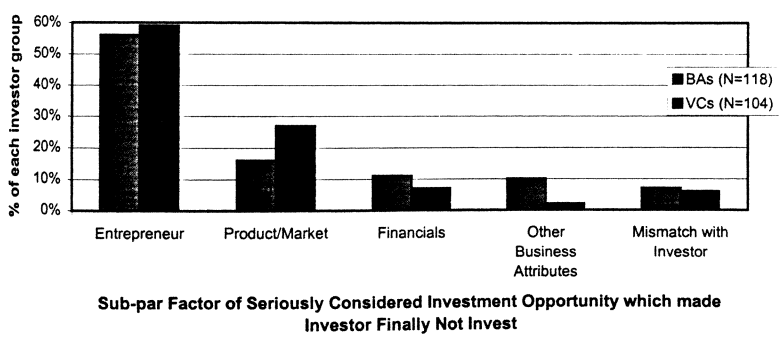
Investment Criteria of BAs Interviewed	Criterion was Superior in Venture Funded by BA (in x % of cases)	Criterion was Superior in Venture Only Considered by BA (in x % of cases)	No Difference in Presence of Investment Criterion Between the Ventures
Investor's strengths fill gaps in business	82%	18%	0%
Investor's involvement possible	73%	0%	27%
Trustworthiness of entrepreneur	67%	0%	33%
Quality of product	67%	0%	33%
Low initial capital costs	67%	33%	0%
Investor liked entrepreneur upon meeting	64%	9%	27%
Niche market	60%	10%	30%
Low initial costs to test market	60%	20%	20%
Track record of entrepreneur	60%	30%	10%
Product's sales potential	58%	17%	25%
Stage of venture (more established)	58%	17%	25%
Product's informal competitive protection (know-how)	56%	0%	44%
Perceived financial rewards	56%	22%	22%
Enthusiasm of entrepreneur	50%	0%	50%
Expected rate of return	50%	8%	42%
(Potential) co-investors present	50%	13%	37%
Low overheads	50%	30%	20%
Expertise of entrepreneur	50%	33%	17%
Uniqueness of product	50%	41%	8%
Nature of competition	46%	9%	46%
Investor understands business	46%	18%	36%
Potential exit routes (liquidity)	46%	27%	27%
High margins of business	44%	11%	44%
Size of the investment (liked by BA)	43%	0%	57%
Growth potential of market	42%	42%	17%
Venture is local	36%	27%	36%
Ability to reach break-even without further funding	36%	36%	27%
Product's formal competitive protection (patents)	33%	44%	22%
Product's overall competitive protection	22%	22%	56%

* Note: BA sample size for comparison = 12

Unfortunately, such a detailed comparison was not possible for the VCs interviewed, because they rarely considered more than one early stage investment opportunity. However, for these VCs in general it was usually a combination of the stage of investment, qualities of the entrepreneur, and the niche and potential of the market which swung the investment decision.

In addition to these interview findings, respondents to the large-scale postal questionnaire were also asked to conduct this comparison. The results were similar to the interview findings, although VCs on average were more deterred by the entrepreneur than was indicated in the interviews. These findings are shown in Chart 5.5.

Chart 5.5 - Aspect of a Seriously Considered Investment Opportunity Which Finally Deterred an Offer of Investment



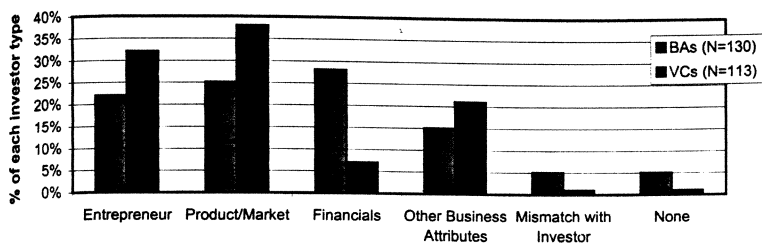
Although the BA literature does not address such analysis, the VC literature partially supports these findings. MacMillen et al. (1987) found that each type of successful investment has an unsuccessful 'twin': "the major difference between the winner and loser is some difficult-to-define venture team characteristic." (p.129)

5.7 - Pre-Investment Criteria Hesitations of those Firms Funded

To add more insight into the relevance of their investment criteria, investors were asked what their most significant pre-investment hesitation was of the firm actually funded. For BAs interviewed, the biggest hesitation was the financials of those companies. Their relative lesser hesitation over the entrepreneur may show how BAs tend to invest more in people (i.e. the entrepreneurs), rather than electing to replace them later as the VCs often do. Including the postal questionnaire, the financials of the firm remained the main hesitation (for 28% of respondents), followed by the product/market (25%), the entrepreneur(s) (22%), and other business attributes (15%). The results in Chapter 5.4.3(B) support this by documenting BAs' active concern for the financial operating costs. Interestingly, the entrepreneur was the main hesitation for over 50% of the investments seriously considered, but not funded, whilst it was only the main hesitation for almost a quarter of the investments made.

For VCs interviewed, the quality of the entrepreneur and the management team was the largest hesitation, followed by their concern about whether the product and sales projections would be realised. However, including the postal questionnaire, the product/market was the most significant hesitation (for 38% of respondents), followed by the entrepreneur(s) (33%), other business attributes (21%), and the financials (7%). This is shown in Chart 5.6.

Chart 5.6 - Aspect of Venture Funded that Made Investor Most Hesitant to Invest



Investors' Primary Pre-Investment Hesitation

Since BAs often invest in firms with few financial controls, they often elect to get involved in a financial capacity as a means of protecting their investment. VCs rectified this through their recruitment of employees with accounting experience. However, it should be noted that in the chart above the investor groups should be considered quite independently. Thus, if more VCs than BAs rated the entrepreneur as their main hesitation, it does not necessarily mean that VCs have more reservations about the entrepreneur than the BAs, rather its relevance should only be rated relative to the other factors considered within each investor group. This is important since the majority of BAs interviewed had significant hesitations, whilst most VCs appeared to have few, if any, serious hesitations. Of course, as in any heterogeneous sample, there was also a minority of BAs who had few, if any, hesitations. One BA even joked: "My greatest hesitation was investing in a horse-racing equipment company, because if the investment starts working, I might start betting some on the horses, that worries me - there goes the investment!" (BA23, 3/4/96)

5.8 - Conclusion

This chapter has shown that although both BAs and VCs are most motivated to invest by financial returns, this is less relevant to BAs, who often also invest to become active in the entrepreneurial process, and also just for fun. Furthermore, an analysis of their investment criteria showed that, for both BAs and VCs, the characteristics of the entrepreneur were most important, although this was more significant for the BAs. In addition, the investors were, to a lesser degree, attracted to the product/market factors and the financials.

However, this section rendered some mixed support for the notion that BAs use more ex post, and VCs more ex ante, investment criteria. Although the entrepreneur, product/market, and business plan investment criteria showed no major differences between the BAs and VCs, the financial data rendered some support for the BAs' inclination for ex post monitoring, whilst their preference for the ex post involvement variables was also more pronounced compared to VCs. In particular, the multivariate analysis found the BAs' preference for filling management gaps themselves in their investee firms was the investment criterion most accountable for the overall BA/VC group differences. Conversely, VCs were significantly more attracted than BAs to criteria which were related to ex ante screening of the investment (such as projected financial returns). Therefore, BAs may place more emphasis on choosing an entrepreneur (to work with ex post) about whom they have less hesitations. However, contradicting these findings, the data show that BAs have a greater preference for co-investing, even though they find this preferable when not actively involved.

Although it was shown that VCs place more emphasis on initial screening, there is somewhat mixed support for BAs' emphasis on ex post involvement criteria. We may, therefore, conclude that the following is only partially supported:

Hypothesis 4: BAs Place More Emphasis on Investment Criteria Related to Ex-
Post Involvement and VCs Place More Emphasis on Investment
Criteria Related to Initial Screening

This lends only limited support to the proposed notion that BAs utilise the incomplete contracts approach, and VCs the principal-agent approach, to reduce potential agency risks in their entrepreneurial investments.

Now that the pre-investment variables and investment criteria of relevance have been analysed, the next chapter will consider the rest of the investment process: the negotiations, actual investment, post-investment monitoring, exiting, and returns realisation.

Chapter Six

Testing the Research Hypotheses: Contractual Control, Monitoring, and Exit Differences Between BAs and VCs

Introduction

This chapter will review the latter part of the investment process, from contract negotiations to exiting the investment. This will be addressed in the following sections:

6.1 - Negotiations, Actual Investment, and Contractual Control Differences

(Hypothesis 5)

6.2 - Post Investment Monitoring Differences *(Hypothesis 6)*

6.3 - Exit Route and Performance Differences *(Hypothesis 7)*

6.4 - Multivariate Analysis of the Control, Monitoring, and Exit Variables

6.5 - Post-Investment Regrets

6.6 - Conclusion *(Hypothesis 8)*

6.1 - Negotiations, Actual Investment and Contractual Control Differences

Once an investment opportunity successfully completes the screening and due diligence stages, the prospective investor will wish to negotiate the venture's valuation to render a fair equity stake in exchange for the funding. However, regardless of the equity stake's

size, the real challenge for a small firm investor often lies in managing the risk of the venture (MacMillan et al., 1987). In Chapter 2 we hypothesised that VCs might do this more through pre-investment screening, due diligence and comprehensive contract formulation (i.e. contractual control), whilst BAs might do this more through ex post involvement. Thus, in this section the fifth hypothesis will be addressed:

Hypothesis 5: VCs have more contractual control over their investments than BAs.

To test this, the following will be addressed:

6.1.1 - Negotiations

6.1.2 - Actual Investment and Contractual Control

6.1.1 - Negotiations

This section will compare the negotiation processes of the two investor types so that in the next section we may address the resulting differences in actual investment contracts and their relative amounts of contractual control. This negotiations process can be a lengthy and difficult time, where “deals are usually arrived at at the extremes of greed of all parties. A bargain (is) usually struck between an equal unwilling buyer and seller.” (Sweeting, 1991, p.641) Indeed, negotiations involve bickering over the fair market value of the venture, which in an efficient market is “the price at which a property would change hands between a willing buyer and willing seller when neither is acting under compulsion and both have equal access to all relevant information and business.” (Benjamin & Margulis, 1996, p.186) However, in the inefficient market for venture capital the negotiation process is crucial because the market price is difficult to

determine. Much reliance is, therefore, placed on the business plan and the market projections to ascertain the venture's worth (Rea, 1989), and VCs, especially, may use their own due diligence reports for this purpose (Wright & Robbie, 1996). This study assessed the rigor and length of BA and VC negotiations.

6.1.1(A) - Rigor of Negotiations

Both the BAs and the VCs interviewed believed that the negotiated contract should be equally fair to both parties. However, the level of fairness appeared to differ between the two investor types. The BAs usually negotiated little and were more easily satisfied than the VCs. In fact, in some cases there was no negotiation at all: "In my case, there was no deal to negotiate, the entrepreneur had a deal lying on the table - here are the terms, take it or leave it." (BA2, 8/2/96) Indeed, many BAs stated that nothing contentious arose in the negotiation process. The major difference between the BAs and VCs at the negotiation stage was the former's restraint in pushing the entrepreneur too much for a better deal, since this might affect the subsequent working relationship. One BA stated: "I wanted the deal evenly balanced, because at the end of the day, any business is a partnership, especially if it is a working partnership - the chemistry had to be there" (BA3, 14/2/96), whilst another reiterated:

"I don't believe in negotiating hard. I think if the man makes a fair offer, you don't scream for the last penny. Because if you do that, it just makes a knock on effect, he will then try to come back in some other way. You put the cards on the table and are honest with each other, then it will pay for both parties." (BA20, 29/3/96)

In contrast, VCs were more willing to negotiate more with the entrepreneurs, and "use standard legal agreements" (VC11, 10/6/96), instead of negotiating the legal clauses.

This difference in negotiation styles may add more weight to the proposed notion that BAs are more interested in being actively involved in their investee firms than VCs and, thus, want to maintain more amiable relations with the entrepreneurs.

To maintain such a favourable relationship, some first-time BAs even stated that they gave the entrepreneur a better deal because as one BA stated: "One of the tricks of the game is not to do anything clever, because at the end of the day the business is the people. We actually wanted the entrepreneur to have a better deal." (BA9, 15/3/96) However, this potentially naïve approach resulted in somewhat of a learning curve for some BA investors. One BA stated with regret: "I allowed the entrepreneurs to have a lot of options that I want to have, like he had the option to buy my shares after 3 years, even if I don't want him to. I wouldn't allow that now" (BA11, 19/3/96), whilst another BA stated:

"In my first deal, I was over generous to the entrepreneur, in subsequent ones they were fair to both parties (...) I would have liked to change more of the investment terms, to give us more voting rights and the right to charge interest on it." (BA25, 18/4/96)

Since VCs invest for a living and do it more frequently, such a learning curve was not evident.

In the UK literature, the BAs' relative lesser degree of negotiation preparedness is reflected in Mason et al.'s (1995) study which found that 78% of entrepreneurs sought professional advice from solicitors and accountants in drawing up investment agreements and reviewing deals, whereas only 38% of BAs used such assistance. The same study

also found that concerning the intensity of the negotiations, 44% of entrepreneurs and only 38% of BAs identified issues that were difficult to agree on.

The VC literature, however, found that VCs are tough and experienced negotiators who rely heavily on the credibility of the business plan and management team to reach agreement (Rea, 1989). Brophy (1992) states that VCs have gained much experience in negotiating these entrepreneurial deals:

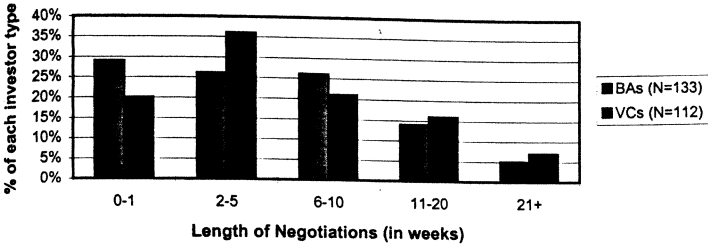
“New venture finance is typically the result of private negotiation, without regulatory intervention or requirements. While deals tend to be tailored to the circumstances of the projects involved, a growing set of identifiable principles and practices has come to be associated with the structuring and pricing of new venture financing.” (p.393)

Clearly, VCs generally negotiate tougher than BAs. The length of their negotiation processes will now be addressed.

6.1.1(B) - Length of Negotiations

To further determine differences in the levels of negotiations, it was assumed that those investors with longer negotiation processes may be more rigorous. However, although BAs reportedly spend less time negotiating than VCs, with each spending an average of 6.22 weeks (median:4) and 7.47 weeks (median:4) respectively, this difference lacked statistical significance ($p=0.216$), as Chart 6.1 shows.

Chart 6.1 - The Length of Investors' Negotiations*



* The difference between the means of the investor types is not statistically significant ($p=.216$)

To some degree, the lack of a significant quantitative difference can be explained through the interview findings. As was shown in the last chapter, VCs take more time throughout the whole investment process and for them negotiations (about valuation) are held at distinct stages throughout the process, as one VC noted: “Negotiations tend to go in two stages, the initial stage, after which we do due diligence, and then the agreement stage.” (VC15, 19/6/96) Thus, when finally discussing the valuation, most important issues have already been addressed and the main negotiation stage may not be too time consuming. For VCs, therefore, the main negotiation stage may be considered to be towards the end of the process, whereas for many BAs it may be regarded as a less distinct time and more spread out in small intervals over the full investment process. This might help to explain the findings in Chart 6.1.

However, in general, BAs placed little emphasis on drawing out these occasions of actual negotiation into a lengthy process. One BA stated: “Negotiations were about 10 minutes long. I liked it, and just went ahead with it” (BA13, 15/3/96), whilst another stated: “Negotiations were about for one evening.” (BA24, 11/4/96) One reason for this quickness may be due to the BAs’ lesser concern for legal:

"The negotiations were not too time-consuming since we were happy with what was being offered, it was just that it got a bit tedious on the legals. It is what the entrepreneur wanted. I found them really a bit unnecessary since you are looking ahead into the future for something you can't know. The legals were disproportionate for the size of the investment." (BA6, 23/2/96)

Another reason for the BAs' speedy negotiations was often attributed to the entrepreneur's haste in getting the deal done in order to get the cash he/she so desperately needs. One BA complained: "I let the entrepreneur push me along too quickly and, therefore, didn't do as much due diligence as I might have done, I regret that." (BA11, 19/3/96)

Conversely, VCs interviewed spend more time actually negotiating to reach more thorough agreements. One VC stated: "People have to give up some of their equity and submit to restrictive covenants and negotiate, it takes quite a bit of time." (VC1, 5/6/96) Another VC supported this when claiming that: "once you press the button and go down the legals process, you meet continuously for two months." (VC6, 6/6/96), whilst another stated: "Legals is usually a 2-3 week process, with many days of boring meetings where documents get redrafted between each round of arguing. I would speak to the entrepreneur every day during this process." (VC15, 19/6/96)

One additional explanation for BAs spending less time actually negotiating can be attributed to the investors' co-investment preferences. As shown in the last chapter, BAs often only invest with co-investors if they know them personally beforehand. This may make the negotiation process less time-consuming since BAs may more likely agree on what they each want. The terms then only need negotiation with the entrepreneur. VCs,

however, tend to co-invest with other VC firms and this often entails negotiating both with them, as well as the entrepreneur, to reach a satisfactory agreement.

Both the BA literature in the UK and US lend some support to these findings. Mason et al. (1995) found that most negotiations with a BA take less than one week to complete, whilst Atkin & Esiri (1993) found that BAs “do not negotiate too hard over terms and conditions and equity share.” (p.20) Not surprisingly, BAs were found to spend less time negotiating than VCs (Fear et al., 1990, 1992, 1995b; Mason & Harrison, 1996b). The more limited VC literature also supports the findings that negotiations can be time consuming, especially with early stage ventures which tend to be more risky (Rea, 1989).

Summary

This section has shown, primarily through qualitative findings, that BAs are less rigorous in, and spend less time on, investment negotiations. Unfortunately, the quantitative findings did not show that the differences in negotiation time between investor types were statistically significant, although a number of possible explanations were offered.

The negotiation differences are summarised in Table 6.1.

Table 6.1 - Summary of the Negotiation Differences

Negotiation Measures	BAs' Mean	VCs' Mean	BAs' S/D*	VCs' S/D*	Statistical Significance Level of Differences between Investors
Rigor of negotiations	---	---	---	---	More for VC (based on qualitative data)
Length of negotiations (in weeks)	6.22	7.47	6.6	9.2	None (although the qualitative analysis shows that VCs take longer)

The actual investment contracts discussed in the negotiation stage will now be compared.

6.1.2 - Actual Investment and Contractual Control

This section analyses the actual components of the investment contract to determine whether, compared to BAs, the VCs' more rigorous and more lengthy negotiations result in more comprehensive contracts which give them greater contractual control over their investee firms. This will be addressed by analysing the following:

6.1.2(A) - Legal Transaction Costs

6.1.2(B) - Investment Contracts

6.1.2(C) - Size of Investment

6.1.2(D) - Invested in Stages?

6.1.2(E) - Investor's Initial Equity %

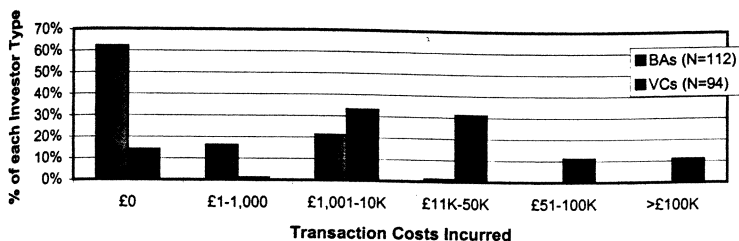
6.1.2(F) - Entrepreneur's Initial Equity %

6.1.2(G) - Number of Entrepreneurs Investor Has Replaced

6.1.2(A) - Legal Transaction Costs

To assess how much emphasis each investor placed on contractual control, BAs and VCs were asked how much they spent on transaction costs (legals etc.) in formulating the investment contract. As Chart 6.2 shows, 62% of BAs and only 14% of VCs spent nothing on transaction costs. Since most VCs use standardised contracts, these VCs may have felt that little or no additional amendments (or outside legal advice) was needed. Overall, VCs significantly outspent BAs, with each paying on average £39,875 (median: £12,000) and £889 (median: £0) respectively.

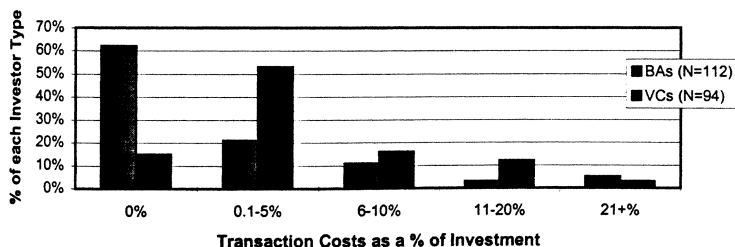
Chart 6.2 - Transaction Costs (Legal, etc.) Incurred on Last Early Stage Investment*



* The differences between the means of the investor types is statistically significant at the <1% level

Yet, since VCs on average make larger investments and, thus, their total legal costs may be higher (not considering possible economies of scale), these findings may be misleading. The legal costs were, therefore, computed as a percentage of the invested amount, as Chart 6.3 shows.

Chart 6.3 - Transaction Costs as a % of Investment*



* The differences between the means of the investor types is statistically significant at the <1% level

Even as a percentage of the invested amount, however, VCs still spent significantly more on legal costs than BAs, with each spending 5.5% (median: 3%) and 2.7% (median: 0%) of their total investment respectively.

Although the literature poorly covers the issue of transaction costs, Landstrom (1993) found that BAs in general incur small administrative and transaction costs in the investment process.

6.1.2(B) - Investment Contracts

When asked about the particular types of investment contracts used in the investment process, most BAs stated that their main concern was not to determine particular contractual structures or equity allocations, but whether the venture was not too risky and whether it would succeed at all. One BA stated: "The quality of the investment contract can only be as good as the business of course. So even with a very sound contract, if the business can not support it, it is worthless" (BA12, 22/3/96), whilst another BA claimed:

"People are so obsessed with equity. The number of people that fall out over 49% or 51% is pathetic. The reality is that equity is not important. 35% or 50% of nothing, means nothing (...) Sophisticated financial structures are worthless, they don't reduce the risk of the firm, you have to make it first!" (BA9, 15/3/96)

Similar to the BAs' greater emphasis on the firm's operating financials and the VCs' greater emphasis on profit screening financials, as witnessed in the last chapter, BAs again demonstrate their concern for the viability of their investment. BAs hope that with luck their firm may break even and eventually grow profitable, whilst VCs seem to take their investment's success with a greater degree of certainty and confidence and may, therefore, focus more on the financial profit measures.

BAs interviewed, therefore, tended to use relatively simple investment contracts, possibly agreeing primarily on the number of shares for the invested amount and the

salary of the entrepreneur. One BA stated: "We wanted something simple that people could understand" (BA15, 25/3/96), whilst another claimed that he used a simple software program to write his contracts (BA16, 26/3/96). Indeed, the BAs' lesser emphasis on contractual agreements was even stated by a VC: "I think that, in general, business angels may be confused over pricing and may pay more for a job than they should." (VC13, 13/6/96)

Resulting from their initial reluctance to form comprehensive contracts, a few BAs now feared that, since their investments were at last becoming successful, they might not receive the financial rewards they deserve. Additionally, one BA stated that this also impeded his ability to control major decisions: "If I had to do anything differently, I would have liked to have taken more control over my investment." (BA4, 16/2/96)

As might be expected, VCs only invested if they could get agreement to their comprehensive investment contracts. One VC stated his tough investment requirements: "We usually take a 33% equity stake, plus we have preference shares that compound annually at 44%." (VC3, 5/6/96) Many VCs acknowledged that their deals were stringent, but then early-stage entrepreneurs often have few other options:

"Half to two-thirds of the ones (investment opportunities) we like end up going somewhere else because they can get better deals. With 150 suppliers of venture capital in the market this should be no surprise. But with the early stage ones, they usually go ahead." (VC15, 19/6/96)

Indeed, one VC even regretfully admitted to the high degree of contractual control that VCs take over their entrepreneurs:

"A lot of venture capitalists will tell you what the deal is at the very end (of the investigation process), which I think makes good business sense, but I think that in the human sense it is very cruel. And if you want to work with people as partners, you might as well not step on them." (VC6, 6/6/96)

The literature supports the finding that VCs formulate much more comprehensive investment contracts than BAs (Norton, 1995). Certainly, the limited BA literature on deal structures shows that BAs tend to be less sophisticated, often relying on 'ad hockery' to price investments (Mason et al., 1995). This usually results in BAs providing funds on more liberal terms than VCs (Wetzel, 1986b; Norton, 1995), which may keep the costs down for the entrepreneur (Mason & Harrison, 1995). Additionally, BA investments often just involve a straight equity percentage exchange (Norton, 1995; Short & Riding, 1989). Indeed, only 70% of BAs in the UK draw up formal investment agreements (Mason et al., 1995) and only 16% of investments involved more complex instruments (than just ordinary shares) which allow the BA to adjust his/her shareholding in light of investment performance (Mason & Harrison, 1996b). In addition, Wetzel (1986a) found in his US study that only 47% of BAs provided for liquidation in their investment contracts. This lesser concern for contractual agreements was also supported by Coveney (1996) who found that 48% of active BAs had a stated preference for standard legal deal agreements, whereas only 20% had no such preference and 23% were indifferent.

In contrast, the VC literature shows that to gain a high degree of control, VCs devise deal structures which are designed to control agency costs in the VC-entrepreneur relationship by structuring the investment terms to shift risk to the entrepreneurs (Sapienza et al., 1996). This renders the VC downside risk protection while preserving the upside risk

potential (Norton, 1995). The security of choice for VCs is, therefore, preferred stock (Sahlman, 1988; Norton & Tennenbaum, 1992, Carter & Van Auken, 1994) which usually includes conversion provisions so that VCs can share in the firm's success and redeemable and puttable provisions which may allow the VC to exercise control over the firm (Norton, 1996). The extent of control that these provisions (covenants) render to VCs was addressed by Tyebjee & Bruno (1984), who state that as well as limiting capital expenditures and management salaries, these:

“covenants also establish the basis under which the venture capitalist can take control of the board, force a change in management or liquidate the investment by forcing a buy-back merger, acquisition or public offering, even though the venture capitalist holds a minority position.”
(p.1053)(underline added)

Cary (1995) supports this use of contractual provisions/covenants, stating that the UK's largest VC, 3i, often uses A ordinary shares which they call: “all singing, all dancing” (p.28) because they may be: convertible, cumulative, participating, preferred, redeemable, as well as ordinary! Not surprisingly, one BA mentioned that the company in which he had invested had taken a deliberate decision to seek £600,000 from more than four BAs in order to avoid the danger of having too many restrictive controls imposed by a VC.

Clearly, VCs ensure that even with minority ownership, they still have a high degree of contractual control over the investment. Conversely, those BAs who even utilise contracts, place little emphasis on making the contracts comprehensive which will render them a high level of contractual control over their investments. This lends some further support to the main assumption used in the hypotheses formation: compared to BAs, VCs

make more use of the principal-agent approach to limit agency problems ex ante through due diligence and contractual control.

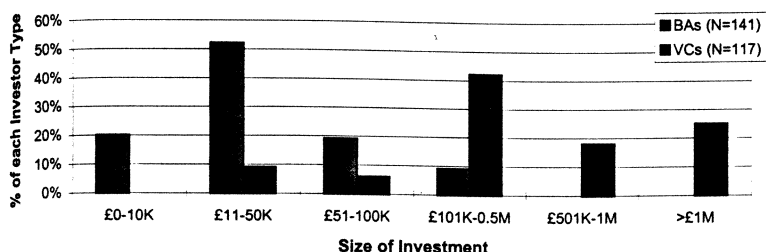
6.1.2(C) - Size of Investment

To gain further insight into the respective levels of BA and VC contractual control, a look at the size of their investments is warranted. It may be assumed that investors with larger amounts at stake, have a greater incentive to protect it, especially when investing in early stage entrepreneurial ventures of a high-risk nature (Carter & Van Auken, 1994).

The interviews showed that since VCs often have large pools of funds for investment, accumulate high overhead costs, and are obligated to invest the full amount of their fund, they invest much larger amounts per deal compared to BAs. In contrast, due to limitations on their financial resources and risk preferences, BAs usually prefer smaller amounts. One BA stated: "The most I put in is the most I can comfortably lose. The worst that will happen is that it will hurt my pride because I made a bum decision." (BA17, 26/3/96) Whilst another stated: "I don't want to put too much money in any one business, I want to spread the risk." (BA11, 19/3/96)

The quantitative results also support the finding that VCs invest significantly more per investment than BAs. On average, each invested £945,363 (median: £400,000) and £54,585 (median: £30,000) respectively, as Chart 6.4 shows.

Chart 6.4 - Size of Each Investment*



* The differences between the means of the investor types is statistically significant at the <1% level

Both the BA and VC literature support these findings. In the UK, BAs on average invest £50,000, with a median of £30,000 (Mason et al., 1995; Harrison & Mason, 1992b; Mason & Harrison, 1994a, 1996a, 1996b), whilst in Scotland the average was £35,000 (KPMG, 1992). One other UK study, Stevenson & Coveney, 1994 (which is an early version of Coveney, 1996) found higher average investment amounts, although this study's sample included a high percentage of corporations (not private individuals) which made unquoted investment and, therefore, Mason & Harrison (1997) claim it may not be truly representative.

However, BAs in the US invest more than their UK counterparts (Harrison & Mason, 1991a), although US studies show a high degree of variation. Aram (1989) and Gaston (1989) found that the investment size averaged between \$48,000 - \$60,000, whilst Ehrlich et al. (1994) and Freear & Wetzel (1990) found this amount to range from \$100-300,000. Regardless of these intra-group variations, evidence shows that BAs invest significantly smaller amounts than VCs (Freear & Wetzel, 1990; Ehrlich et al., 1994; Freear et al., 1995b; Bank of England, 1996). Although the VC literature focuses mostly

on the invested amounts of later stage deals and MBOs, the Bank of England (1996) claims that the average size of an early stage deal is about £450,000, which is similar to the median amount (£400,000) found in this study.

6.1.2(D) - Invested in Stages?

To further assess the respective amount of control investors have over their financial investments, this study asked them whether their funding was staged. Providing the investment amount in increments renders the valuable option to revalue, abandon, or expand commitment to the investment (Sahlman, 1988; Norton, 1995). This also reduces agency risk by helping investors to monitor their investments as entrepreneurs reach important pre-determined milestones (Norton, 1995; Cable & Shane, 1997). The results show that only 21% of BAs and 23.5% of VCs staged their investments, although for the BAs this practice was certainly more frequent in earlier stage ventures (i.e. start-ups) (correlation=.4226).

In the BA literature in the UK, Mason et al. (1995) also found that 21% of BAs staged initial investments, whilst Coveney (1996) found that 55% of his sample provided additional rounds of finance in addition to the initial investment. Unfortunately, no such research has been conducted on BAs in the US.

In the VC literature in the UK and the US, the staging of investments dependent upon predetermined milestones/performance targets is well documented as a way for VCs to limit their risk exposures (Sweeting, 1991; Gorman & Sahlman, 1989; Ruhnka & Young, 1991), although the frequency of its use has not been documented.

6.1.2(E) - Investor's Initial Equity %

Levels of equity ownership were measured to further assess the investor's degree of contractual control. In the interviews, some variation occurred amongst BAs as to their preferred levels of ownership. A number of BAs, however, did agree that entrepreneurs were often not realistic about the amount of equity an investor should receive in exchange for the investment. One BA stated:

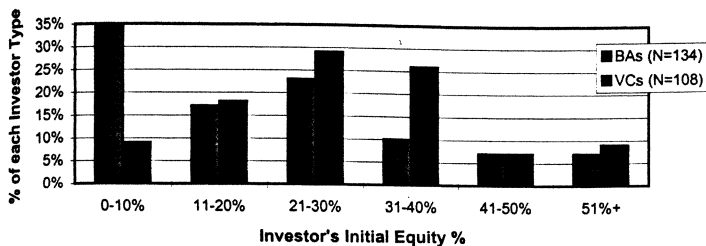
"An entrepreneur has an unrealistically high belief that his/her firm will succeed and, therefore, is often only willing to give a small amount away. Giving half the business to make it four times bigger, makes the entrepreneur twice better off (...) It is crucial to see that an entrepreneur shows that he has thought deeply about (this) (...) it is crucial to a strong relationship with the business angel and will avoid any possible resentment that the entrepreneur might have (now or later) concerning the percentage of equity surrendered." (BA6, 23/2/96)

The VCs also stated a range of preferred equity percentages, however, many mentioned their proclivity for sizeable stakes in early stage entrepreneurial investments. One VC commented:

"With these types of investments, I have learned to now only go in if you have a controlling stake. I have tried different types of capital structures and intensities of involvement. Using a controlling stake has worked best." (VC9, 10/6/96)

The VCs' preference for larger equity stakes was also supported statistically. On average, VCs had a 31.7% (median: 30%) equity stake and BAs a 23.6% (median: 20%) equity stake. Chart 6.5 shows this statistically significant difference.

Chart 6.5 - Investor's Initial Equity % in the Investment*



* The differences between the means of the investor types is statistically significant at the <1% level

The BA literature supports these findings. Both in the UK and the US, BA investors prefer minority shareholdings (Ehrlich et al., 1994; Harrison & Mason, 1992b; Mason & Harrison, 1995, 1996b), not to favour voting control (Mason & Harrison, 1996a; Freear & Wetzel, 1991), and Haar et al. (1988) even found in their US sample that the majority prefer less than 10% ownership. However, Coveney (1996) found that BAs in the UK tend to average a 35% shareholding in their investee firms, which is considerably higher than the 23.6% found in this study. This difference may be attributed to Coveney's (1996) inclusion of corporations in his BA sample (Mason & Harrison, 1997).

The VC literature also supports this study's results that VCs, like BAs, usually own less than 50% of the shares. In the UK, Cary (1995) found that most VCs take 10-30% equity stakes in their investments, whilst in the US, Carter & Van Auken (1994) claim that the average equity stake is 24.49%. Indeed, VCs usually do not wish to demotivate the entrepreneurs by taking a controlling interest (Bank of England, 1996). However, VCs still ensure that they have a degree of control through the use of two primary contractual instruments which will now be addressed: voting rights and ratchets. Under company law in the UK, minority shareholders with more than 25% of the equity can safeguard

their investments against abuse by major shareholders by having the right to veto certain actions the major shareholders may wish to take (Cary, 1995). In this way, VCs may be able to exert some control over their investments. Since 55% of VCs in this study have more than 25% equity stakes, and only 36% of BAs do so, this further supports the assumption that VCs have more contractual control than BAs. In addition to these voting rights, most VC contracts also employ 'ratchets' to incentivise the entrepreneur and reduce the variability of returns. Under this system, the final equity stake percentages of the entrepreneurs and the VC depend upon the firm's performance as measured against projected performance (Hall, 1988). Woolfman (1993) found that 68% of VC funds actually used ratchets on 50% or more of their deals, whilst 80% claimed that they would favour them on their next investment. Such a system, although quite rare in BA investments, allows VCs to vary their shareholdings and, in many instances, increase their amount of equity control.

Clearly, both the empirical findings and the literature support the notion that, compared to BAs, VCs may have larger equity stakes, and more control, in their early-stage entrepreneurial investments.

6.1.2(F) - Entrepreneur's Initial Equity %

To gauge the entrepreneur's degree of control, the size of their equity stakes was measured. In the interviews, both BAs and VCs expressed a clear relationship between the age of the company and the ownership percentage of the entrepreneur. In younger firms, entrepreneurs usually have only been through one round of finance and, thus, have

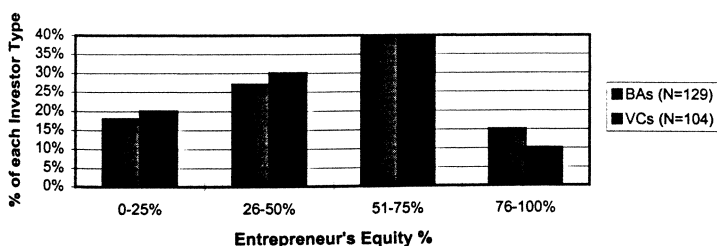
not yet had to give up majority ownership for additional rounds of financing. But as one BA stated:

“The entrepreneurs always need a second round of financing, even though they always say they never will. But at that stage, when they come back to you, they will have a bit of a track record so you can be a better judge, and you tighten the screw on the entrepreneur and take a bigger equity percentage. At the early stages, you give him the money and let him go - you always want them to remain motivated.” (BA10, 19/3/96)

Since this study’s sample is composed primarily of early stage firms, we would expect many entrepreneurs still to be in control.

The results show that, indeed, 55% of BA-financed entrepreneurs still had more than 50% of the equity stakes, whilst 50% of the VC-funded entrepreneurs did so. On average, the former had 52% of the firm’s equity (median: 54%), whilst the latter had 48% (median: 50%).

Chart 6.6 - Entrepreneur’s Initial Equity %*



* The difference between the means of the investor types is not statistically significant ($p=.268$)

The BA literature is very scant in this area, with only a Swedish study indicating that on average BA-funded entrepreneurs have an ownership stake of 30% (Landstrom, 1992).

The VC literature, however, presents more support. Bruno & Tyebjee (1985) found that,

on average, entrepreneurs had a 45.1% equity stake, whilst many other studies acknowledge that entrepreneurs often surrender more of their equity as the firm grows and needs further rounds of financing (Steinberg, 1996; Gorman & Sahlman, 1989; Sweeting, 1991; McDonald Wood, 1985). Indeed, Bruno & Tyebjee (1985) found in a US study that, on average, entrepreneurs give up 31.5% of equity in the first round, 19.7% in the second, and 10% more in the third round of VC financing. Clearly, if concerned about dilution, the later the entrepreneur waits to raise venture capital, the better (Steinberg, 1996).

The entrepreneurs' equity percentages differed little between those funded by BAs and those funded by VCs. Although the BA-funded entrepreneurs appeared to have only slightly more equity, we might have expected this difference to be larger since BA financing tends to be less expensive and more lenient than VC financing (Freear et al., 1995b).

6.1.2(G) - Number of Entrepreneurs Investor Has Replaced

As another measure of the investors' degree of contractual control over their investments, this study ascertained the number of unquoted investments in which the investors replaced the entrepreneurs. This, of course, is based on the loose assumption that in order to force a replacement of the firm's entrepreneur, an investor must have a certain amount of control (i.e. contractual) in the firm. One VC stated:

"The ability to replace an entrepreneur is usually related to the investors' contractual control. Initially most entrepreneurs cannot be replaced, but this becomes more feasible after a couple of rounds of financing. But, usually the relationship is harmonious rather than adversarial." (VC15, 19/6/96)

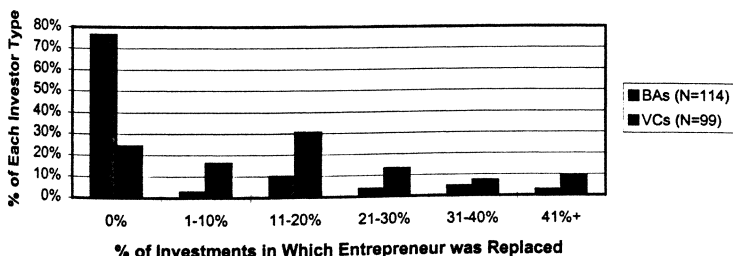
The interviews showed that although the quality of the entrepreneur was important to both types of investors, VCs were more proactive than BAs in replacing existing entrepreneurs if the venture was not running as well as expected. One VC even stated:

“In pretty much all the companies that I have invested in, apart from the one that went bust, I have replaced the management team. In the one that went bust, I left the entrepreneur and existing management team in. In all the other ones that have been successful, I have recruited people and replaced the manager.” (VC12, 13/6/96)

BAs, however, stated that they were more prone to getting personally involved as a means of rectifying problems in their investments, rather than replacing existing management with new recruits. This will be addressed more in Chapter 6.2.1.

The quantitative data show that, on average, VCs replaced entrepreneurs in 5.7 unquoted investments (median: 3), whilst BAs have only done so in 0.45 unquoted investments (median: 0). However, when compared more accurately between investors as a proportion of the total number of unquoted investments done, VCs still have a greater tendency to replace entrepreneurs than BAs, each having done so in 17% (median: 13%) and in 7% (median: 0%) of their investments respectfully. This is shown in Chart 6.7.

Chart 6.7 - % of Investments in Which the Investor has Replaced the Entrepreneur*



* The differences between the means of the investor types is statistically significant at the <1% level

Both the BA and VC literature support these findings. It is well documented that many VCs in the UK and the US are not afraid to replace the entrepreneurial team if the venture is not performing up to expectations (Kanellos, 1996; Sweeting, 1991; Rosenstein, 1988, 1989; Gorman & Sahlman, 1989; Bruton et al., 1994; MacMillan et al., 1988), although this was more common with the top VC firms in the industry (Rosenstein et al., 1990; Ehrlich et al., 1994). In fact, in a UK study, Hall (1988) found that 73% of the VCs interviewed had replaced management where necessary, whilst in the US, Carter & Van Auken (1994) found that 28.86% of VC investments had required a change of management. This high degree of VC control over investments was further supported by another US study, Gorman & Sahlman (1989), which states:

“The venture capitalist, acting through the board of directors, typically gains the power to fire senior management in the initial negotiation. We asked venture capitalists how often they resorted to this final privilege. The answer is, ‘Frequently’. The mean (in the statistical sense) venture capitalist has initiated the firing of three CEO/Presidents, or one CEO/President per 2.4 years of venture investing experience.” (p.241)

In contrast, BAs replace existing management infrequently and, therefore, place greater emphasis on finding a competent entrepreneur in the initial appraisal of the investment (Mason & Harrison, 1994), as Chapter 5.4.1 shows.

Based upon the evidence presented, it is clear that VCs replace entrepreneurs infrequently, but still more so than BAs. It is proposed that this may imply that VCs have more contractual control, but based on the available information this remains uncertain.

Summary

VCs conduct more rigorous and more lengthy negotiations than BAs (based on the qualitative data) and gain more authority through their more thorough contract formulation processes with the entrepreneur (i.e. they form better contracts, spend more on transaction costs proportionately, invest larger amounts, have greater equity stakes, and more often exercise the authority to replace entrepreneurs). However, despite these findings, the quantitative measure of the length of negotiations and the entrepreneurs' equity stakes do not differ significantly between BAs and VCs, and it is uncertain whether the replacement of entrepreneurs is a robust measure of contractual control. However, even with these limitations, the data show that VCs may employ more comprehensive contracts than BAs which render them more contractual control. Thus, it may be concluded that the following is probably *true*:

Hypothesis 5: VCs have more contractual control over their investments than BAs.

Table 6.2 gives a review of the contractual control measures which give support to this hypothesis.

Table 6.2 - Summary of the Actual Investment and Contractual Control Differences

Actual Investment & Contractual Control Measures	BAs' Mean	VCs' Mean	BAs' S/D*	VCs' S/D*	Statistical Significance Level of Differences between Investors
Transaction costs (legal etc.)	£888	£39,875	1.9K	63.6K	More for VC at <1%
Transaction costs (as a % of total investment)	2.7%	5.4%	6.1	7.2	More for VC at <1%
Rigor of investment contracts	---	---	---	---	More for VC (based on qualitative data)
Size of investment	£54,585	£945,363	71.9K	1,350K	More for VC at <1%
Investments made in stages? (% yes)	26%	28%	.44	.45	None
Investor's initial equity %	23.6%	31.7%	20.2	17.7	More for VC at <1%
Entrepreneur's initial equity %	52.1%	48.7%	24.1	22.4	None
Number of entrepreneurs investor has replaced (average)	.45	5.7	1.2	9.5	More for VC at <1%
Number of entrepreneurs investor has replaced (as a % of investments made)	7.1%	17.1%	17.0	16.4	More for VC at <1%

Now that the investment negotiation and contracting stage has been analysed, the next stage of the investment process, the post-investment monitoring stage, will be reviewed.

6.2 - Post-Investment Monitoring Differences

After making the financial investment, many investors will monitor the venture to ensure that the entrepreneurs competently utilise their new funding, and to provide managerial assistance to reduce the inherent risks of early stage ventures. Such investor assistance may make the difference between success and failure of a venture (Bygrave & Timmons, 1992; Sapienza, 1992).

In this section, analysing the differences between the post-investment monitoring by BAs and VCs will determine to what extent each utilised personal involvement to reduce investment risks, in particular, potential agency problems. Thus, the following hypothesis will be addressed:

Hypothesis 6: BAs monitor more actively post-investment than VCs.

If BAs are indeed found to monitor more actively, then more support will be rendered to the proposal that BAs utilise the incomplete contracts approach to manage agency problems by monitoring more ex post, rather than more ex ante as the principal-agent approach would suggest.

The interviews clearly showed that the BAs tended to be personally more actively involved in their investments than VCs. This may be partly due to the BAs' need to feel that they can protect their investment in these early stage and high risk ventures by influencing the way their money is being used, but also partly for the sheer joy of involvement. One BA stated: "I like to babysit the entrepreneur - I am available

morning, noon, and night" (BA9, 15/3/96), whilst another said: "I couldn't just be an investor in the venture and sit back and look at the results in each quarter, I wouldn't trust anyone that far. I get twitchy, I want to be involved." (BA12, 22/3/96) This is not to say that every BA was actively involved, although it was rather common.

The VCs interviewed, however, stated that they usually did not take such an active approach as the BAs. Rather, they preferred to monitor from afar and take on a more administrative role, instead of one that required active hands on involvement. Their duties at the VC firm tended to prohibit the level of active involvement that many BAs were free to follow, although like with the BAs, VC involvement varied across the scale. One VC summed up the common view:

"It is not our business to get involved in the day-to-day running. Why would I want to do that? If you have the right people in there, you don't have to be there everyday, that is not our business. We are more strategic. It is our business to make sure that we get the right people in there to run it." (VC10, 10/6/96)

However, a number of VCs stated that they tended to be more involved with the few early stage investments they do, rather than with the more established ventures they usually fund, as will be shown in Chapter 7.1.2.

The international BA literature documents well, the active, hands-on involvement of BAs (Mason & Harrison, 1992a, 1996a, 1996b; Mason et al., 1991a, 1995; Freear et al., 1990, 1993, 1995b; Freear & Wetzels, 1991; Wetzels, 1983; Landstrom, 1991, 1992, 1993; Coveney, 1996), partly due to their need to influence and protect the way their investment is being used (Duxbury et al., 1996).

However, in the US VC literature there has been more debate over the amount of value-added by VCs beyond the provision of funding (Gorman & Sahlman, 1986; Timmons, 1986), with some acknowledging that VCs add value (Sapienza et al., 1992; Tyebjee & Bruno, 1981; Gupta & Sapienza, 1988; Landstrom, 1990), whilst others do not (Busenitz et al., 1997; MacMillan et al., 1987). This debate is now an emerging issue in the UK as well (Harrison & Mason, 1992a).

Yet, some confusion still exists as to whether BAs or VCs, respectively, are more actively involved in the ventures they finance. In the only two studies to ever compare the post-investment involvement of these two investor types (by analysing responses from their investee firms), the US study concluded that differences between BAs and VCs were not too distinct and that VCs may be slightly more involved in some monitoring activities than BAs (Ehrlich et al., 1994). The UK study, however, concluded that BAs may be more active and play a more hands-on role in their investments than VCs (Harrison & Mason, 1992a), although they acknowledged that the main difference between the two investor types may be more qualitative, rather than quantitative (Harrison & Mason, 1992a).

Since much ambiguity exists about the degree of investment monitoring and involvement by BAs and VCs, the different levels of possible investor involvement ('passive' versus 'hands on') will now be analysed. In these analyses, the amount of time personally spent involved with the investee firm is the primary categorisation variable. Although classical finance may believe that an investor on the board of directors of a quoted firm is actively involved, this study considers investors on the board of small unquoted entrepreneurial

firms to be more passively involved compared to those who actually work in investee firms on a daily or weekly basis.

6.2.1 - Passive Monitoring Options

In this section, the more passive options of investment involvement, such as financial statements monitoring, business strategy advice, and board of directors involvement, will be reviewed. VCs interviewed preferred and employed these more passive methods of monitoring. One VC stated:

“Most venture capitalists might be on a few boards, but they spend most of their time investing money. They are usually involved in a non-executive way. All the companies have a full management team, they are there primarily just for strategy and guidance” (VC7, 7/6/96),

whilst another VC noted:

“I see myself more as a financier really. I want to be a friend to the entrepreneur. You may be policing the agreement, but having put your cash in, you are not looking to manage their business. So you make sure that they know that and they can talk to you openly and can open up with you (...) The entrepreneurs are now much more comfortable with our input because they are 100% sure that we don't want to run their business.” (VC13, 13/6/96)

In contrast, the majority of BAs claimed to play a rather more hands-on role, instead of the more strategic and passive approach adopted by many VCs.

The VC literature also supports this more passive monitoring approach of VCs (MacMillan et al., 1987; Harrison & Mason, 1992a). Cable & Shane (1997) even state that “many venture capitalists try to minimise their personal interactions with entrepreneurs in favour of low-contact, fast-payoff investments” (p.171), despite the fact

that the value-adding potential of these frequent interactions has been documented (Sapienza, 1992).

One possible explanation (provided by the interviews) which may explain the VCs' more passive approach to venture monitoring than BAs, is their propensity to recruit new employees until the management team is balanced (as already hinted to in Chapter 5.4.1 and Chapter 6.1.2(G)). Recruitment of these individuals, especially industry and finance experts, to fill these gaps is intended to ensure that the firm will be run properly. One VC stated:

"We are not adverse to putting in our people to balance the management team. The people we put in are outsiders, i.e. not from the venture capital firm (...) Quite often we like to choose the person to come in to help run our investment. We often send proposals to people that specialise in the sector and often ask for their assistance." (VC9, 10/6/96)

Although both BAs and VCs often realise that the luxury of a well balanced management team is not always present in early-stage investments, many BAs preferred to utilise their own input and skills to fill management gaps. One BA stated: "The management team does not have to be well balanced, as long as I have some input to make it well balanced" (BA14, 25/3/96), whilst another said: "I am more attracted, I suppose, to unbalanced management teams. That means that I can help them." (BA22, 2/4/96) However, another BA recognised the limitations of his own involvement: "We add to the management team to make it well balanced. If without our involvement it is not well balanced, then we would not go near it." (BA9, 15/3/96)

This difference between the investor types was even acknowledged by one of the VCs: "Venture capitalists differ from business angels in that they bring in people to the management team, and replace people if they have to, whereas angels can plug those management gaps themselves." (VC13, 13/6/96) Thus, once VCs have filled the venture's management team with their own recruits (with or without removing the entrepreneurs), they may have more confidence in the day-to-day running of the business and, therefore, adopt a more administrative approach to monitoring.

Now a detailed qualitative comparison will be conducted between BA and VC investors across three measures of more passive post-investment involvement: financial statement monitoring, business strategy advice and involvement, and board of directors involvement.

6.2.1(A) - Financial Statements Monitoring

Whereas BAs tended to be more active in the actual daily running of the organisation, the interviews showed that VCs tend to play a more strategic role which is less involved with daily operations. It was clear that VCs tend to monitor the progress of the firm much more through the monthly financial reports.

The literature supports this notion that VCs tend to conduct more hands-off monitoring with the financial statements than BAs. In their comparison study of BA and VC post-investment involvement, Harrison & Mason (1992a) state:

"Overall, venture capital fund managers were most involved in financial and personnel related issues, where involvement is not necessarily either

continual or overly time consuming. They were less involved (...) where substantial and continual hands-on participation is required." (p.2)

Compared to BAs, therefore, VCs tend to monitor financial performance more (Harrison & Mason, 1992a), set higher performance targets for entrepreneurs to meet (Ehrlich et al., 1994), and provide more frequent and more detailed feedback when the venture is not achieving the set financial targets (Ehrlich et al., 1994). However, BAs place less stringent financial controls on their investee firms and this renders entrepreneurs more flexibility since less time needs to be spent on frequent generation of financial reports and more time can be devoted to more pertinent activities in the venture (Ehrlich et al., 1994). The importance of monitoring financial performance for VCs is also supported by Rosenstein et al. (1989) and MacMillan et al. (1988) in the US. However, in the UK, Hall (1988) found that only 60% of VCs in his sample monitored investments through monthly or quarterly reports.

Clearly, monitoring monthly or quarterly financial statements in a hands-off fashion is utilised more by VCs than BAs. Harrison & Mason (1992a) sum up this difference well:

"(A)lthough private investors do emphasise the (financial) monitoring role, they are less likely to contribute in this area than are venture capitalists and are therefore more likely to monitor and manage the venture rather than monitor and manage the investment in the venture."
(p.12)

6.2.1(B) - Business Strategy Advice

When investor input is given regarding the overall direction of the entire investee firm this may be considered business strategy advice (Barney et al., 1994). The interviews showed that both BAs and VCs were active in this manner, although more of the VCs

stressed it as being very important. One VC stated: "We always expect to render the direction of the business (...) We are instrumental in developing the strategy for a business and developing the organisational resources to support it." (VC9, 10/6/96) Conversely, since BAs may be more actively involved hands-on in their investments and may believe that they can influence the firm's strategy through their involvement, they may feel less pressure to overtly give strategic advice.

Unfortunately, the BA literature is very scarce on this area, only a Bank of England Report (1996) claims that BAs have influence over a firm's business strategy. In contrast, the VC literature in the US is much more abundant on this area. It is well documented that VCs are actively involved in formulating strategy for their investee firms (MacMillan et al., 1989; Busenitz et al., 1997; Rosenstein et al., 1989). Sapienza et al. (1996) even stated: "Consistent with prior empirical work, we found that VCs saw strategic involvement as their more important role, i.e. providing financial and business advice and functioning as a sounding board." (p.439) Indeed, the importance of the VCs' strategic input was classified by both VCs and entrepreneurs as important (Sapienza & Timmons, 1989). However, the VCs' strategic advice was found to be less receptive by entrepreneurs in more established firms and those pursuing technical innovations (Barney et al., 1994). Unfortunately, the UK literature does not cover VC strategic advice.

With support from the literature, it may be possible to conclude that VCs are more involved than BAs in setting the business strategy of investee firms.

6.2.1(C) - Board of Directors Involvement

One of the best ways for a VC to monitor the financial statements and influence strategy (as aforementioned) may be to take a seat on the board of directors of an investee firm. This may be considered another way to passively monitor the performance of the firm without being actively involved in a hands-on manner in its operations. In the interviews VCs seemed to more greatly prefer board involvement than BAs. Few BAs even mentioned board involvement, whilst almost every VC mentioned it as a necessity. One VC stated this as an effective hands-off way of monitoring:

“Part of having someone on the board as a director is that they are receiving and considering management information. But rather than being passive and just receiving information, we find that the best way to monitor is actually to be a director so that you still have some control over the company.” (VC4, 6/6/96)

The literature supports this finding. The limited BA literature on this area in the UK found that 60% of BAs took a seat on the board of directors, although in 20% of the investments the venture was not a limited company and so had no board of directors (Mason et al., 1995; Mason & Harrison, 1996b). However in the US, more ambiguity exists as to the levels of BA involvement on boards. Freear et al. (1990) found that 71% of BAs and over 90% of VCs in their sample had a seat on the investee firm's board, whilst other studies showed that this applied to only 15-37% of BAs (Postma & Sullivan, 1990; Gaston & Bell, 1988; Freear & Wetzel, 1989). In Canada, this lower percentage of representation was also witnessed with 37% of BAs having a board seat (Short & Riding, 1989).

In contrast, the VC literature is in greater agreement over the extensive level of VC board involvement. In the UK, most VC funds monitor their largely unsecured investments by appointing a director to the board (Mason & Harrison, 1991; Sweeting, 1991). Hall (1988) states: "The most important form of involvement in, and monitoring of, investments was to demand a seat on the board of the investee company." (p.46) However, surprisingly, VC representation on boards was not found to be a major cause of concern for most companies (Bank of England, 1996). Similarly in the US, VCs are active and influential members on the boards of early stage ventures, playing a vital role in shaping the strategy of those firms and monitoring financial performance (as aforementioned) (Rosenstein, 1988; MacMillan et al., 1989; Ehrlich et al., 1994; Bygrave & Timmons, 1992; Gorman & Sahlman, 1989). Rosenstein et al. (1989) even found that VCs often dominated boards of entrepreneurial firms, whilst Rosenstein et al. (1990) found that in those firms which were financed by any of the top 20 VC firms (in the US), "the board was significantly more likely to be structured to give venture capitalists outright majority control of board seats." (p. 247) Thus, board involvement is seen by VCs as a way to add value to the firm (Sapienza, 1992). Even in Sweden few VCs were found to work actively in their investee firms. Rather, Klofsten-Olofssen (1985) found that 74% of VCs were actively involved on the board as a means of adding-value in a constructive manner.

Compared to BAs, therefore, VCs are more active on the board of directors of their investee firms as a means of monitoring and controlling their investments.

Summary

VCs are more involved than BAs in those monitoring activities which do not require active hands-on involvement. Partially because VCs usually recruit new employees to balance the investee firm's management team, they, themselves, place more importance on monitoring monthly financial statements, advising on business strategy, and monitoring the firm from within the board of directors. These are means of ensuring that potential risks are kept to a minimum in their entrepreneurial investments.

Now that differences in passive involvement strategies have been analysed, more hands-on strategies of monitoring will be reviewed.

6.2.2 - More 'Hands-On' Involvement/Monitoring Options

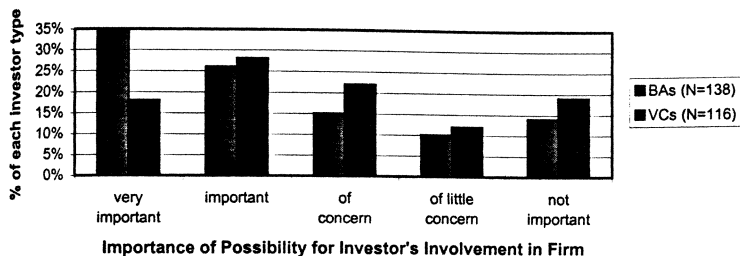
To lend further support to the main interview findings that BAs are more actively involved in their investments than VCs, this section will present a number of quantitative measures and further insights from the interviews. These measures are presented in two separate categories: the levels of involvement desired at the time of investment, and the levels of involvement actually undertaken in the investee firm post investment.

6.2.2(A) - Active Involvement Desired at the Time of Investment

The quantitative measures considered in this section are the investment criteria related to personal venture involvement that investors evaluated as attracting them to the particular investment funded. The first measure asked investors how important the possibility of investor involvement was as an attraction to the investment. The results show that this was significantly more important for BAs than for VCs. Indeed, this was 'very

important' for 35% of BAs and 18% of VCs, whilst it was 'important' for 26% and 28% respectively, as Chart 6.8 shows.

Chart 6.8 - The Possibility of Involvement as an Investment Attraction*



* The differences between the means of the investor types is statistically significant at the <2.5% level

As was shown in the last chapter, involvement in the investee firm can also be an important motivating factor for BA investors. One BA echoed this:

"I wanted to get involved again (in business), rather than sitting on a beach. I get really bored. You think that life is passing you by and it is (...) I want to be in the driver's seat, I don't want my investment diminished by someone else's decisions." (BA14, 25/3/96)

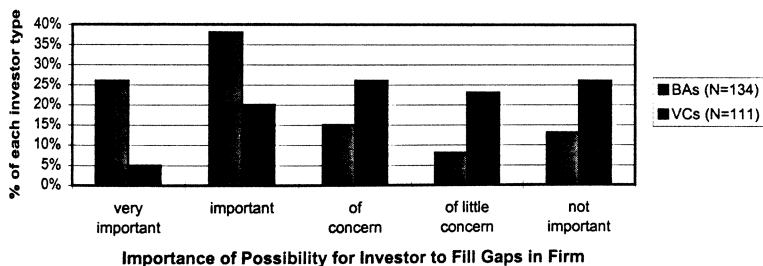
Whilst another BA reiterated the importance of contact as a way of ensuring the venture is running well: "You really need 'eyeball contact' on the job. You have to go in and talk to people and see them." (BA17, 26/3/96)

Closely related to the importance of possible investor involvement as a funding attraction is the importance of the investor's ability to fill gaps in the business through their own involvement. Chapter 6.2.1 addressed this by clarifying that in order to balance the management team, VCs prefer to recruit new employees, whilst BAs prefer to get involved themselves. This was also supported by one VC who stated: "We are a small

venture capital firm, so a lot of our co-investors tend to be high net worth individuals (BAs). These people often have the particular skills to plug some of the gaps in the management team.” (VC13, 13/6/96)

The quantitative results support the interview findings that the opportunity to fill gaps through investor involvement was significantly more important to BAs than VCs. Indeed, 26% of BAs and only 5% of VCs believed that this was a ‘very important’ attraction, whilst 38% and 20% respectively thought that it was ‘important’, as Chart 6.9 demonstrates.

Chart 6.9 - The Possibility of Investor Filling in Gaps in Firm as an Investment Attraction*



* The differences between the means of the investor types is statistically significant at the <1% level

The BA literature documents this preference for active involvement by BAs in their investments (Wetzel & Freear, 1994; Freear et al., 1993; Harrison & Mason, 1991a, 1992a, 1992b; Landstrom, 1992). Indeed, in Wetzel & Seymour’s (1981) sample of BA investors in the US, 84% expected to play an active role in their investments. However, for VCs, involvement is not stated as an investment attraction (Murray, 1995a).

An additional measure of the investor's preference for involvement may be the importance of the geographical proximity of the venture to the investor. Chapter 5.4.5 addressed this briefly when it was shown that the venture's locality is significantly more important to BAs than to VCs. In the interviews it was clear that most BAs preferred an investment within a few hours drive of their homes, as one BA summed up: "I prefer for the firm to be easily accessible so that I can easily visit and control the situations." (BA4, 16/2/96). A manager of a business introduction service for BAs even stated: "Because of the variability of rationality of angel investments, one of the attractions is that it is nearby and they can take an interest in it." (AC1, 25/3/96) For VCs, the venture's location was of lesser concern. One VC stated:

"Location is important in as far as it affects the business, rather than as far as it affects how far we are prepared to travel. In general, location is not very important to us. We also have quite a lot of investments in the US, wherever the big market is." (VC5, 6/6/96)

Supporting the interview findings, the questionnaire results show that location was either 'very important' or just 'important' for 50% of the BAs and for only 25% of the VCs. Not surprisingly, it was 'not important' for 21% of BAs and 44% of VCs (see Chart 5.4). This highlights the fact that a minority of more passive BAs exists, as will be further addressed in the next section.

The BAs' preference for investing relatively close to their homes is supported in the BA literature in the UK (Mason & Rogers, 1996; Mason 1996a), in the US (Wetzel & Freear, 1994; Wetzel, 1983; Freear et al., 1992a; Aram, 1989; Freear & Wetzel, 1989, 1991; Postma & Sullivan, 1990), in Sweden (Landstrom, 1992), and in Canada (Short & Riding, 1989). Indeed, this preference for venture proximity has also been attributed to

the BAs' preferences for close working contact with their investments (Wetzel, 1983; Mason & Harrison, 1996a; Mason et al., 1995; Landstrom, 1992). Despite this plethora of support, Stevenson & Coveney (1994) found that local deals interest only a minority of BAs in the UK. However, their study focused on investor preferences, rather than actual investments, and included a significant number of corporations in its sample (Mason & Harrison, 1997).

The US and UK literature supports the VCs' lesser preference for local investments (Sapienza et al., 1992, 1996; Sapienza, 1989; Muzyka et al., 1993; Murray, 1995a; Wright & Robbie, 1996), although lead investors do prefer to be closer to aid their investment (Sapienza et al., 1992). Additionally, Sapienza et al. (1996) found that a new phenomenon in the UK is the raising of VC funds for investment in foreign markets, even though such greater geographic distance reduces face-to-face contact.

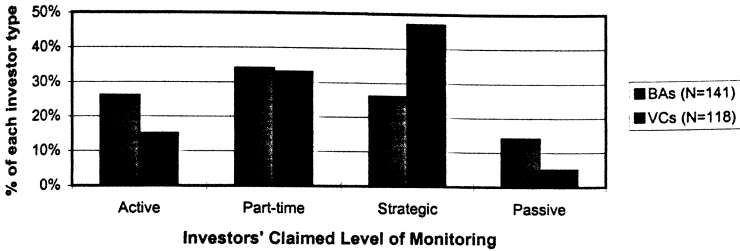
Now that it has been shown that BAs have a greater preference for active venture involvement than VCs, their actual levels of participation will be assessed.

6.2.2(B) - Active Involvement Actually Conducted

Further supporting the interview findings that BAs were involved in a more hands-on fashion than VCs, the postal questionnaire asked investors to rate their actual level of monitoring for their last early-stage investment. The results show that 26% of BAs and 15% of VC claimed to be actively involved (i.e. one day or more per week), 34% of BAs and 33% of VC were part-time hands-on (i.e. more than one day per month at the venture), 26% of BAs and 47% of VCs were strategically involved (i.e. not more than

one day per month; attend board meetings and render advice), whilst 14% of BAs and 5% of VCs claimed passive involvement. This is shown in Chart 6.10 below.

Chart 6.10 - Levels of Investee Firm Involvement Claimed by Investors*



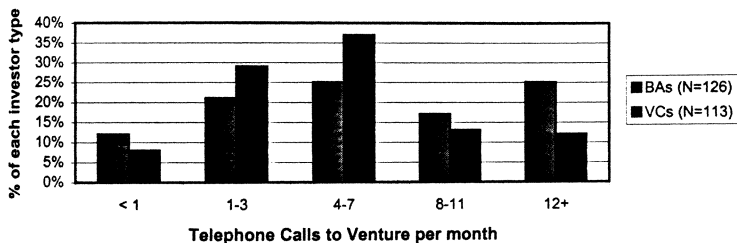
* The differences between the means of the investor types is not statistically significant ($p=.221$)

Although the chart shows that most BAs tend to be more actively involved than VCs, who prefer to be more strategic, the difference lacked statistical significance primarily due to the minority (14%) of BAs who were passive. Such a minority presence of passive BA investors was also found in two other UK studies (Mason et al., 1991a; Harrison & Mason, 1992a).

Interestingly, upon reviewing the questionnaires, it was evident that a number of VCs claimed active involvement in their investments despite listing low levels of telephone and face-to-face contact with their investments. This was not the case with the BA responses, and may imply that to VCs, 'active involvement' may also include time spent on 'hands-off' monitoring activities, rather than actual face-to-face ('hands on') monitoring of the investee firm.

To further assess the level of actual personal involvement in their investments, the investors were asked about their levels of telephone contact and frequency of face-to-face visits to their investee firms. The results indicate that BAs telephone their investee firms more often than VCs, with 68% of BAs and 63% of VCs calling once per week or more, and 42% and 24% respectively calling twice per week or more. On average, BAs telephone 7.7 times per month (median: 4) and VCs 5.5 times per month (median: 4), as Chart 6.11 shows.

Chart 6.11 - Telephone Calls Investor Makes to Investee Firm (per month)*



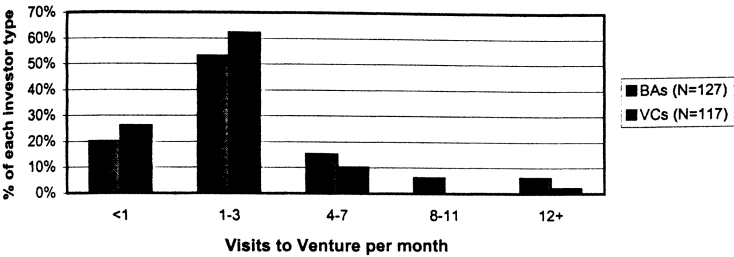
* The differences between the means of the investor types is statistically significant at the <2.5% level

However, the only other study directly comparing the level of telephone contact of BAs and VCs found that VCs in the US telephoned their investments significantly more often than BAs (Ehrlich et al., 1994). This may be a cultural difference or due to the fact that Ehrlich et al. (1994) sampled investee firms whilst this study sampled investors.

The number of visits the investor makes to the investee firm were also measured. The results show that BAs visit their investments more often than VCs, with 27% and 12% respectively calling upon their investee firms once per week or more. As Chart 6.12 shows, on average, BAs visit 3.2 times per month (median: 1), and VCs 1.6 times per

month (median: 1). Unfortunately, this study did not collect data on the lengths of these visits. This may have shown the differences between investor types to be more pronounced.

Chart 6.12 - Visits Investor Makes to Investee Firm (per month)*



* The differences between the means of the investor types is statistically significant at the <1% level

The BA and VC literature lend some support to the above finding that BAs visit their investments more, on average, than VCs, although Ehrlich et al. (1994) found that the majority of both investor types do not actively work on-site with the firm on a daily basis. However, both investor types tend to be more involved in ventures when: the investment is early stage (Gupta & Sapienza, 1988; Sapienza, 1988; Sapienza & Timmons, 1989; Gorman & Sahlman, 1989; Kelly & Hay, 1996; Landstrom, 1990), in difficulty (Mason & Harrison, 1996b), and missing gaps in the management team (Gorman & Sahlman, 1989); when the investor has a large equity stake (Sapienza & Timmons, 1989); and when the funder is the lead investor (Gorman & Sahlman, 1989). Although, under similar conditions, BAs are still more active than VCs.

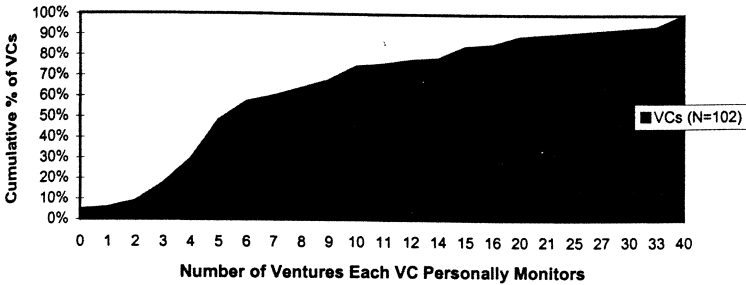
The BA literature claims that 23-39% of BAs in the US work full or part-time in their investments (Postma & Sullivan, 1990; Freear & Wetzel, 1989, 1991; Freear et al., 1990, 1995), whilst about half the BAs sampled in the UK spent at least one day per week in the investee firm, with more than 75% claiming to play a hands-on role (Mason & Harrison, 1996b, Mason et al., 1995; Stevenson & Coveney, 1994). Even in Sweden, 13% of BAs have daily contact with their investments, whilst 40% have weekly and 25% have monthly contact (Landstrom, 1992). However, in all these markets a substantial minority of BAs (14% of BAs in this study) appear who prefer to monitor their investments passively, electing to receive just periodic financials and reports (Harrison & Mason, 1992a). Nevertheless, Freear & Wetzel (1991) note that 75% of investee firms in the US found their relationship with BA investors to be very productive or moderately productive in receiving benefit above and beyond the provision of finance. Unfortunately, in the UK, 60-75% of ventures reported no such positive helpful contribution from BAs (Harrison & Mason, 1992a), leading Landstrom (1993) to conclude that BAs in the UK may actually be more passive than those in the US.

In the VC literature, monitoring is acknowledged as an important way in which VCs may increase return potential and reduce risks in their investments (Timmons & Bygrave, 1986; Norton, 1995; Busenitz et al., 1997), however, it does appear to be on a lower level of face-to-face involvement than what is witnessed with BAs. In the US, Sahlman (1990) found that VCs firms on average only visit their investments 19 times per year and spend 100 hours in direct contact with them, whilst Robinson (1987) noted that VCs only spend 31 man days per year with each investment. In addition, Gorman & Sahlman (1989) claim that a typical early-stage investment gets only about 2 hours per week from

a lead VC investor, whilst Murray (1992) discovered that in the UK the equivalent figure may be twice that. However, Robinson (1987) and MacMillan et al. (1988) commented that the VC market has a greater range of distribution forming in the levels of VC involvement. This is evident in Hall's (1988) finding in the UK market that 30% of VCs claimed to be 'hands on', 20% described themselves as 'eyes on' the funds, and 30% claimed to be 'hands off'. Indeed, Sapienza et al. (1996) found that the VC's face-to-face interaction with the entrepreneur related strongly to the amount of value-added to the firm. However, studies in the UK and the US found that VCs often add little if any value beyond the provision of finance (Harrison & Mason, 1992a; Busenitz et al., 1997; MacMillan et al., 1987), which may imply that they have a low level of face-to-face interaction, "or not much to contribute", as one VC stated (Anonymous). Thus, a comparison between the two literatures indicates that VCs probably have less day-to-day involvement with their investments than BAs do.

However, the literature also adds more insight into why VCs monitor less actively. Due to time constraints, VCs may not be able to become involved in a hands-on manner in each of their investments, and, therefore, tend to be least active in the venture's ongoing operations (Sapienza et al., 1996; MacMillan et al., 1988; Sweeting, 1991; Bank of England, 1996). Indeed, Gorman & Sahlman (1989) found in their US sample that, on average, VCs monitor nine investee firms each (median: 8; range: 4-20), and sit on five boards, whilst this study found that, on average, VCs in the UK personally monitor 10.3 firms (median: 6; mean including outliers: 12.2), as Chart 6.13 shows.

Chart 6.13 - Number of Investee Firms the VCs Personally Monitor



This high level of VC monitoring commitments is also supported by Robinson (1987) who found in his US sample:

“The average annual amount of staff time allocated to managerial assistance (i.e. monitoring) was 35% of total staff time available during a given year (...) Furthermore, the average capital per firm and average capital per professional have increased 155% and 93% respectively. This indicates staff-time available was hardly more than sufficient to cover basic oversight responsibilities associated with a substantial increase in financial commitments across a growing number of venture capital firms.” (p.69)

This was also supported by one of the VCs interviewed:

“If you calculate it out, a director (of a VC firm) has on average 6 investments and there are 20 working days in a month, then it will be difficult for him to even spend two full days on that investment, and he also has to invest in other businesses and exit from his businesses.” (VC2, 5/6/96)

Thus, due to such constraints, monitoring efficiency is very important to VCs (Sapienza et al., 1996). Furthermore, VC firms may limit their involvement in investee firms to prevent the individual VC from ‘going native’ and becoming too biased towards the venture so as to compromise their obligations to the fund providers (Sweeting, 1991), and because some entrepreneurs may resent excessive intrusion (Sapienza, 1992).

Summary

This research study has shown that BAs tend to be more actively involved hands-on in their investee firms than VCs. Such active involvement in the operations of the investment may not be an option open to VCs due to their time constraints (Freear & Wetzel, 1991; Tybejee & Bruno, 1984). This limits the VC to involvement through more passive methods (such as strategic advice) in a more hands-off monitoring function, "not unlike the role of a senior manager in a large company overseeing many business units" (Gorman & Sahlman, 1989, p.236), rather than actually getting involved in the running of the business units as a BA would. However, it must be noted that although BAs are more actively involved than VCs, this does not imply that the majority are involved daily (i.e. full-time) in the running of the firm. Indeed, most BAs will oversee the actual operations personally on a frequent basis, rather than reviewing operations more from a balance sheet as the VC would.

Although this research has already shown that VCs may have more contractual control over their investments than BAs, Landstrom (1992) found that the level of contractual control may not be most influential in determining the level of investor involvement. Rather, it may be the feasibility for such interaction, such as the geographical proximity of the venture to the investor and the investor's preferences. Since BAs have less control through their investment contracts, they may limit agency problems more through their active hands-on involvement in their geographically-close firms. Freear & Wetzel (1991) support this by stating: "Individual investors tend to be less concerned to seek voting control (...) but in some cases work full-time or part-time with the ventures after the investment is made." (p.35) Indeed, one BA interviewed stated: "Rule 1: Don't ever

invest in anything as a passive investor" (BA9, 15/3/96), whilst a number of other BAs asserted that their involvement limited potential (agency) problems with the entrepreneur.

Such hands-on involvement was not seen as vital for VCs since Sapienza et al. (1996) claim that VCs adequately handle these concerns contractually. However, it should not be overlooked that another reason for their less hands-on approach is that VCs appear to recruit new employees more to their investee firms than BAs. Therefore, their active hands-on monitoring (post-investment) may be less essential, assuming that they can place trust in the management and monitoring abilities of their recruits.

Thus, despite the fact that possibly more employee recruitment by VCs slightly clouds the hypothesised definition of post-investment risk reduction (i.e. primarily through personal involvement), the lack of data on the extent of employee recruitment by both investor types may be potentially limiting. However, based on the research data collected, we may conclude that the following is probably *true*:

Hypothesis 6: BAs monitor more actively post-investment than VCs.

Table 6.3 presents a summary of the quantitative measures which help to support this hypothesis.

Table 6.3 - Summary of the Post-Investment ‘Hands On’ Monitoring Differences

‘Hands on’ Monitoring Variables	BAs’ Mean	VCs’ Mean	BAs’ S/D*	VCs’ S/D*	Statistical Significance Level of Differences between Investors
<i>Investment criteria (as in Chap 4):^a</i>					
- Investor’s desire for involvement	2.42	2.85	1.4	1.4	More for BA at <2.5% level
- Investor can fill in business gaps	2.44	3.47	1.3	1.2	More for BA at <1% level
- Venture is local	2.79	3.65	1.5	1.4	More for BA at <1% level
Monitor (1=active, 4=passive)	2.27	2.42	1.0	0.8	None (but see distribution)
Telephone calls (per month)	7.74	5.51	8.2	6.0	More for BA at <2.5% level
Visits (per month)	3.15	1.58	4.8	2.3	More for BA at <1% level

* Note: S/D = Standard Deviation

^a The Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

Now that the post-investment stage has been reviewed, the last stage of the investment process, exiting and performance evaluation, will be addressed.

6.3 - Exit Route and Performance Differences

When an investment is made, exit opportunities and ways to realise returns are just some of the many variables that an investor considers in assessing the risk-reward ratios. However, such an exit assessment considers an action which will be taken at least 5-10 years hence, and so is not directly affected by the current economic climate. However, the current data may suggest a general direction for the economy and in turn indicate the likelihood that the venture will succeed and an exit will be possible (Pence, 1982). But, as the venture grows and matures and the investor wishes to realise some (or all) of the financial gains on the investment, the consideration of exit opportunities may become a serious concern. In this section, therefore, the exit preferences, intended investment times, and the return expectations of the BA and VC investors will be considered, since these will allow us to develop an even more informed knowledge base of their investment strategies (Freear et al., 1996). Indeed, such an analysis will allow us to address the following hypothesis:

Hypothesis 7: VCs are more concerned about exiting investments than BAs.

6.3.1 - Exit Routes Preferred

The interviews clearly gave the impression that VCs were much more concerned with future exit routes than BAs. Most BAs gave this little thought and appeared to be more concerned in making the investment successful, rather than optimistically speculating about the riches of its success. A manager of a BIS supported this by stating: "I never get asked by angels about exits. But venture capitalists are different because that is the basis of their business, get in, get out." (AC1, 25/3/96) In fact, many BAs believed that

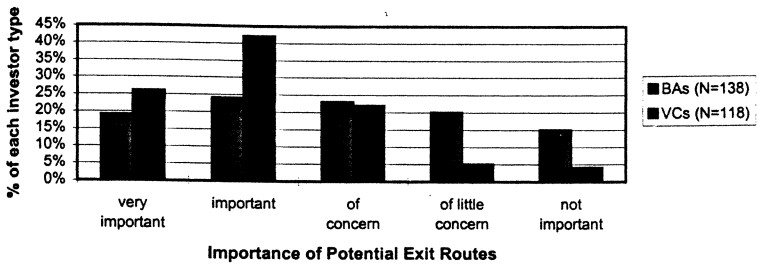
as long as the investment was successful, exit routes should not be a concern, as one BA stated: "I think that there is always an exit route if the company is successful. I don't know what absence of exit route really means?" (BA24, 11/4/96)

Conversely, VCs placed much more emphasis on identifying potential exit routes prior to investment. One VC stated: "The thing we look for most is the exit. We try to identify the exit before we go in, or if we want a trade sale, we try to identify a company that will buy it" (VC1, 5/6/96), whilst another noted:

"Exit routes are of concern right from the word 'Go'. In fact, we focus on it with the entrepreneur right from the very beginning. If you don't focus on exits right from the beginning, you will cause problems for yourself later, at least you have to have an understanding of what will happen in the long term." (VC2, 5/6/96)

To further assess the differences in exit preferences between the investor types, the postal questionnaire asked how important potential exit routes (i.e. potential liquidity) were as an attraction to the investment the investors actually made. These quantitative results also indicate that exit routes are much more important for VCs than for BAs. Indeed, 91% of VCs believed that potential exit routes were at least 'of concern' (if not more important), whilst this was the case with only 65% of BAs. In fact, exit routes were 'very important' for 26% of VCs and 19% of BAs, whilst it was 'important' for 42% and 24% respectively, as Chart 6.14 shows.

Chart 6.14 - Potential Exit Routes as an Investment Attraction*



* The differences between the means of the investor types is statistically significant at the <1% level

Supporting these findings, the BA literature in the UK (Harrison & Mason, 1992b; Mason & Harrison, 1996b; Atkin & Esiri, 1993), the US (Freear et al, 1990, 1991; Freear & Wetzel, 1991), Sweden (Landstrom, 1993), and Finland (Lumme et al., 1996) has found that BAs usually do not have a clear exit strategy, or even exit plans, at the time of investment. This may be partly explained by the lack of adequate exit routes actually available (Landstrom, 1993; Mason & Harrison, 1996b). This was supported by Lumme et al (1996) who found that the most common exit route for Finnish BAs was through sale to another shareholder or third party, whilst trade sales were infrequent and flotations very rare. In addition, Stevenson & Coveney (1994) found that nearly half of the BAs in their UK sample would be encouraged to invest more if more suitable exit routes were made available. This was echoed by one BA:

“It is the easiest thing in the world to invest £X,000s but how do you retrieve it if you need to get it out? This can be difficult when investing in private companies (...) For those seeking to make an investment, remember that it is much easier to buy into a company than to sell it!”
(BA20, 29/3/96)

The VC literature also supports the finding that VCs place more emphasis on exiting investments than BAs, primarily due to the exit pressure VCs receive from their fund providers (Robbie et al., 1997; Cable & Shane, 1997; Murray, 1995a). Indeed, VCs only invest in ventures with enough upside potential to eventually render them high investment liquidity so that they may realise financial returns (Wetzel, 1983; MacMillan et al., 1985). However, although a number of exit choices exist - trade sale, flotation, management buyout or buy-in, and merger with another company - trade sales remain the most common means of exit for VC-funded entrepreneurial firms, although flotations are also important for larger firms (Bank of England, 1990; Berglof, 1994; Sapienza et al, 1996). For this reason, VC investment contracts with entrepreneurs often stipulate procedures for future flotation (Berglof, 1994).

Clearly, this study supports Freear et al.'s (1990) US finding that "Private individuals were more inclined to leave the method of liquidation undefined at the time of investment than were venture capital funds." (p.227) Possibly, VCs have more pressure than BAs to exit and, therefore, place more emphasis on finding, and usually have more feasible, exit opportunities.

6.3.2 - Intended Length of Investment

To render more insight into the exit preferences of the investors, their intended lengths of investment time were assessed. Notably, since most of the investments analysed in this study are relatively early stage, the amount of time required to recoup the investment may be longer than for investments in established ventures, as the interviews supported. However, the interviews also showed that BAs tend to be rather relaxed about setting an

anticipated time scale, opting to leave it open-ended depending upon the investment's performance. One BA stated: "My time scale depends on the success of the investment. If it is successful, I will exit within 5 years, otherwise I will hang on for up to 10 years and try to turn it around." (BA4, 16/2/96) However, another BA pointed out: "If a company can't show me that it is a winner within its first 4-5 years, then it probably is not." (BA12, 22/3/96)

Conversely, VCs appeared to be more concerned about exiting earlier, partly due to the pressure upon them to realise returns for suppliers of their funding, who often tend to have a short time horizon (Bank of England, 1996). However, the length of a feasible time horizon also depends on the industry sector of the investment: "A software business you can usually get right in 5 years, a biotech business in 5-8 years, if you are unlucky, 12, and a new materials business can take a very long time to get right." (VC6, 6/6/96) Yet, a few VCs also admitted that this short-termism approach they take may often act to the detriment of the investee firm's needs. One VC stated:

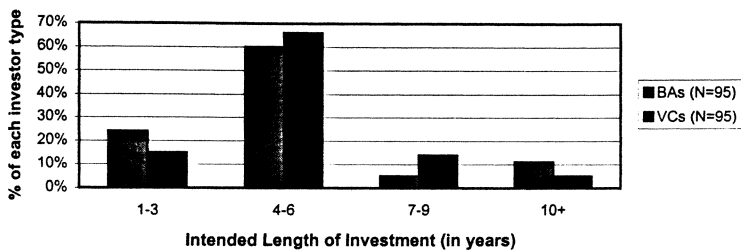
"You often have a situation of the tail wagging the dog, where the time cycle of investors is completely out of sync with business needs. If you are in a position to take a very long time view, I think that you have the opportunity to make a lot of more money, but it is jolly painful." (VC3, 5/6/96),

whilst another VC claimed:

"I am not at all convinced that one wants venture capital money in start-ups anyway because it is the wrong type of capital I think. Even a ten year period is not the right type of mindset, per se, for start up money. Because a venture capitalist, by definition, wants an exit, the whole strategy of how that money gets a satisfactory exit and return on its capital, puts, in principle, inappropriate pressures on start-up businesses." (VC9, 10/6/96)

To further support the interview findings, data was collected through the postal questionnaire. Unfortunately, this quantitative data showed no significant difference in intended investment times between BAs and VCs. Indeed, the average intended time for BAs was 5.2 years (median: 5), whilst it was 5.1 years (median: 5) for the VCs. Chart 6.15 shows a distribution of the data.

Chart 6.15 - Intended Length of Investment Time*



* The differences between the means of the investor types is not statistically significant ($p=.865$)

One explanation for this finding may be that because both BAs and VCs were asked to (and did) evaluate one early stage firm on the questionnaire, the VCs' general preference for more established firms with shorter time horizons was not specified. Whereas, in the interviews, the VCs may have responded to this question more in general terms rather than relative to the one early stage investment under discussion. Thus, the stage of the firm at the time of investment may have a significant influence over the intended length of investment time. Indeed, Chapter 7.1.2 documents such a relationship for VCs.

These findings imply that BAs and VCs may have very similar intended length of investment times when they both invest in entrepreneurial firms which still need to grow. However, when the recently more popular expansion and MBO investments of VCs are included, VCs may have a shorter time horizon overall than BAs.

The literature lends support to these findings, although it rarely specifies the development stage of the investors' ventures. However, it will be assumed that the literature reviewed here, in general, compares the investments in entrepreneurial firms which still need to attain future growth, rather than MBOs and MBIs.

The BA literature internationally supports this study's finding that the average (and median) expected holding period is 5 years (Short & Riding, 1989; Freear et al., 1995b; Freear & Wetzel, 1991), although a degree of variation exists with some reporting that the majority of BAs prefer a median of 3-5 years (Freear et al., 1994a, 1996; Haar et al., 1988; Harrison & Mason, 1991b, 1992b; Lumme et al., 1996; Landstrom, 1993), whilst others claim 5-7 years (Wetzel, 1986a; Freear & Wetzel, 1989; Duxbury et al., 1996; KPMG, 1992; Coveney, 1996). Regardless, those BAs investing in early stage ventures have a longer investment horizon (Freear et al., 1996), whilst BAs in the US may be slightly more patient than those in the UK (Harrison & Mason, 1992b).

The VC literature internationally also lends some support to this study's quantitative results. Most studies found that VCs have an average investment horizon of 5-7 years (Robinson, 1987; Dixon, 1991; Tyebjee & Bruno, 1984; Gorman & Sahlman, 1989; MacMillan et al., 1988). However, due to its more recent concentration on later stage investments, the VC industry has come under criticism for its increased short-termism (Pratt, 1990; Mason & Harrison, 1991), although for more entrepreneurial ventures Keeley & Turki (1992) found that the average VC holding period for start-up firms was 6.4 years, whilst it was 5.2 years for early stage firms.

Clearly, the literature appears to support the finding that when BAs and VCs invest in growing entrepreneurial firms, they tend to adopt similar time horizons. However when comparing typical BA investments (early stage ventures) with more typical VC investments (Management Buy-Outs etc.), VCs may have a shorter time horizon than BAs.

6.3.3 - Investment Returns Initially Expected and Now Believe Likely

To gain further insight on the exit preferences of BA and VC investors, their investment returns (those initially expected and those they now expect to realise) were analysed. Each of these returns will now be addressed in turn.

In the interviews, most of the BAs were unable to estimate the rates of return they initially expected when they made the investment. Instead, many BAs stated that return projections were not too important since they were confident that if the investment did succeed, the returns would be high. One BA echoed this:

“We want a return, that is why we are doing it, but we are not so much saying: ‘can the investment give us 25 or 30% IRR?’ That is not really the way we look at it. What we are saying is: ‘is this business likely to be highly successful?’, and if it is, we are most likely to make a very substantial return on our money.” (BA6, 23/2/96)

This was supported by another BA who stated: “Rates of return are hypothetical. We just aim for something better than what we could get in the bank. If an investor tells you otherwise, don’t believe them!” (BA11, 19/3/96)

However, a number of BAs stated that in addition to any capital gains they might make on the investment, they were receiving monthly or quarterly payments for their active involvement in the firm, similar in fashion to what a consultant would receive. But, these payments were often quite low (if they could be paid at all) due to the limited cash flow of the early stage entrepreneurial firm. This may be another way in which BAs attempt to reduce the riskiness of their investments ex post.

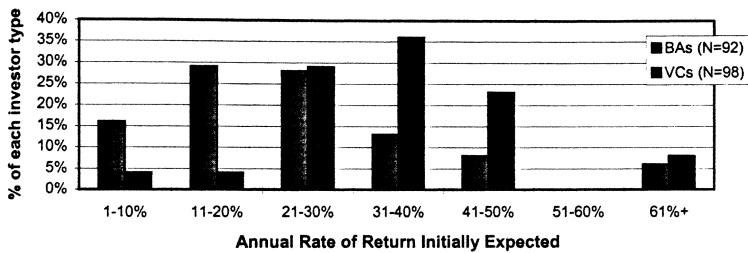
But, regardless of whether the BA receives a consulting income, the amount of time the BA actively monitors the investee firm may help to increase the overall value of the firm, but it may also decrease the realistic rates of return for the BA due to his/her time costs (i.e. opportunity costs). One BA echoed this: "I was hoping for a reasonable return, but that is if you count my time as nothing. But it is still fun." (BA16, 26/3/96)

Conversely, the VCs interviewed usually had a pretty good idea of the percentage returns they anticipated on their investments. Since VCs conduct a high amount of (financial) due diligence ex ante on their investments, and usually invest in larger and later-stage firms which may have less uncertainties, VCs may find it easier to predict rates of return. In addition, since their fund providers are IRR driven, VCs also have to be IRR driven. One VC stated: "We have to, as a fund, give about 30%+ return to our investors. So since some fail, we usually aim for about 50%+ on each investment." (VC11, 10/6/96)

To lend further support to the interview findings that VCs may have higher rate of return predictions than BAs, the postal questionnaire asked investors to state the average rate of return (p.a. compound R.O.I.) they expected on their investment. These quantitative

results also show that VCs initially expect significantly higher rates of return on their investments than BAs. Indeed, 54% of BAs and 96% of VCs expected to receive more than 20% returns, whilst this reduced to 26% and 67% respectively for expected returns over 30%. On average, BAs expected 29.9% return (median: 25%), whilst VCs expected 39.2% return (median: 40), as Chart 6.1.6 shows.

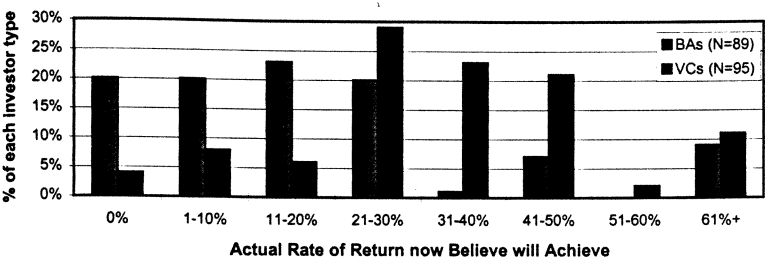
Chart 6.16 - Annual Rate of Return Initially Expected on the Investment*



* The differences between the means of the investor types is statistically significant at the <1% level

However, since the investments were made, on average, 1.4 years ago (median: 1) and 1.5 years ago (median: 0.7) by the BAs and VCs respectively, they were also asked whether the rates of return had changed from those they initially expected. Some investors said that it was still ‘too early to tell’. Nevertheless, return expectations for the majority were still significantly different between BAs and VCs, with the former’s expected return rate dropping slightly to, on average, 26.8% (median: 20%), whilst the latter’s expected return rate stayed relatively constant at, on average, 39.4% (median: 35%). Now, 37% of BAs and 85% of VC realistically expect to attain rates of return of more than 20%, whilst 17% and 66% respectively expect rates in excess of 30%, as Chart 6.17 highlights.

Chart 6.17 - Annual Rate of Return Investor Now Believes Will Achieve*



* The differences between the means of the investor types is statistically significant at the <1% level

In analysing these return expectations, one must consider that since VCs have to demonstrate a high level of competence to their fund providers, as was documented in Chapter 2, they may be more inclined to overstate their rate of return expectations to a researcher. In addition, Chapter 3 mentioned that VCs have made more investments (than BAs) from which to choose a successful one for this research focus, and that the firms VCs consider early stage may actually be later state and less risky (i.e. already proven) than those funded by BAs. Thus, although these findings are useful, they are still just opinions of fact subject to potential bias and are not returns which have actually been realised through exit. Clearly, the reader should be aware that: valuation is not a precise exercise and many answers may just be guesses, investors with more higher returns may be more likely to answer the question (note that only 62% of BAs and 80% of VCs responded to this question), and that no negative returns were reported rather they were listed as 0%.

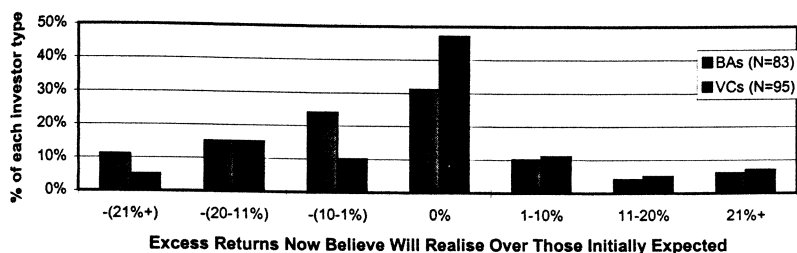
However, if these expected return projections are relatively accurate, it may indicate that there is a niche of VCs in the industry who are successful in early stage investments. In

fact, one VC even stated that the negative impression the VC industry has of early stage investments may be changing:

“In 1995, 3i (the UK’s largest VC) refined their policy and started the Emerging Business Team, which is their start-ups team, and they did some research which showed that they got some good returns from investing in start-ups. They put some resources to revisiting that area.”
(VC4, 6/6/96)

In this study, even though the returns from VCs in the sample also look healthy, the returns now expected by BAs look less robust. 20% of BAs now expect no returns on their investments (i.e. this may include negative returns and even the full loss of the investment). Yet, if one assumes that those BAs less likely to respond to this question are those with negative returns, then an additional 38% of BAs may be included as unsuccessful investors. Thus in the best case scenario, 20% of BAs and 4% of VCs may expect no returns on their investments, whilst in the worst case scenario (which is rather unlikely), it may be 58% and 24% respectively. Similarly, Mason & Harrison (1996b) found that in the best/worst case scenario that 21%/41% of BA investments presumably failed within the first 5-6 years. However, when this research study’s unsuccessful investments are placed into perspective and compared to the 11% of VAT-registered businesses in the UK that are deregistered each year (Mason & Harrison, 1996b), the rate of failure for these venture capital investments seems rather high, especially for the BAs. But, if the investment returns which are now expected are compared to those initially expected, out of those who responded, 51% of BAs (31.7% of total) and 70% of VCs (55.8% of total) claim their ventures are performing as expected or better, as is shown in Chart 6.18.

Chart 6.18 - Comparison of Returns Investors Now Believe They Will Realise Compared to Those Initially Expected*



* The differences between the means of the investor types is not statistically significant ($p=.408$)

This may indicate that the performance predictions of VCs are slightly more accurate than those of BAs (at least as much as can be accurately measured in a postal questionnaire), but then VCs also have more due diligence upon which to base such assessments. However, one VC thought that even out of those BA investments which are now successful, and which do exceed initial expectations, many of those will be difficult for BAs to exit in order to realise financial gains:

"I would think that an awful lot of very bad investments are being made by business angels, where they back a pretty pleasant bloke, the entrepreneur, and it is a pretty pleasant business. So they are going to have a problem with the exit route because: a) it won't get to the size where it can get floated or make a suitable acquisition for most companies (i.e. trade sale), and b) it is very personal to the entrepreneur (i.e. not separable from its founders). But even if they succeed, so what? What do they have left? The entrepreneur is probably getting a better deal. Even a loan to the entrepreneur is not really a loan, it is like equity since all the creditors have priority and then what is left?" (VC7, 7/6/96)

Thus, even though VCs tend to expect significantly higher return than BAs, there is some ambiguity as to the actual feasibility of realising these return projections, especially for the BAs. A review of the literature may lend more insight on this issue.

The literature on return *expectations* lends support to the findings of this study. The BA literature in the UK (Mason & Harrison, 1994, 1995), the US (Freear et al., 1995b), and Canada (Short & Riding, 1989), shows that the median (and mean) expected rate of return for BAs investing in start-ups and early stage entrepreneurial ventures is around 30%, as was found in this study, whilst Mason & Harrison (1994) found it was about 20% for investments in more established ventures. However, in Scotland, KPMG (1992) found the expected rate of return for early stage investments to be nearer to 40%, whilst Gaston (1989) in the US, and Coveney (1996) in the UK, found this to be closer to the 21-22% mark. Either way, there is agreement that BAs in the UK appear to have the highest return expectations, followed by those in the US, and then by BAs in Sweden (Mason & Harrison, 1994; Landstrom, 1993).

The VC literature in the UK (Bank of England, 1996; Wright & Robbie, 1996; Hall, 1988), and in the US (Robison, 1987; Freear et al., 1995b) shows the median (and mean) expected rate of return for VC investing in early stage firms to be between 30-40%, whilst it was slightly lower for more established investments (Wright & Robbie, 1996). However, two UK studies found this rate for early stage investments to be somewhat closer to the 50-60% range (Murray, 1994; Mason & Harrison, 1992).

Although no direct comparisons have been conducted, studies in the US (Freear et al., 1995b), the UK (Mason & Harrison, 1992; Coveney, 1996), and Canada (Short & Riding, 1989) believe that the investment return expectations of VCs are greater than those of BAs, as is supported by this study's findings and the literature review. Since BAs in general invest in earlier stage and riskier ventures than VCs, this difference in

return expectations may seem counterintuitive, although it may be partially explained by the non-financial returns (i.e. psychic income) that BAs receive from investing (Freear et al., 1995b, Wetzel, 1983). This may also explain why Short & Riding (1989) found that the BAs in their sample held realistic expectations about the outcome of their risky investments and still funded them. However, this difference between BAs and VCs may seem even more surprising if one considers that VCs hold a more diversified portfolio than BAs, which theoretically should make total investment risk (and required returns) lower. But Gupta & Sapienza (1988) found that most VCs (in the US) do not attempt to actively diversify their portfolios and, instead, prefer strategies of specialisation. Of course, one could also argue that even with a diversified portfolio of entrepreneurial investments, the portfolio's risk might still be quite high due to the nature of the investments' entrepreneurial market. Alternatively, the high due diligence, administrative, and salary costs that a VC firm incurs may also add insight on the rates of return they require.

Now, having reviewed the literature on initial return expectations, we will look at the literature on *actual returns*. Unfortunately, little or no information is available on the actual rates of return realised by BAs (Mason & Harrison, 1995; Mason et al., 1995, 1996b; Mason, 1993; Freear et al., 1996; Coveney, 1996). However, Harrison & Mason (1992b) and Mason et al. (1995) found that few BAs in the UK were particularly satisfied with the performance of their investee firms. The former study found that only a quarter of BA investments performed moderately or substantially above expectations, which is a lower success level than BAs in the US may experience (Harrison & Mason, 1992b; Gaston, 1989). This low rate of BA success is also supported in Finland by Lumme et al.

(1996) who found that more than half of BA investors experienced a partial or full loss on their investments. However, contrary to these findings, Coveney (1996) found that the annual rate of return for BAs in the UK was a surprisingly high 58% (although his sample also included corporate angels), whilst Haar et al. (1988) found that 42% of his US sample of BAs believed their angel investments to be their most profitable form of investment. In addition, Short & Riding (1989) in Canada found that in almost 50% of BA investments, performance met or exceeded expectations. Clearly, since none of these studies used realised returns and instead relied on post-investment expectations, and many BAs find it difficult to estimate the performance of their investments and any paper profits they may have made (Lumme et al., 1996; Mason & Harrison, 1996b; Atkin & Esiri, 1993), there remains much ambiguity about the success of BA investments.

In the VC literature in the US it has been claimed that VC investments have significantly higher success rates than new ventures in general (Hall & Hofer, 1993; Timmons, 1994; Zacharakis & Meyer, 1995). Indeed, the survival rate for VC-funded ventures ranges from 65% (Sahlman, 1990) to 85% (Dorsey, 1979), although Ruhnka et al. (1992) claim that 20% of these will not provide an adequate return to the VC, and, thus, the failure rate might approach 60% (Dean & Giglierno, 1990). Bygrave & Timmons (1992) documented the venture capitalists' 2:6:2 rule, where out of a portfolio of ten investments, two investments are expected to fail, six will survive but make little or no returns (called "the living dead" by Gorman & Sahlman, 1989), and two will be expected to be very successful, bringing in the majority of returns for the investment portfolio. In fact, in the US, 1 out of 15 investments return more than ten times the original

investment, and these account for over 50% of the portfolio's final value (Bank of England, 1996).

However, if average returns per investment are analysed, Huntsman & Hoban (1980) found this to be 18.9% in their US study, although upon eliminating the top 10% of investments, this resulted in an average return of only 0.28%. But, comparison of these returns to a benchmark is important (Wright & Robbie, 1996). Thus, when VC investments in the US are compared to the Standard & Poor's market index returns, they have a 63% higher rate of return (Poindexter, 1976; Tyebjee & Bruno, 1984). However, Sapienza (1992) points out that this higher rate of return may be largely due to the top 20 VC firms, who tend to enjoy higher returns.

Unfortunately, less is known about the realised performance of VC investments in the UK (Bank of England, 1990; Murray, 1995a). The BVCA's performance figures for 1995 show that the pooled internal rate of return for start-up ventures was only 4.3% (compared to 16.2% and 23.8% for medium and large MBOs), although this rate is acknowledged to be low due to the young and unrealised nature of the VC investment portfolios and the conservative valuation method used.

Clearly, the literature review supports this study's findings that VCs may realise higher returns on their investments than BAs.

Summary

This section has shown that although BA and VC investors have similar investment horizons, VCs are much more concerned about exiting their investments in the future and also have higher expected and partially realised rates of return on their venture investments. Thus, we may conclude that the following is true:

Hypothesis 7: VCs are more concerned about exiting their investments than BAs.

The exit variables are summarised in Table 6.4.

Table 6.4 - Summary of the Exit Route and Performance Differences

Exit Routes & Performance Rates of Return	BAs' Mean	VCs' Mean	BAs' S/D*	VCs' S/D*	Statistical Significance Level of Differences between Investors
Potential exit routes present ^a (investment criteria as in Chapter 4)	2.88	2.19	2.8	2.2	More for VC at <1% level
Intended length of investment time (in years)	5.17	5.12	2.7	1.8	None ($p=0.87$)
Annual rate of return initially expected on investment	29.9%	39.2%	24.2	13.4	More for VC at <1% level
Annual rate of return now believe will realistically achieve on investment	26.8%	39.4%	37.2	25.9	More for VC at <1% level
Amount of time since investment (in years)	1.37	1.51	1.2	1.7	None ($p=0.46$)

^a The Criteria were Measured on a Likert Scale where 1 = very important; 5 = not important

6.4 - Multivariate Analysis of the Control, Monitoring, and Exit Variables

To shed more light on the variables discussed in this chapter, this section will analyse them in a logistic regression, as highlighted in Chapter 3.5.2. The resulting model may then be used to classify and predict, based upon the characteristics of an investor's

investment process, whether a certain investor is a BA or a VC. Those variables with the greatest predictive power in making such a classification are also identified.

For this chapter, the resulting model, which has a prediction accuracy of 91.81%, reads:

$$z = -6.1709 + .0000176X_1 + .4799X_2 + .0260X_3 + .0315X_4$$

where the variables in order of greatest predictive power (*p*-values in parentheses) are:

X_1 = Size of the investment (.0000)

X_2 = Number of entrepreneurs investor has replaced (.0118)

X_3 = Annual rate of return initially expected on investment (.0207)

X_4 = Entrepreneur's initial equity % (.0453)

The resulting estimated probability of an investor being a VC = $\frac{1}{1 + e^{-z}}$

To test this model, an investor was randomly chosen from the database (number 172), whose ratings were: X_1 =£250,000, X_2 =10, X_3 =40, X_4 =62.50. Putting these into the equation, $z = 6.0368$, and the estimated probability of this investor being a VC = 99.76%. Indeed, this investor was a VC. Interestingly, if this investor had invested £200,000 less, the probability of him/her being a VC would be 92.53%. This investor would still be predicted as a VC clearly due to the large number of entrepreneurs he/she has replaced.

Another investor (number 104) was also picked out of the database, who had the following ratings: X_1 =£80,000, X_2 =0, X_3 =38, X_4 =62.50. Putting these into the equation,

$z = -1.3746$, and the estimated probability of this investor being a VC = 20.19%. Indeed, this investor was a BA.

To further test the robustness of the model, 10 investors were excluded from the sample and a new model was built. Almost perfectly resembling the old model, the new model (with a 91.76% prediction accuracy) reads:

$$z = -6.1707 + .0000176X_1 + .4798X_2 + .0260X_3 + .0315X_4$$

Then one of the out of sample investors was placed into the new model. This investor had the following ratings: $X_1 = \text{£}550,000$, $X_2 = 0$, $X_3 = 50$, $X_4 = 87.50$. The resulting $z = 6.2635$, and the estimated probability of being a VC = 99.8%. Indeed, this investor was a VC. This model is clearly also quite robust.

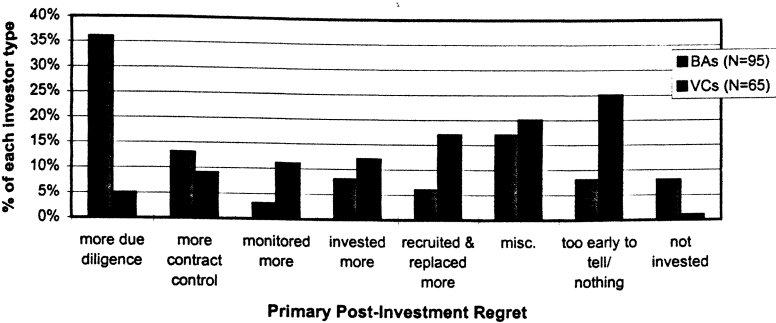
Not surprisingly, the sizeable difference in the amounts BAs and VCs invest per deal was the variable most accountable for the overall difference between the two investor types. This was followed by the number of entrepreneurs they have replaced and the rates of return they initially expect, both variables which the univariate analysis in this chapter also found to vary significantly. The last variable, the entrepreneur's initial equity %, was not found to differ univariately, although it was highlighted that, on average, entrepreneurs with BA financing still had a majority stake, whilst this was not the case for those with VC funding. These multivariate regression findings render some support to the proposed notion that VCs have more contractual control than BAs.

6.5 - Post-Investment Regrets (Things That Investor Would Have Done Differently)

To determine whether investors felt there were any weaknesses in their investment processes, they were asked what they would have done differently in their most recent early stage investment if they could do it all over again. The BAs interviewed, in general, mentioned many significant regrets and many referred to the costly learning curve they experienced. The most common regret, however, amongst BAs was that they should have conducted more due diligence and obtained more contractual control over their investments. Many BAs echoed the following responses: "I should have done more research, it never occurred to me that it was a difficult area" (BA10, 19/3/96), whilst another stated: "If I had to do it again, I would have dug deeper and not been in such a rush to put the money in." (BA3, 14/2/96). Indeed, many BAs felt that the entrepreneur(s) should have been checked out more thoroughly. Conversely, VCs had fewer regrets, which tended to be quite non-specific.

To support these interview results, this question was included on the postal questionnaire. With 66% of BAs and 55% of VCs responding, the results show that BAs wished more than VCs that they had conducted more pre-investment due diligence (36% vs. 5%), had more contractual control (13% vs. 9%), and that they had not invested (8% vs. 1%). However, the VCs wished more than BAs that they had invested more (12% vs. 8%), recruited and replaced more employees sooner (17% vs. 6%), miscellaneous - such as secured more future funding and agreed on a fixed fee for the legals - (20% vs. 17%), and VCs tended to believe more than BAs that it was too early to tell if anything should have been done differently (25% vs. 8%). Chart 6.19 shows these distributions.

Chart 6.19- The Primary Thing Investors Would Have Done Differently With Their Investments*



* The above data was coded from written responses to an open-ended question on the postal questionnaire and in the interviews.

These results may indicate that each investor type has the greatest post-investment regrets about those stages in their investment process which the theoretical hypotheses and empirical results have suggested they respectively concentrate on least. Thus, since BAs appear to follow the incomplete contracts approach more to limit potential agency problems in the investment process, they tend to monitor more ex post (a minor BA regret), whilst conducting less due diligence and gaining less control over the investment through comprehensive contracts (both major BA regrets). Similarly, since VCs appear to follow the principal-agent approach more to limit potential agency problems, they conduct extensive due diligence and write comprehensive contracts ex ante (both minor VC regrets), whilst conducting little hands-on ex post monitoring of their investments (more sizeable VC regret). One additional factor which may indicate that VCs regret not conducting more ex post monitoring is that their biggest true regret is that they did not recruit more new employees and/or replace the entrepreneurs sooner.

6.6 - Conclusion

In this chapter a comparison between BA and VC investors was conducted on their: contract negotiation and formulation processes, post-investment monitoring process, and expected and partially realised investment rates of return. In doing so, the last three research hypotheses were rendered support.

Since four of the seven hypotheses were strongly supported and the remaining three received slightly less (but still relatively persuasive) support, we may conclude (with only limited doubt) that the following is probably *true*:

Hypothesis 8: VCs prefer the principal-agent approach, and BAs prefer the incomplete contracts approach, to agency risk control.

Thus, based upon much qualitative data, large-scale quantitative empirical evidence, and a review of the literature, it appears that, although both investors aim to reduce potential agency risks throughout all stages of the investment process, BAs may prefer to do so more through active ex post monitoring and involvement in the venture, whilst VCs may prefer to do so more through ex ante screening, due diligence and comprehensive contract formulation.

Chapter Seven

Further Insights Into The Research Findings: An Analysis of Differences Within Each Investor Group

Introduction

Now that the differences between the BA and VC groups have been analysed in the last three chapters, this chapter will examine the differences within each investor group. It will then be determined whether these intra-group differences may have affected the comparison results between the BA and VC groups. This will, hopefully, render more insight on the previous findings. This chapter is divided into the following sections:

7.1 - Business Angel and Venture Capitalist Sub-Groups

7.2 - Business Angel Sub-Groups

7.3 - Venture Capitalist Sub-Groups

7.4 - Conclusion

7.1 - Business Angel and Venture Capitalist Sub-Groups

Unfortunately, most studies in the BA and VC research fields treat these investors as homogeneous groups (Landstrom, 1995). Certainly, since an emerging consensus has occurred in the BA field as to the BA investor's characteristics, one consequence has been the assumption that these traits are tightly clustered around the norm, rather than considering potential diversity of this investor (Freear et al., 1994a). Few attempts have also been made in the VC field to distinguish between different types of VC investors, instead treating this diverse sector as a homogeneous group (Sandberg et al., 1987). Yet, for both investor types there is significant group diversity, as was seen, for instance, in the BA and VC interviews.

In this section intra-group comparisons will be conducted on both investor types. Only a number of other studies have attempted such comparisons, each segregating investors on only one or two variables. In this study, however, intra-group differences will now be reviewed for both BA and VC investors on the following classification variables:

- 7.1.1 - Early Vs. Late Questionnaires
- 7.1.2 - Early Stage Vs. Established Venture Investments
- 7.1.3 - Geographical Distribution of the Investors
- 7.1.4 - Technology Vs. Non-Technology Investments
- 7.1.5 - Successful Vs. Less Successful Investments

7.1.1 - Early Vs. Late Questionnaires

When conducting survey research by means of a postal questionnaire, one of the most serious potential problems is non-response bias (Tull & Hawkins, 1980), which is the difference between those who respond to a survey and those who do not. Since in this research, 48.4% of BAs and 41.2% of VCs did *not* return their postal questionnaires, it may be difficult to determine how representative the sample collected is of the population as a whole. There are a number of ways to assess non-response which do not involve extensively pre-surveying the target population, each of which was utilised by this research study. First, the use of pre-questionnaire and follow-up letters can be utilised. Second, a series of callbacks can improve the response rate (Short & Riding, 1989). Third, an extrapolation approach can be utilised. This is based upon Pace's (1939) finding that persons responding later to postal questionnaires more likely resemble non-respondents than those who return their questionnaires promptly. An analysis of the characteristics of late respondents may, therefore, allow a better generalisation to be made of the whole population. This was also supported by Armstrong & Overton (1977) who argue that this extrapolation method is the most effective way to handle non-response bias in postal surveys. Indeed, Freear et al. (1994a) and Coveney (1996) used this approach successfully in their BA studies. The former found that the rate of questionnaire returns started to decline 23 days after mailing, after which they received the last 20% of the total number of questionnaires collected. When they compared these last 20% to the rest, they found no significant differences in BA characteristics. The latter study also used this approach and also found no significant differences.

In this study, the rate of questionnaire responses started to decline about a month after receiving initial response, and so a month and a few days after initial mailing. As in Freear et al.'s (1994a) study, this proved to roughly be the cut off point for the first 80% of BA and VC responses. For both investor types, the first 80% of responses were compared to the last 20%.

As was found in the previous BA studies utilising this approach, no major differences existed between the investment processes of early and late BA respondents, and so this offers no real insight on the general research results. The most interesting findings were that, compared to late respondents, those responding earlier took longer to complete the full investment process, and they tended to live further from London, possibly indicating that London BAs are busier than non-London BAs. The results are shown in Table 7.1.

Table 7.1 - Differences Between Early (First 80%) and Late (Last 20%) Postal Responses from BAs

Investment Characteristics Statistically Different Between BA Questionnaires Received Early & Late	Early Postal Mean (N=94)	Late Postal Mean (N=24)	Early Postal S/D*	Late Postal S/D*	Statistical Significance Level of Differences between BA Groups (early 80% vs. late 20%)
<u>Due Diligence Process</u>					
Time from first meeting entrepreneur to investment decision (in weeks)	10.39	4.78	15.1	4.8	More for Early BA at <10%
<u>Investment Criteria^a</u>					
Size of the investment	2.71	2.26	1.29	0.91	More for Late BA at <10%
Product's formal competitive protection (patents)	3.03	3.78	1.52	1.31	More for Early BA at <10%
<u>Negotiations & Investment</u>					
Transaction costs (as a % of total investment)	1.84%	6.43%	4.07	10.45	More for Late BA at <10%
<u>Miscellaneous</u>					
Time since investment (in years)	1.36	0.89	1.35	0.64	More for Early BA at <2.5%
Distance from London (location) ^b	5.03	3.74	3.24	2.49	More for Early BA at <5%

^a These criteria were measured on a Likert Scale where 1=very important; 5=not important

^b This variable measures approximate distance from London where 1=London; 11=Scotland

* Note: S/D = Standard Deviation

The VCs' results proved to be slightly more interesting. Compared to earlier respondents, those responding late tended to invest larger amounts per investment, for larger % equity stakes, and tended to be less concerned about the operating financials of their investee firms (i.e. financial break-even and low initial capital expenses) and less about the trustworthiness of the entrepreneur(s), possibly since they have more control over potential agency problems through their larger equity stakes. These results are shown in Table 7.2.

Table 7.2 - Differences Between Early (First 80%) and Late (Last 20%) Postal Responses from VCs

Investment Characteristics Statistically Different Between VC Questionnaires Received Early & Late	Early Postal Mean (N=83)	Late Postal Mean (N=21)	Early Postal S/D*	Late Postal S/D*	Statistical Significance Level of Differences between VC Groups (early 80% vs. late 20%)
<u>Investment Criteria^a</u>					
Trustworthiness of the entrepreneur(s)	1.19	1.50	0.43	0.68	More for Early VC at <10%
Product's overall competitive protection	1.97	2.52	0.93	1.07	More for Early VC at <5%
Ability to reach break-even without further funding	2.61	3.47	1.24	0.77	More for Early VC at <1%
Low initial capital expenses needed	3.16	3.94	1.28	0.80	More for Early VC at <1%
Size of the investment	3.18	3.90	1.25	1.09	More for Early VC at <2.5%
<u>Negotiations & Investment</u>					
Size of investment	£763.9K	1,809K	1.02M	2.2M	More for Late VC at <10%
Investor's initial equity %	29.7%	43.7%	16.13	22.10	More for Late VC at <1%

^a These criteria were measured on a Likert Scale where 1=very important; 5=not important

* Note: S/D = Standard Deviation

Although no major differences were found between different BA respondents, it may be inferred from the late VC respondent data that the general VC sample population invests larger average amounts and has larger equity stakes (%s) per investment, than the average VC respondent in this study's sample. Not surprisingly, it has been made quite clear in previous chapters that small investments in early stage ventures are very unrepresentative of the general VC industry.

7.1.2 - Early Stage Vs. Established Venture Investments

Since early stage firms are usually higher risk than those more established, this section aims to determine whether aspects of each investor group's investment process differ depending upon the stage of the investment. Those investments classified by respondents as: pre start-up, start-up, and early, were therefore codified as 'early stage' and compared to those investments classified by respondents as 'established'.

Contrary to what would be expected, the BA analysis shows that BAs in more established firms conduct more due diligence and more hands-on post investment monitoring than BAs investing in early stage ventures. This may highlight a certain minority of BAs who are more risk-averse than the average BA and, therefore, elect to invest in more established (and less risky) ventures. They also prefer to conduct more sector research in potential investment sectors which they understand more and have more experience in. This may further emphasise the general research finding that the average BA does not conduct a high level of due diligence. Furthermore, the early stage BA investor appears to have more of a preference for co-investors than the later stage BA investor. This may be a way for them to spread the risk and due diligence amongst other BAs in the process of funding young and risky investments. These differences are listed in Table 7.3.

Table 7.3 - Differences Between the Investment Processes of BAs Investing in Early and Established Firms

Investment Characteristics Statistically Different Between Early & Established BA Investee Firms	Early Stage Mean (N=115)	Established Mean (N=28)	Early stage S/D*	Established S/D*	Statistical Significance Level of Differences between BA Groups
<u>Due Diligence Process</u>					
Sector experience of the investor	3.04	2.15	0.95	1.12	More for Established BA <1%
Sector research conducted by investor	2.66	2.07	0.92	1.08	More for Established BA <1%
<u>Investment Criteria^a</u>					
Ability to reach break-even without further funding	2.67	2.14	1.19	0.98	More for Established BA <5%
Investor understands business	3.03	2.28	1.43	1.46	More for Established BA <2.5%
<u>Post-Investment Monitoring</u>					
Visits (per month)	2.50	6.04	3.42	8.12	More for Established BA <5%
<u>Miscellaneous</u>					
Like the presence of co-investors, in general (% yes)	50%	25%	1.07	0.99	More for Early BA at <1%

^a These criteria were measured on a Likert Scale where 1=very important; 5=not important

* Note: S/D = Standard Deviation

Contrary to the BA results, the VC findings proved again to be much more enlightening. Compared to VCs investing in (less-risky) established ventures, those VCs funding (riskier) early stage firms were more entrepreneurial, had more unquoted investment experience, and were more inclined to replace the entrepreneur with new management. They also tended to be more concerned about the venture's growth prospects, competitive protection, and the opportunity to aid the early stage firm in an active fashion. This is supported by the finding that early stage investors have more pre-investment hesitations about the entrepreneur and the product/market than the VC investor in more established ventures. Furthermore, early stage investors invested smaller amounts, received smaller equity stakes and spent less overall (not as a % of the

invested amount) on due diligence and transaction costs. To limit the inherent early stage risks, these VC investors also tended to pay out the investment amount in stages, rather than all at once, and kept in contact more closely via the telephone post investment. As might be expected, these risky early stage investments were expected to be held longer by the investor, and had higher expected rates of return than less risky established ventures. One VC interviewed stated: "The percentage returns you expect always depends on the amount of risk you are taking on" (VC1, 5/6/96), whilst another VC stated: "Very few people are operating in this area (early stage ventures) because it is a risky area where you loose your shirt more often than not." (VC12, 13/6/96) Due to these risks of early stage investments, it was found that VCs firms with outside fund providers supplying a smaller percentage of their total investment fund (and so may have less agency pressure to invest in safer investments) were more inclined to fund early stage ventures. This will be discussed in more detail in Chapter 7.3.1. Lastly, early stage VC ventures were also found to be significantly more technologically intensive. Table 7.4 details these findings.

Table 7.4 - Differences Between the Investment Processes of VCs Investing in Early and Established Firms

Investment Characteristics Statistically Different Between Early & Established VC Investee Firms	Early Stage Mean (N=103)	Established Mean (N=16)	Early stage S/D*	Established S/D*	Statistical Significance Level of Differences between VC Groups
<u>Investor Characteristics</u>					
Number of firms founded	1.14	0.37	2.07	0.72	More for Early VC at <1%
Number of unquoted investments done	34.9	17.12	40.81	9.39	More for Early VC at <1%
<u>Due Diligence Process</u>					
Cost of due diligence	£7,610	£29,687	£16K	£32K	More for Established VC <2.5%
Cost of due diligence as a percentage of investment	1.09%	2.03%	1.1	2.10%	More for Established VC <5%
Times met entrepreneur before investing	10.0	6.43	8.30	2.65	More for Early VC at <1%
<u>Investment Criteria^a</u>					
Product's sales potential	1.50	1.93	0.73	0.57	More for Early VC at <2.5%
Growth potential of the market	1.51	2.31	0.76	1.07	More for Early VC at <2.5%
Product's formal competitive protection (patents)	2.85	3.56	1.41	1.37	More for Early VC at <10%
Low overheads	3.07	2.5	1.06	1.09	More for Established VC <10%
Low initial cost to test the market	3.13	3.91	1.11	1.14	More for Early VC at <5%
(Potential) co-investors present	3.27	4.14	3.27	4.14	More for Early VC at <5%
Investor's strengths fill gaps in business	3.38	4.13	1.18	0.99	More for Early VC at <2.5%
<u>Negotiations & Investment</u>					
Investors initial equity %	30.1%	47.9%	16.5%	22.1%	More for Established VC <2.5%
Size of investment	£845K	£1.67M	1.3M	1.3M	More for Established VC <2.5%
Transaction costs (legal etc.)	£27.7K	£96.5K	45K	102K	More for Established VC <2.5%
Number of entrepreneurs investor has replaced	6.31%	2.81%	10.28	2.10	More for Early VC at <1%
Investment made in stages?	33%	0%	0.47	0.00	More for Early VC at <1%
<u>Post-Investment Monitoring</u>					
Telephone calls (per month)	5.79	3.75	6.33	2.96	More for Early VC at <5%
<u>Exit & Performance</u>					
Intended length of investment time (in years)	5.25	4.28	1.88	1.15	More for Early VC at <10%
Annual rate of return initially expected on investment	40.5%	32.32%	14.01	5.55	More for Early VC at <1%

<u>Miscellaneous</u>					
% of outside investors in VC	57.8%	83%	47.10	33.93	More for Established VC <2.5%
Was the venture technologically intensive? (% yes)	62%	21%	0.48	0.42	More for Early VC at <1%
Time since investment (in years)	1.63	0.85	1.78	1.06	More for Early VC at <2.5%

^a These criteria were measured on a Likert Scale where 1=very important; 5=not important

* Note: S/D = Standard Deviation

These findings may indicate that VC investments in general (which tend to be more often than not in more established firms) tend to be larger in size, render higher equity stakes for control, and require less active post-investment monitoring, whilst it may be assumed that most VCs are less entrepreneurial and fund less unquoted ventures. These generalisations about the larger VC population which the new results have suggested are also well documented in previous chapters, lending some support to these findings.

The BA literature, unfortunately, offers few comparisons of early and established BA investments, and so does not offer much insight to these findings. However, two US studies did conduct early/established stage comparisons. Aram (1989) found that BAs who have more success (relative to expectations) with past investments, have more interest in investing in future start-up and early stage firms. Furthermore, Freear & Wetzel (1989) reported that presumably due to the decline in perceived risk, the BAs' expected rate of return declined the later the stage of the investee firm. Although this relationship was also present in this BA study, the correlation was not significant (correlation=-0.1315).

Nevertheless, the VC literature supports many of these findings. As in this study, researchers in the US (Norton & Tennebaum, 1993; Robinson, 1987) and in the UK (Wright & Robbie, 1996) found that VCs who typically invest more in early stage firms are smaller in size and invest smaller amounts than those VCs who fund established firms. Additionally, two US studies (Norton, 1995; Gupta & Sapienza, 1988) also found that VC investors in earlier stage ventures tend to monitor more actively post investment, whilst Carter & Van Auken (1994) claim that early stage VC investors in the US also had a longer investment horizon and replaced entrepreneurs more often than VC investors in more established firms. However, although Carter and Van Auken (1994) found no obvious differences in their US study in a number of VC investment criteria (depending upon the stage of the investment), this research study found significant differences and so may add further insight to this area for future study.

Although the BA analysis only highlighted the possible presence of a rather risk-adverse minority BA group, the VC analysis clearly offers a greater understanding of how VC firms which invest in earlier stage (and more risky) ventures strive to reduce their risks throughout the investment process more so than VC investors in more established ventures.

7.1.3 - Geographical Distribution of the Investors

Since London is the UK's only major financial centre, this research wanted to determine whether investors who operate in this heavily competitive geographical area operate differently from those who live further away. A number of studies in the US (Freear et al., 1994a; Haar et al., 1988), Canada (Short & Riding, 1989), and the UK (Mason & Harrison, 1990, 1995a; Mason, 1996a; Martin, 1989) have noted that regional differences between investors are critically important and data on one region may not be generalisable to other regions. However, very few studies, especially in the UK, have analysed regional differences (Martin, 1989). In particular, the regional study of BAs, who live virtually everywhere (Gaston, 1989; Baty, 1991) and tend to invest locally in a hands-on fashion (Mason, 1996a; Aram, 1989; Wetzel, 1983), is very important since:

“informal investments are valuable because they help to retain and recirculate wealth within a region, counteracting the effect of most investment mechanisms (e.g. banks, insurance companies, pension funds) which act as a conduit through which personal savings flow out of peripheral regions in the nation's financial centres for investment in core regions and abroad.” (Mason & Harrison, 1995, p.43)

A better understanding of regional investor differences may, therefore, shed more light on spatial clustering of regional development as well (Wilson, 1994; Mason, 1996a). Indeed, one manager of a BIS believed that there was definitely a regional difference between BA investors: “Angels in London are much harder, more profit-oriented than they are in Devon. They are more gentlemanly once you get away from London.” (AC1, 25/3/96) Let us now see whether the results give some support to this statement.

This study found that 68% of all BA respondents were from London and the surrounding South-East areas. However, since only 48% of all BAs targeted lived in these areas (see

Table 3.1), these BAs were probably more inclined to respond. Other researchers (Coveney, 1996; Mason & Harrison, 1995; Mason et al., 1991a) also found that the majority of their BA respondents were based in the South and, therefore, concluded that Southern BAs represent most of the BA population in the UK. The quantitative results show that, compared to non-London based BAs, BAs living in the London area are more entrepreneurial, invest larger amounts per deal (although for smaller equity stakes), visit their investments less, and now expect to receive lower returns than those they initially anticipated. These differences are shown in Table 7.5.

Table 7.5 - Differences Between London-Based BAs and BAs in the Rest of the UK

Investment Characteristics Statistically Different Between London area & non-London based BAs**	London BAs' Mean (N=97)	Non-London Mean (N=46)	london S/D*	non-london S/D*	Statistical Significance Level of Differences between BA Groups
<i><u>Investor Characteristics</u></i>					
Number of firms founded	2.27	1.79	3.79	2.10	More for London BA at <10%
<i><u>Investment Criteria</u>^a</i>					
Low initial cost to test market	2.90	2.47	1.17	1.25	More for non-London BA <10%
<i><u>Negotiations & Investment</u></i>					
Size of investment	£61,510	£41,555	79K	47K	More for London BA at <10%
Investors' initial equity %	19.54%	26.18%	15.95	21.07	More for non-London BA <10%
<i><u>Post-Investment Monitoring</u></i>					
Visits (per month)	2.10	3.99	3.86	5.31	More for non-London BA <5%
<i><u>Exit & Performance</u></i>					
Annual rate of return now believe will realistically achieve on investment	18.9%	34.7%	24.96	45.16	More for non-London BA <5%
Rates of return over/under those initially expected	-12.3%	6.51%	21.93	37.84	More for non-London BA <2.5%

^a These criteria were measured on a Likert Scale where 1=very important; 5=not important
 * Note: S/D = Standard Deviation; ** Note: South East investors are also included in the London group

London-based BAs appear to be more similar to VCs than non-London BAs since they tend to invest more and monitor less actively. Thus, if the sample included more non-London BAs then the results may have shown even greater contrast with the VCs.

As in previous comparisons, the VC results are much more enlightening. Indeed, the differences found between London and non-London VCs were quite remarkable, with the former demonstrating more risk-averse investing practices throughout the whole investment process. In particular, compared to non-London VCs, London-based VCs were more entrepreneurial, conducted more due diligence, placed greater emphasis on growth and exit investment criteria, invested more per deal, gained more contractual control, and appeared to monitor their investments more post-investment. Thus, non-London VCs may be perceived to more closely resemble some BA investors. However, one Scottish VC wrote in a letter (attached to a returned postal questionnaire) that they were not able to conduct investments in the same manner as London-based VCs because they deal with rather different types of investment opportunities: "In London, venture capital firms get the top 10% of all the deals, whereas in Scotland we have to work with companies to set them up." Table 7.6 shows these differences between the VC types.

Table 7.6 - Differences Between London-Based VCs and VCs in the Rest of the UK

Investment Characteristics Statistically Different Between London area & non-London based VCs**	London VCs' Mean (N=68)	Non-London Mean (N=51)	london S/D*	non-london S/D*	Statistical Significance Level of Differences between VC Groups
<u>Investor Characteristics</u>					
Number of firms founded	1.20	0.47	2.11	1.05	More for London VC at <2.5%
<u>Due Diligence Process</u>					
Size of firm funded	£3.5M	£1.6M	3.4M	2.2M	More for London VC at <1%
Sector research conducted by investor ^a	1.53	1.89	0.70	0.73	More for London VC at <2.5%
Cost of due diligence	£16.3K	£5.1K	25.5K	6.9K	More for London VC at <1%
Times met the entrepreneur before investing	10.97	6.01	7.62	3.51	More for London VC at <1%
Number of independent references taken on entrepreneur	4.84	2.92	4.29	1.83	More for London VC at <2.5%
Number of people investor consulted before investing	4.66	3.77	2.46	1.88	More for London VC at <10%
Time from first meeting entrepreneur to investment decision (in weeks)	15.26	8.21	13.73	11.52	More for London VC at <1%
<u>Investment Criteria^b</u>					
Enthusiasm of entrepreneur(s)	1.26	1.54	0.47	0.65	More for London VC at <5%
Growth potential of the market	1.51	1.86	0.76	1.00	More for London VC at <10%
Expected rate of return	1.55	2.03	0.76	1.04	More for London VC at <1%
Quality of product	1.83	2.16	0.82	1.06	More for London VC at <10%
Potential exit routes (liquidity)	1.94	2.56	0.89	1.14	More for London VC at <1%
Investor understands business	2.17	2.78	1.01	1.13	More for London VC at <1%
High margin of the business	2.13	2.50	0.96	1.11	More for London VC at <10%
Venture is local	3.80	3.22	1.43	1.45	More non-London VC <10%
<u>Negotiations & Investment</u>					
Length of negotiations (in weeks)	9.21	5.02	10.68	6.27	More for London VC at <2.5%
Investor's initial equity %	34.45%	26.41%	19.96	10.24	More for London VC at <2.5%
Entrepreneur's initial equity %	40.55%	62.10%	21.81	15.05	More for non-London VC <1%
Size of investment	1.25M	363K	1.63M	427K	More for London VC at 1%
Number of entrepreneurs investor has replaced	7.5	2.77	11.61	3.82	More for London VC at <1%
Number of entrepreneurs investor has replaced (as a % of investments made)	22.19%	9.58%	16.80	11.91	More for London VC at <1%
Transaction costs (legal, etc.)	£50.1K	£22.2K	70K	37.4K	More for London VC at <2.5%

<u>Post-Investment Monitoring</u>					
Telephone calls (per month)	6.30	3.94	6.58	4.79	More for London VC at <10%
<u>Miscellaneous</u>					
Number of ventures the VC personally monitors	7.51	15.74	8.51	14.60	More non-London VC <10%
Time since investment (in years)	1.96	0.80	1.83	1.21	More for London VC at <1%

^a This variable were measured on a Likert Scale where 1=extensive; 4=none

^b These criteria were measured on a Likert Scale where 1=very important; 5=not important

* Note: S/D = Standard Deviation; ** Note: South East investors are also included in the London group

Clearly, London-based VCs appear to invest more cautiously than those in the rest of the UK. This may be due to the greater level of competition amongst VCs in London for financial backing from fund providers, or that VCs in London have greater resources available with which to conduct these investment practices. Either way, it is clear that since London VCs act more like the stereotypical VC identified in previous chapters, greater inclusion of these VCs in this study's sample (more than the current 57%) would make the differences between BAs and VCs even more pronounced.

Although both the BA and VC literature primarily concentrate on spatial UK concentration of investors and wealth, and make little or no reference to actual differences in preferences and investment processes, they are still able to lend some support to this study's findings. In the BA literature it is well documented that the London and South East region has 39% of BA investments and 58% of the total amount invested (Harrison & Mason, 1996a; Mason & Sackett, 1996). In fact, Harrison & Mason (1991a) found that 3% of firms in the southern regions cited a BA as a source of finance, whilst only 0.5% of firms in the Midlands and North did. Yet, the only investment process variable that is listed in the literature also supports this study's finding: Mason & Harrison (1995) found that BAs in the South invest larger amounts

than their counterparts in the rest of the UK, investing on average £35,000 and £19,000 respectively (£61,500 and £41,500 respectively for this study).

The VC literature tends to be more comprehensive on the regional variation of VC investors in the UK. It is well chronicled that the VC industry is over-centralised in the London area (Mason & Harrison, 1995a, 1996). Martin (1989) found on the basis of 1986 data that 75% of VC funds were located or headquartered in London, and that the London/South East area received 31% of investments from VCs in the UK and accounted for 24% of the VC investments done. However, this concentration of VC investments in the South is due to both demand- and supply-side factors (Mason & Harrison, 1991). On the demand side, suitable investment opportunities, usually of superior quality, are largely concentrated in the southeast region (Martin, 1989; Mason & Harrison, 1991). Indeed, Deakins (1996) states that one significant factor affecting this level of business formation and growth in an area is the level of capital availability. Certainly, the London/South East area has the most capital available since most VC funds are now located there because many of the 'captive' VCs were established within larger financial institutions which were already London-based. London's financial milieu also induced many independent VCs to be based there (Martin, 1989). But, looking at the supply side, these VC firms are also well situated. Since good local knowledge is usually required to succeed in any region (Hamilton Fazey, 1986), London-based VCs need not look beyond the London area to find suitable investment opportunities, as was aforementioned (Mason & Harrison, 1991; Woolfman, 1993). Clearly, there is a circular causality between the demand and supply-side factors. This spatial bias in investment preferences will, therefore, continually reinforce the north-south divide in the funding of VC

investments (Mason & Harrison, 1991), which may have further serious implications for the northern parts of the UK (Martin, 1989).

However, the few investment process variables listed in the literature support this study's findings. The larger average size of investment of London VCs compared to VCs from the rest of the country is well documented (Hall, 1988; Mason & Harrison, 1991; Martin, 1989), although Mason & Harrison (1991) state that this may be due to the higher managerial unit costs and overhead costs of London-based VC firms which make it uneconomic for them to make smaller investments. The finding that London-based VCs take larger equity stakes was also supported (Mason & Harrison, 1991).

Thus, rather than just looking at the geography of investments, as all past studies have done, this research has rendered the first clear impression of how investors from different parts of the UK differed in their preferences and practices throughout the investment process. This may be of benefit to entrepreneurs seeking funds.

7.1.4 - Technology Vs. Non-Technology Ventures

Well documented in the US and the UK, technology-based firms are vital to the future development and long run competitiveness of the national economy (Bank of England, 1996; Murray & Lott, 1992; Tewksbury et al., 1980). However, technology-based firms may experience difficulty in getting financing from traditional sources (i.e. banks) for a number of reasons: lack of commercially viable products, difficulty in assessing the size of the market for a new and innovative idea, uncertainty of future income streams, history of poor rates of return, high degree of confidentiality to protect the innovation,

entrepreneurs who often lack high technology skills, absence of collateral, intangibility of R&D expenses in the firm valuation, and the lack of technological understanding by most fund providers (Bank of England, 1996; Deakins, 1996; Murray, 1994). Hence, many of these high risk ventures will rely on alternative forms of financing, such as venture capital financing. With the many inherent risks of technology financing, this research wanted to determine whether investors in technology behaved differently during the investment process than non-technology investors. Little research has been carried out in this area, especially in the UK (Bank of England, 1996).

Using the 'technologically intensive' response category on the questionnaire, the results show that 86.5% of BAs did not invest in technology investments and most BAs interviewed stated that they did not like them. There were four main reasons that BAs voiced for avoiding high tech investments. First, most BAs do not understand the technology, as one BA stated: "The information technology I don't understand from Adam. We are in an age where things are moving forward so quickly." (BA3, 14/2/96) This avoidance of high tech was even more pronounced with the older generation of BAs interviewed: "High tech is foreign to me and worrying for me because I wasn't brought up in the computer world. It is a bit bad on my part." (BA19, 28/3/96) Second, BAs feel that most high tech firms need sums of money that they can not afford, but are more in the league of VCs, as one BA stated:

"The numbers high tech companies are looking for are way out of my league and with high tech I would have to take much on trust. I always have a question mark if a high tech company is looking for £1 million to fill a major high tech need, why have venture capitalists not invested already?" (BA3, 14/2/96)

Third, due to the specialised nature of high tech companies, many BAs do not believe that they are able to add any value through involvement in the firm. One BA stated: "I can't contribute to technology firms, I only have experience at the management level." (BA3, 14/2/96) Thus, the potential inability to be actively involved post-investment would prohibit BAs from reducing potential agency problems and this is clearly not preferred by the majority of BAs. Fourth, high tech investments are often of a high risk nature not in line with BA preferences. One BA stated: "Technology has a lot of competition and is a specialist thing. It is very easy to get wrong, especially if you don't know that much about them." (BA15, 25/3/96)

With such perceived disadvantages to investing in technology-intensive investments, we will now analyse whether BAs who do invest in them behaved differently. Compared to BAs not investing in technology, those funding technology firms consulted more people before investing, were more attracted to investments with competitive protection and a niche market, and had smaller equity stakes. Furthermore, they were slightly less actively involved hands-on post-investment, possibly because they did not feel they could add as much value. Table 7.7 lists these differences.

Table 7.7 - Differences Between the Investment Processes of BAs Investing in High Tech Firms and Those Who Don't

Investment Characteristics Statistically Different Between Technology & non-Technology BA Investments	Tech Mean (N=16)	Non-Tech Mean (N=103)	Tech S/D*	Non-Tech S/D*	Statistical Significance Level of Differences between BA Groups
<u>Due Diligence Process</u>					
Number of people investor consulted before investing	3.69	2.66	3.36	2.26	More for Tech BA at <10%
Stage of firm (early) ^a	2.42	2.84	1.13	0.92	More for Tech BA at <5%
<u>Investment Criteria</u>^b					
Trustworthiness of entrepreneur	1.46	1.26	0.72	0.49	More for Non-Tech BA <1%
Niche market	1.75	2.15	0.96	1.28	More for Tech BA at <10%
Product's informal competitive protection (know-how)	2.06	2.59	0.82	1.06	More for Tech BA at <1%
Size of the investment	2.29	2.75	1.23	1.23	More for Tech BA at <5%
Product's overall competitive protection	2.37	2.85	1.19	1.26	More for Tech BA at <10%
(Potential) co-investors present	2.52	3.09	1.61	1.44	More for Tech BA at <10%
Product's formal competitive protection (patents)	2.92	3.49	1.40	1.38	More for Tech BA at <10%
<u>Negotiations & Investment</u>					
Investor's initial equity %	18.11%	26.42%	16.82	20.93	More for Non-Tech BA <5%
<u>Post-Investment Monitoring</u>					
Investor's involvement possible ^b	2.72	2.25	1.40	1.39	More for Non-Tech BA <10%
Telephone calls (per month)	5.29	9.09	6.55	8.98	More for Non-Tech BA <1%

^a This variable was measured on a Likert Scale where 1=pre start-up; 4=established

^b These criteria were measured on a Likert Scale where 1=very important; 5=not important

* Note: S/D = Standard Deviation

Contrary to the BA findings, the majority of sampled VCs (56.7%) invested in technologically-intensive investments. This was surprisingly high, especially since most of the VCs interviewed claimed that apart from them, few other VCs actually invested in high tech. One VC even stated: "You can count us on the fingers of one hand. There are fewer than six who do early stage technology investments. A lot of big companies say they do, but if you send them a deal, they don't do it." (VC1, 5/6/96) In fact, many VCs interviewed gave a number of reasons why more high tech investments were not

conducted in the UK. First, many claimed that VCs in the UK are not trained to deal with high tech investments. Second, high tech investments are much riskier and time consuming. One VC stated:

“Nobody does technology because it takes a lot of time and effort. The deal costs are exactly the same for a large deal (...) Technological products are inherently so much more risky. Because it is a mature venture capital industry, the better returns can be found with MBOs.” (VC12, 13/6/96)

Third, the VC industry in the UK has a rather poor history of funding high tech companies. One VC stated:

“In the 1980s, the young British venture capital industry forgot the cardinal rule of always investing in people, and they backed some dodgy products. Then these went wrong, and instead of analysing where they went wrong, they just said they lost a lot of money in technology, so, per se, it must be bad.” (VC3, 5/6/96)

With so many negative things said about high tech investing, it was surprising to see the majority of responses claiming to have invested in this area. One explanation may be that since the investments analysed in this study are early stage, and not representative of typical VC deals, they may be more technology-based. Also, perhaps many VCs were too liberal in claiming that their investments were technology-based, or misunderstood the meaning of ‘technologically intensive’. Thus, the problem may be that only one variable was used to measure technological intensity and this variable was self reported. Indeed, Mason & Harrison (1995) experienced the same problem and state: “but as the definition of technology-based was left to investors, this figure may be over-stated.” (p.42) One last explanation might be that since the UK venture capital industry has

always followed its US counterpart, it might now finally also start to concentrate more on technology investments.

Despite such conflicting information about the general rationale for, and frequency of, high tech investing by VCs in the UK, the results show that these high tech investors behave very differently from those who were technology-averse. In comparison to VCs not investing in technology, high tech VC investors tend to be more entrepreneurial, spend less on due diligence (possibly because they are more specialised and require less background research on the sector or because there is less sensible due diligence possible), take longer to invest, are more attracted to high growth firms with competitive protection, have smaller equity stakes, reduce investment risks more by staging the distribution of the investment amount, and have higher return expectations initially and even a year or so after the investment is made. Table 7.8 lists these differences.

Table 7.8 - Differences Between the Investment Processes of VCs Investing in High Tech Firms and Those Who Don't

Investment Characteristics Statistically Different Between Technology & non-Technology VC Investments	Tech Mean (N=63)	Non-Tech Mean (N=48)	Tech S/D*	Non-Tech S/D*	Statistical Significance Level of Differences between VC Groups
<u>Investor Characteristics</u>					
Number of firms founded	1.44	0.59	2.38	1.21	More for Tech VC at <2.5%
<u>Due Diligence Process</u>					
Cost of due diligence	£4,559	£21,517	7,060	30,612	More for Non-Tech VC at <1%
Cost of due diligence as a percentage of investment	0.93%	1.72%	1.47	1.91	More for Non-Tech VC <10%
Time from first meeting entrepreneur to investment decision (in weeks)	14.47	9.53	13.79	10.73	More for Tech VC at <5%
Stage of firm (early) ^a	2.52	2.87	0.67	0.91	More for Tech VC at <2.5%
<u>Investment Criteria</u>^b					
Growth potential of the market	1.42	1.89	0.69	0.94	More for Tech VC at <1%
Expertise of entrepreneur(s)	1.44	1.20	0.69	0.41	More for Non-Tech VC at <5%
Product's sales potential	1.45	1.75	0.76	0.67	More for Tech VC at <5%
Product's overall competitive protection	1.82	2.41	0.86	0.89	More for Tech VC at <1%
Trackrecord of entrepreneur(s)	2.03	1.48	1.22	0.65	More for Non-Tech VC at <1%
Niche market	2.37	3.41	1.18	0.90	More for Tech VC at <10%
Product's formal competitive protection (patents)	2.67	3.40	1.37	1.40	More for Tech VC at <2.5%
Low overheads	3.21	2.76	1.15	0.94	More for Non-Tech VC at <5%
Ability to reach break-even without further funding	3.26	2.41	1.25	1.07	More for Non-Tech VC at <1%
Size of the investment	3.48	2.89	1.19	1.18	More for Non-Tech VC <2.5%
<u>Negotiations & Investment</u>					
Investor's initial equity %	28.19%	36.12%	15.86	20.26	More for Non-Tech VC <5%
Transaction costs (legal, etc.)	£27,377	£55,042	44,391	83,391	More for Non-Tech VC <10%
Investments made in stages	35%	19%	0.48	0.39	More for Tech VC at <10%
<u>Exit & Performance</u>					
Annual rate of return initially expected on investment	42.87%	34.06%	13.83	11.23	More for Tech VC at <1%
Annual rate of return now believe will realistically achieve on investment	46.14%	31.34%	30.55	14.83	More for Tech VC at <1%

^a This variable was measured on a Likert Scale where 1=pre start-up; 4=established

^b These criteria were measured on a Likert Scale where 1=very important; 5=not important

* Note: S/D = Standard Deviation

Although the BA and VC literature has not examined many of this study's data variables, it does lend some support to the results of others. In the US BA literature, studies found that 18-33% of BAs invest in technology firms and 25-64% express strong interest in investing in such ventures (Gaston, 1989; Haar et al., 1988; Aram, 1989; Freear et al., 1992b; Freear & Wetzel, 1988, 1990; Wetzel, 1981, 1987). Similarly, in Canada 38-70% of BA investments are technology based (Short & Riding, 1989), whilst in Finland about 40% of investments (62% of manufacturing investments) were high tech (Lumme et al., 1996). Even in Sweden, it is common for BAs to fund these types of ventures (Landstrom, 1992). However, in Scotland, very few BAs were interested in high-tech investments (KPMG, 1992), whilst in the UK there was also less BA interest in high technology investments, with studies accounting them for 15-22% of all BA investments (13.4% for this study) (Mason & Sackett, 1996; Mason & Harrison, 1995; Coveney, 1996). In the UK, therefore, Mason & Harrison (1995) suggest that BA financing may play a less prominent role in the funding of new high tech firms. Whilst in the US, BAs are the single greatest source of early-stage high-tech financing, even surpassing VCs (Freear & Wetzel, 1988, 1992b; Bank of England, 1996). In addition to these general findings, Landstrom (1992) also supports this study's finding that BA investors are less involved post-investment in high tech investments.

In the VC literature, the different levels of high tech investment between US and UK investors is even more apparent. In the US, 80% of the annual investment by the VC industry was directed to high technology ventures in 1991, whilst this was 13% and 9% respectively for the European and UK venture capital industries in 1993 (Murray, 1995a, 1995b; BVCA, 1994; EVCA, 1994). However, in 1995, only 2.2% of the total

investment activity of the UK VC industry was in early high-tech ventures, although another 21.8% was in more established (and possibly less-risky) technology ventures. Clearly, the European, and particularly the UK, VC industry prefers investing in more mainstream industry sectors, whilst their US counterparts have a much greater attraction to technology-based sectors (Bank of England, 1996; Murray & Lott, 1992; Knight, 1992). However, the frequency of high tech early-stage VC investments found in this study *may* (if the results are representative) signal that this tide is changing.

The VC literature also adds insight into, and support for, some of the differences in investment characteristics found in this study. Indeed, compared to non-technology ventures, technology-based investments tended to place more importance on growth potential of the market (Murray, 1995a; Storey, 1994; Murray & Lott, 1992), invest larger amounts per deal (Benjamin & Margulis, 1996; Hall, 1988), and expect high rates of return (Murray & Lott, 1992; Rigby, 1997).

This study has highlighted for the first time many variables which differ between the BA and VC investors who invest in technology-based firms, and those that do not. This understanding is particularly important since, although these firms have important economic significance, they often have difficulty attracting funding. Indeed, the Bank of England (1996) even advocates gaining a greater understanding of technology-based BA investors as potentially one of the most effective ways of easing this problem.

7.1.5 - Successful Vs. Less-Successful Ventures

To determine whether successful investments share certain characteristics, this research sought to compare the 30% of investments with the highest expected rates of return (currently expected, not initially), with the 70% which were less successful. This analysis does not want to imply that there is causality between the common variables found and the rates of return, but does want to raise awareness of which factors may have influence.

In this study, the top 30% of BA investments were those with an expected rate of return of 30% or higher. Compared to the BAs of less successful investments, the successful BAs conducted more research of the sector, were more attracted to the trustworthiness and trackrecord of the entrepreneur and potential exit routes, had less concern for the size of investment demanded, spent a smaller proportion on transaction costs and replaced entrepreneurs in a smaller proportion of unquoted investments done. In addition, these BAs had a shorter investment horizon and higher initial return expectations, as Chart 7.9 shows.

Table 7.9 - Differences Between Successful and Less-Successful BA Investments

Investment Characteristics Statistically Different Between Successful & Less Successful BA Investee Firms	Success Mean (N=28)	Less-Success Mean (N=67)	success S/D*	non-success S/D*	Statistical Significance Level of Differences between BA Groups
<u>Due Diligence Process</u>					
Sector research conducted by investor ^a	2.03	2.54	0.92	0.87	More for Successful BA <2.5%
Cost of due diligence as a percentage of investment	0.17%	0.99%	0.69	3.26	More for Unsuccessful BA <10%
<u>Investment Criteria</u>^b					
Trustworthiness of entrepreneur	1.19	1.46	0.49	0.67	More for Successful BA at <5%
Quality of product	1.56	2.03	0.82	0.87	More for Successful BA <2.5%
Trackrecord of entrepreneur	1.74	2.34	0.92	0.98	More for Successful BA <2.5%
Potential exit routes (liquidity)	2.32	3.09	1.22	1.3	More for Successful BA <2.5%
Size of investment	3.08	2.51	1.25	1.4	More for Unsuccessful BA <5%
<u>Negotiations & Investment</u>					
Transaction cost (as a % of total investment)	1.06	4.30	2.44	7.86	More for Unsuccessful BA <1%
Number of entrepreneurs investor has replaced (as a % of investments made)	3.99%	9.58%	9.75	21.15	More for Unsuccessful BA <10%
<u>Exit & Performance</u>					
Intended length of investment time (in years)	4.02	5.73	2.04	3.21	More for Unsuccessful BA <2.5%
Annual rate of return initially expected on investment	42.60%	23.65%	29.02	14.53	More for Successful BA at <1%

^a These variables were measured on a Likert Scale where 1=extensive; 4=none

^b These criteria were measured on a Likert Scale where 1=very important; 5=not important

In the VC analysis, the top 30% of investments were those with expected rates of return of 49% or higher. Compared to their less successful counterparts, VCs from successful investments consulted more people before investment, took less time overall to complete the investment, were more attracted to growth and financial profit criteria, expected higher rates of return initially, and preferred to invest in technology-based ventures.

Table 7.10 lists these differences.

Table 7.10 - Differences Between Successful and Less-Successful VC Investments

Investment Characteristics Statistically Different Between Successful & Less Successful VC Investee Firms	Success Mean (N=26)	Less-Success Mean (N=63)	success S/D*	non-success S/D*	Statistical Significance Level of Differences between VC Groups
<u>Due Diligence Process</u>					
Number of people investor consulted before investment	5.18	4.18	2.72	2.34	More for Successful VC at <10%
Time of total investment process (in weeks)	17.07	21.17	8.13	13.87	More for Unsuccessful VC <10%
<u>Investment Criteria^a</u>					
Perceived financial rewards	1.25	1.54	0.52	0.80	More for Successful VC at <5%
Product's sales potential	1.39	1.68	0.74	0.73	More for Successful VC at <10%
Expected rate of return	1.48	1.89	0.97	0.97	More for Successful VC at <10%
Trackrecord of entrepreneur(s)	2.11	1.62	1.16	0.96	More for Unsuccessful VC <5%
Product's formal competitive protection (patents)	2.63	3.24	1.57	1.27	More for Successful VC at <10%
Low overheads	3.48	2.91	1.05	0.99	More for Unsuccessful VC<2.5%
Low initial capital expenditures needed	3.77	3.14	1.08	1.24	More for Unsuccessful VC<2.5%
Size of investment	3.77	3.15	1.16	1.21	More for Unsuccessful VC<2.5%
<u>Exit & Performance</u>					
Annual rate of return initially expected on investment	49.36%	33.81%	10.59	9.24	More for Successful VC at <1%
<u>Miscellaneous</u>					
Firm is technologically intensive ^b	1.31	1.49	0.47	0.50	More for Successful VC <10%

^a These criteria were measured on a Likert Scale where 1=very important; 5=not important

^b 1=yes, 2=no

To add further insight into these findings, the rates of return for BA and VC investments were correlated with the variables in this study, as is shown in Table 7.11.

Table 7.11 - Correlations of Expected Rates of Returns for BA and VC Investments With Various Variables from the Investment Process

Correlations with 'Annual Rate of Return Now Believe Will Realistically Achieve on Investment' Variable for Both Investor Types	BA Correlations (with current rate of return expected)	VC Correlations (with current rate of return expected)
<u>Investor Characteristics</u>		
BA invests through a BIS	-.2453*	---
<u>Due Diligence Process</u>		
Sector experience of the investor	.1382	.2556*
Sector research conducted by investor	.3360*	.0138
Size of firms funded (corporate value)	.6233*	.0202
<u>Investment Criteria</u>		
<u>(Importance as attraction to the investment):</u>		
Trackrecord of entrepreneur(s)	.3009*	-.1423
Perceived financial rewards for investor	.2557*	.2698**
Expected rate of return	.2225*	.2621*
Investor's involvement possible	.0037	.2146*
Low overheads	.0427	-.2309*
Niche market	-.0338	-.2111*
Product's formal competitive protection (patents)	.1278	.2403*
Potential exit routes (liquidity)	.2784*	0.326
Size of the investment	-.3042**	-.0370
<u>Exit & Performance</u>		
Annual rate of return initially expected on investment	.5311**	.5879**
Intended length of investment time	-.2378*	-.0484
<u>Miscellaneous</u>		
Firm is technologically intensive	-.0721	.2853**

* The correlation between the variables is statistically significant at the <5% level

** The correlation between the variables is statistically significant at the <1% level

Unfortunately, due to the limited amount of research on rates of return from venture capital investments, there is little literature which can be used to support these findings.

In the BA literature, Haar et al. (1988) also found in a US study that BAs with greater familiarity in the industry perform better, whilst Lumme et al. (1996) noted that Finnish BAs also show no difference in levels of involvement depending upon the success of the

investment. Contrary to this study's findings, Lumme et al. (1996) also discovered that successful BAs tend to make fewer investments, invest smaller amounts of finance and are more likely to fund ventures with which they have no friendship connection.

In the VC literature, Tyebjee & Bruno (1984) also found that attractive market conditions (i.e. growth potential of the market) and highly differentiated products (i.e. product's sales potential and product's competitive protection) had a high explanatory power over a venture's rates of return. However, although MacMillan et al. (1988) also found no relationship between the level of investor involvement and the rates of return of the investments, Sapienza (1992) found a strong positive correlation.

Whilst these aforementioned findings are insightful, they should be assessed with caution because no link of causality is made between them and the rates of investment success. In addition, the actual levels of realised success probably influenced how the investors completed the questionnaire, especially for variables they deemed important at the stage of initial investment. This was mentioned in Chapter 3 as a possible research limitation.

7.2 - Business Angel Sub-Groups

Now that the intra-group differences applicable to both BA and VC investors have been assessed, this section will analyse variations which are only applicable to BAs. These are:

7.2.1 - Business Angels: Those Who Use Business Introduction Services Vs. Those Who Don't

7.2.2 - Business Angels: Application of Another Researcher's Active Angel Typology to the Results

7.2.3 - Serial Business Angels Vs. Non-Serial Business Angels

Although BAs have many common traits, the heterogeneity of the BA population has also been recognised (Freear et al., 1996; Freear & Wetzel, 1992). Although most past studies have not compiled sufficiently large samples to allow examinations of intra-group variations (Mason, 1996a), a few past studies have attempted to segregate BAs into: 2 (Kelly & Hay, 1996), 3 (Postma & Sullivan, 1990), 6 (Coveney, 1996), and even 10 (Gaston, 1989) distinctive types of informal investors. There is a growing awareness amongst researchers in the BA field "of the need to desegregate the unit of analysis further" (Kelly & Hay, 1996, p.1), and clearly further research is warranted (Mason, 1996a).

7.2.1 - Business Angels: Those Who Use Business Introduction Services Vs. Those Who Don't

Since the majority of BA studies in the UK rely heavily (if not completely) upon business introduction services (BISs) for their BA samples (Coveney, 1996; Harrison & Mason, 1991a, 1991b, 1992b; Mason & Harrison, 1996b; Mason et al., 1995; Atkin & Esiri, 1993), this study wanted to determine whether these BAs differ from those who use personal networks to find investment opportunities. Indeed, most of our knowledge of UK BAs comes from those which are visible (i.e. they use BISs), although they are probably only the tip of a potentially sizeable iceberg (Mason, 1996b; Harrison & Mason, 1992b; Stevenson & Coveney, 1994). Since most BAs, however, tend to adopt a passive attitude towards finding investments, those BAs which join BISs may be seen as adopting a much more active approach, implying that these two investor types may have differing investment practices and attitudes (Harrison & Mason, 1991a; Atkin & Esiri, 1993). In addition, Mason & Harrison (1996b) speculate that BIS BAs may be more inexperienced and, thus, need assistance in finding investments. Unfortunately, until now, no research has compared these two types of BAs in detail. In fact, Mason (1996a) cautions:

“Members of business introduction services (are) a very important subgroup of the business angel population but in all probability one which has certain distinctive characteristics. The implication is that in most circumstances researchers should derive samples of business angels from several different sources so that sources of bias in individual data sources will, hopefully, be cancelled out.” (p.10)

This research study will now determine the extent of such a potential bias.

As the control group, Coveney (1996) provided this research study with a list of BAs who had not utilised a BIS to make investments, and this group rendered 21 responses. Thus, compared to non-BIS BAs, the results show that those BAs utilising BISs conduct less due diligence, have greater attraction and concern for market and sales growth, visit their investments more often, and have a shorter investment horizon, as Table 7.12 shows.

Table 7.12 - Differences Between BAs Who Utilise BISs and Those Who Don't

Investment Characteristics Statistically Different Between BIS BA and Non-BIS BA Investee Firms	BIS BA Mean (N=122)	Non-BIS BA Mean (N=21)	BIS S/D*	Non-BIS S/D*	Statistical Significance Level of Differences between BA Groups
<u>Due Diligence Process</u>					
Sector research conducted by investor ^a	2.65	1.95	0.93	0.97	More for Non-BIS BA at <1%
Time from first meeting entrepreneur to investment decision (in weeks)	7.06	19.90	6.66	28.47	More for Non-BIS BA at <10%
Time of total investment process (in weeks)	12.29	26.47	9.64	29.40	More for Non-BIS BA at <5%
Number of people investor consulted before investment	2.84	4.04	2.57	3.12	More for Non-BIS BA at <10%
<u>Investment Criteria</u>^b					
Low overheads	2.54	2.05	1.17	0.78	More for Non-BIS BA at <2.5%
Growth potential of the market	1.73	2.20	0.93	1.06	More for BIS BA at <5%
Product's sales potential	1.44	1.80	0.57	0.83	More for BIS BA at <2.5%
<u>Post-Investment Monitoring</u>					
Visits (per month)	3.43	1.37	5.15	1.48	More for BIS BA at <1%
<u>Exit & Performance</u>					
Intended length of investment time (in years)	4.83	6.79	2.18	4.32	More for Non-BIS BA at <10%

^a These variables were measured on a Likert Scale where 1=extensive; 4=none
^b These criteria were measured on a Likert Scale where 1=very important; 5=not important
 * Note: S/D = Standard Deviation

One reason why the BIS BAs may conduct less due diligence ex ante investment may be because they believe that since the investment was featured by the introduction service, it has already been screened and, therefore, requires less thorough investigation. Unfortunately, this is usually not the case since BISs conduct only minor screening and it is really the BA's responsibility to conduct a thorough investigation before investing. Furthermore, since BIS BAs join a BIS to actively search for suitable investment opportunities, rather than passively waiting for an investment to come to their attention, it may not be surprising that these investors are more attracted to ventures with high sales and market growth rates which offer them the returns they are so actively seeking. Although the BA literature does not adequately address this area, Stevenson & Coveney (1994) found that BIS BAs are more active (i.e. they visit their ventures more) which supports this research, and that they may invest more, which was not supported.

Clearly, this analysis has offered the first detailed insight into the level of representativeness that BIS BAs offer of the larger non-BIS BA population. Indeed, this study found that BIS BAs conduct less due diligence, are more concerned with growth ventures and are more actively involved post-investment. It is, therefore, important that future studies utilising convenience samples consider these potential biases and address them accordingly. Further research may also wish to analyse whether local/regional non-profit BISs have different types of BAs than national commercial BISs, a differentiation not considered by this study.

7.2.2 - Business Angels: Application of Another Researcher's Active Angel Typology to the Results

To further increase our understanding of BA heterogeneity, this research applied its BA sample to Coveney's (1996) typology of active BA investors. Although Coveney (1996), (and its earlier and later versions: Stevenson & Coveney, 1994, and Coveney & Moore, 1997, respectively), identified six BA types, only three applied to private individuals (non-corporate) who were actively investing: Income Seeking Angels, Wealth Maximising Angels, and Entrepreneurial Angels. Each is now defined.

Income seeking angels were found to be less affluent individuals who often invested for personal income or employment. They made few investments, had started few businesses themselves as entrepreneurs, and preferred co-investors and investments to be geographically local (Stevenson & Coveney, 1994).

Wealth maximising angels, on the other hand, were wealthier and tended to be experienced businessmen who invested in a number of ventures for financial gain. They also preferred co-investing and were least concerned about the location of the venture (Stevenson & Coveney, 1994).

Entrepreneurial angels were the wealthiest of these BAs, less inclined to co-invest, preferred majority stake holdings, enjoyed the 'buzz' of being involved in unquoted ventures and were not too concerned about the proximity of the investment (Stevenson & Coveney, 1994).

If these angel types were placed on a continuum, from Income Seeking to Wealth Maximising to Entrepreneurial BA, it may be possible to generalise that: the size of

investment, the amount of entrepreneurial experience, and the number of unquoted investments done increase, whilst the preference for co-investing decreases. Based upon these four variables and the location proximity variable, this research study's database of 143 BAs was segregated into the three BA types. Due to the heterogeneity of such a large sample, some BAs did not fit all five categorical variables for a particular BA type. These were then assigned to a BA type based upon the majority of variables with which they did comply.

However, in applying this study's findings upon these three BA types, it should not be forgotten that dividing a new large-scale database of investors into three categories based upon five classification variables (which were generated by a different, and older, research database) may have inherent limitations. Thus, these results are presented here to add possible insight into the BA types identified by Coveney (1996), rather than to confirm or contradict his findings.

The results show that each BA type was represented in very similar proportions in both studies, with this study finding that 31% were Income Seeking, 44% were Wealth Maximising, and 25% were Entrepreneurial, whilst in Stevenson & Coveney (1994) these were 35%, 44%, and 21% respectively. In addition to the variable differences used to divide the BA sample into the distinctive angel categories, this research used a one-way ANOVA test to find a number of other significant differences between the three BA types:

- Entrepreneurial BAs spent considerably more than the other BA types on due diligence and transaction costs.

- Income seeking BAs were significantly more attracted, than entrepreneurial angels, to ventures with high perceived financial rewards and expected rates of return.
- Income seeking BAs monitor significantly more closely and visit their investments more frequently than the other BA types. In addition, wealth maximising BAs were found to be least involved in their ventures, contradicting Stevenson & Coveney's (1994) finding that they provide hands-on support.
- Although entrepreneurial BAs were much more attracted to a niche market than the other BA types, showing a significant correlation between the investor types (correlation=0.1701*), this was not shown to be significant in the ANOVA. Thus, some ambiguity exists about this variable's significance.

These differences are shown in Table 7.13.

Table 7.13 - Significant Differences Between Coveney's (1996) BA Types in this Study's Sample

Investment Process Variables	Income-Seeking BA Mean (N=42)	Wealth Maximising BA Mean (N=64)	Entrepreneurial BA Mean (N=37)
<i>5 Variables used to categorise:</i>			
Size of investment	£32,402	£34,017	£104,583
Number of firms founded	1.34	2.34	3.46
Number of unquoted investments done	3.15	6.37	5.70
(Potential) co-investors present ^a	3.12	2.77	3.00
Venture is local ^a	2.36	3.07	2.86
Cost of due diligence	£144.59	£39.62	£861.76
Transaction costs	£723.08	£443.40	£2,392.56
Perceived financial rewards ^a	1.57	1.88	2.15
Expected rate of return	1.88	2.25	2.67
Visits (per month)	6.24	0.89	3.38
Level of Monitoring ^b	1.45	2.92	2.09
Niche market ^a	2.33	1.95	1.79

^a These criteria were measured on a Likert Scale where 1=very important; 5=not important

^b This criteria was measured on a Likert Scale where 1=active; 4=passive

- One further significant difference between the BA types was that:
- The majority of entrepreneurial BAs live in London and the South East, whilst this is less so for wealth maximising BAs and much less so for income seeking BAs.

This geographical distribution of the BA types is shown in Table 7.14.

Table 7.14 - The Geographical Dispersion of this Study’s Sample on Coveney’s (1996) BA Types

Location in UK (listed in roughly increasing distance from London)	Income Seeking BA (N=41)	Wealth Maximising BA (N=58)	Entrepreneurial BA (N=34)	Total (N=133) (10 missing)
London	2%	16%	38%	17%
Rest of South East	22%	33%	24%	27%
East Anglia	0%	2%	9%	3%
South West	20%	21%	12%	18%
West Midlands	0%	3%	12%	5%
East Midlands	5%	2%	0%	2%
Wales	2%	2%	0%	2%
North West	24%	12%	6%	14%
Yorkshire	17%	5%	0%	8%
North	0%	2%	0%	1%
Scotland	7%	3%	0%	4%
				100%

To further demonstrate that the majority of entrepreneurial BAs live in the London/South East area, Table 7.15 condenses the geographic information.

Table 7.15 - Condensed Geographical Dispersion of this Study’s Sample on Coveney’s (1996) BA Types

Location in UK (listed in roughly increasing distance from London)	Income Seeking BA (N=41)	Wealth Maximising BA (N=58)	Entrepreneurial BA (N=34)	Total (N=133) (10 missing)
London & SE	24%	49%	62%	44%
Rest of UK	76%	51%	38%	56%

Since neither Coveney (1996) nor Stevenson & Coveney (1994) nor Coveney & Moore (1997) identified specifically where in the UK the majority of each BA type resides, these findings may have some practical implications for entrepreneurs wishing to target a certain type of BA for funding. Since a high proportion of the UK's wealth is in the London area, it is not too surprising that the majority of wealthier BA investors live there, whilst the less wealthy tend to live farther away from the London area.

Thus, this research has sought to add slightly more insight to the BA types identified by Coveney (1996). Indeed, it found that that the wealthiest BA type (entrepreneurial) tends to spend more on due diligence and transaction costs and tends to live closer to London, whilst the least wealthy BA type (income seeking) tends to be more actively involved in its investments and is more attracted to ventures with high financial return expectations. Furthermore, the moderately wealthy BA type (wealth maximising) spends least on due diligence and transaction costs and is least actively involved ex post in its investments.

7.2.3 - Serial Business Angels Vs. Non-Serial Business Angels

The last BA group comparison sought to determine whether those BAs with unquoted investment experience (serial BAs) differed in their investment process from those who are less experienced investors (non-serial BAs). Gaining greater knowledge about these serial BAs is important for three reasons. First, serial investors invest more frequently than other BAs and, therefore, probably account for a disproportionately large percentage of investment activity (Kelly & Hay, 1996). Second, gaining greater understanding of the active segment of the BA population may stimulate additional investment activity from the less active majority (Kelly & Hay, 1996). Third, since serial investors have

made more investments, they may have experience effects operating which will need to be documented and researched (Kelly & Hay, 1996). Indeed, a number of the BAs interviewed discussed these experience effects with their first few investments. Some BAs stressed their initial investment naïveté; one stated: “My first two investments, I think, were made very hastily. I must regard them, in retrospect, unwise (...) But my subsequent investments I am pleased with” (BA20, 29/3/96), whilst another stated:

“My first investment was really a ‘toe in the water’, I didn’t have any experience as a business angel and didn’t really know what was involved. I was really in the dark on this and I took some money that I was prepared to lose to gain some experience.” (BA21, 2/4/96)

Research on these serial BAs may render some insight which may allow more inexperienced BAs to avoid potential and expensive pitfalls in their future investment processes.

Despite the advantages of studying serial BAs, only one study (Kelly & Hay, 1996) to date has compared serial with non-serial BAs, but this UK study only had a sample size of eight and was of an exploratory nature. This research study, therefore, sought to conduct the first large-scale analysis of serial BAs and, thus, used Kelly & Hay’s (1996) definition - serial BAs are those investors with at least three unquoted investments - to segregate the BA sample.

The results show that 64.5% of the BA sample are serial BAs, and compared to non-serial BAs, they tend to be more entrepreneurial, have more experience in the sector in which they invest, prefer to co-invest, are less concerned about liking the entrepreneur and the proximity of the venture (possibly because they are less hands-on involved in

their investments), and they have higher initial return expectations. Table 7.16 highlights these differences.

Table 7.16 - Differences Between Serial BAs and Non-Serial BAs in the Investment Process

Investment Characteristics Statistically Different Between Serial & Non-Serial BAs	Serial BA Mean (N=91)	Non-Serial Mean (N=50)	serial S/D*	non-serial S/D*	Statistical Significance Level of Differences between BA Groups
<u>Investor Characteristics</u>					
Number of firms founded	3.04	1.08	3.69	0.96	More for Serial BA at <1%
Number of unquoted investments done	7.27	1.58	7.27	0.54	More for Serial BA at <1%
<u>Due Diligence Process</u>					
Sector experience of the investor ^a	2.68	3.09	1.00	1.09	More for Serial BA at <5%
<u>Investment Criteria</u>^b					
(Potential) co-investor present	2.68	3.32	1.49	1.46	More for Serial BA at <5%
Nature of competition	2.39	2.73	0.92	1.09	More for Serial BA at <10%
Investor liked entrepreneur(s) upon meeting	1.80	1.45	0.79	0.96	More for Non-Serial BA <2.5%
Venture is local	2.99	2.49	1.40	1.48	More for Non-Serial BA <10%
<u>Exit & Performance</u>					
Annual rate of return initially expected on investment	33.02%	22.94%	27.78	10.05	More for Serial BA <2.5%

^a These variables were measured on a Likert Scale where 1=extensive; 4=none

^b These criteria were measured on a Likert Scale where 1=very important; 5=not important

* Note: S/D = Standard Deviation

These results may indicate that due to past investment experiences, serial BAs may prefer investing in industry sectors in which they have experience and they may be less actively involved. Although the variables which measure involvement clearly show that non-serial BAs monitor more closely than serial BAs, these findings were not statistically significant at the 10% level.

In the sparse literature, some support is found for this study's results. Kelly & Hay (1996) also found that serial BAs prefer to fund ventures in sectors which are familiar to them, and that serial BAs prefer to co-invest. Furthermore, Carter et al. (1997) discuss how a similar learning curve is used by entrepreneurs who have started multiple ventures to aid them in future start-ups. Indeed, Sapienza et al. (1996) also state that a VC investor's learning curve can aid in future investments and allow him/her to invest as efficiently, but with less effort. More experienced VCs may, therefore, not have to be as involved post-investment in monitoring their investments as less experienced VCs. Applying this idea to this research, it may help to explain why serial BAs may be slightly less involved in the firm and why they have less concern for the proximity of the venture and the amicability of the entrepreneur. Of course, past experience may also make the serial BA more willing to travel to find a good investment opportunity, and so this may also explain the serial BA's lesser concern for the venture's location.

Greater insight into serial BAs can certainly be beneficial. Since 76% of BAs in the UK expected to increase their angel activities over the next five years (Stevenson & Coveney, 1994), it is hoped that more serial BAs can be researched in the future so that the results presented here may be used as a research base to be developed further.

7.3 - Venture Capitalist Sub-Groups

In this section, the influence of different concentrations of outside fund providers, the only variable solely applicable to VC investors, will be analysed.

7.3.1 - Venture Capitalists: Captive Vs. Independent Funds

The US and UK VC industries are composed primarily of two different types of VC firms, captives and independents, discernible based upon the source of their funding.

‘Captives’ are VC firms which have been established by financial institutions (pension funds, insurance companies, merchant banks, or clearing banks) and receive their funding from these parent institutions, although they have considerable operating autonomy (Martin, 1989; Mason & Harrison, 1991; Bank of England, 1990). These VC funds tend to be open-ended and the amount they are allocated for investment purposes reflects the overall strategy of the parent institution (Bank of England, 1990).

‘Independents’, in contrast, are VC firms which are not associated with a parent organisation (i.e. they are ‘independent’) and raise capital from various outside sources, usually institutional sources (Martin, 1991). They are usually formed and owned by managements who may have spun-off from established VC firms. These VC firms tend to set up funds of predetermined size and investment strategy, and draw down committed funds as investment opportunities arise. They attempt to liquidate these funds by a pre-specified date, usually seven to ten years from inception, although there has been a trend towards immediate dissemination of proceeds from investment distributions (Wright &

Robbie, 1996; Bank of England, 1990). VCs in independent firms are remunerated from both annual management fees and a portion of the fund's realised profits (Bank of England, 1990) and so "may be more committed than captives to generating a return for investors through realising a capital gain" (Wright & Robbie, 1996, p.156), rather than focusing more on an income stream from investments as captives tend to do. To do this, independents may place greater emphasis on earlier stage investments, whilst captives may prefer management buyouts and buyins (Wright & Robbie, 1996). However, one VC from an independent VC fund noted:

"The stage that we prefer to invest in really depends on the life of the fund. In the early years of a new fund, we will consider many more early stage investments than later on. A lot of captives don't have these problems with the life of the fund since they have a regular flow of funds anyway, so they are less concerned with exiting within a defined time period. They obviously set criteria, but they don't have to exit all the investments by the end of the fund." (VC5, 6/6/96)

However, in this research study, which focuses on early stage investments, 64% of VCs in the sample were independents. Indeed, in the UK VC market independents are also the majority. Since the early 1980s, when captives composed about 70% of VC firms, the number of independents has grown dramatically and they now account for 54% of new funds invested (Martin, 1989; Wright & Robbie, 1996; Murray, 1995a; Robbie et al., 1997). Yet, these independent VCs have for the last few years experienced more difficulty in obtaining funds from outside investors, due to increased competition in the VC market, greater fund provider concern for liquid investments, and reduced foreign investment (Bank of England, 1990, 1996; Murray, 1995a, 1995b)

Although both independents and captives are obligated to produce returns for their fund providers, the former is now less assured of a future stream of committed funds and has a much higher proportion of outside investors to please. Indeed, Woolfman (1993) found that all the captive VCs in his response sample claimed to have unlimited access to finance. Thus, agency theory (as outlined in Chapter 2) would hypothesise that independents may behave in a slightly more thorough manner (than captives) in the investment process to signal competence to their external fund providers. This is supported in part by Robbie et al. (1997) who found that venture capital fund provision (especially to captive VC firms) is usually a relatively insignificant part of the investment portfolio of institutional fund providers (i.e. pension funds and insurance companies), and so they tend to adopt a more reactive approach to monitoring the VC firm. This may imply that captives have less agency pressures and less incentives to overtly signal competence in the investment process.

To determine whether the source of funds affects the investment process of VCs, the VC sample was segregated into captives and independents based upon the percentage of outside investors each claimed to have in their fund. The results show that, compared to captives, independent VC funds conduct more due diligence, are more attracted to investments with high expected financial returns, invest more per deal, gain more contractual control, and claim to monitor the investment more ex post investment (although the actual involvement differences were not significant). Table 7.17 lists these differences.

Table 7.17 - Differences Between Captive and Independent VC Funds in the Investment Process

Investment Characteristics Statistically Different Between Captive & Independent VC Funds	Captive VC Mean (N=33)	Independent VC Mean (N=59)	<i>captive S/D*</i>	<i>independent S/D*</i>	Statistical Significance Level of Differences between VC Groups
<u>Due Diligence Process</u>					
Size of firms funded (full corporate value)	£2.12M	£3.34M	3.03M	3.15M	More for Independent VC <10%
Sector research conducted by investor ^a	1.75	1.45	0.76	0.62	More for Independent VC <10%
Cost of due diligence	£5,354	£16,459	7,050	26,622	More for Independent VC <1%
Length of negotiations (wks)	4.76	8.99	5.3	11.1	More for Independent VC <2.5%
Number of independent references taken on the entrepreneur	3.13	4.39	1.89	3.98	More for Independent VC <10%
<u>Investment Criteria^b</u>					
Size of the investment	3.75	3.05	1.34	1.17	More for Independent VC <2.5%
Perceived financial rewards	1.72	1.27	0.91	0.58	More for Independent VC <2.5%
Niche market	1.94	2.31	0.84	1.23	More for Captive VC at <10%
Expected rate of return	2.00	1.64	0.90	1.05	More for Independent VC <10%
Investor understands business	2.84	2.31	1.00	0.94	More for Independent VC <2.5%
<u>Negotiations & Investment</u>					
Size of investment	£450K	£1,252K	637K	1,663K	More for Independent VC <1%
Investor's initial equity %	28.28%	35.86%	15.13	19.35	More for Independent VC <10%
Entrepreneur's equity %	55.95%	44.92%	23.04	21.88	More for Captive VC at <5%
Transaction costs	£20,344	£50,079	47.9K	64.1K	More for Independent VC <5%
Number of entrepreneurs the investor has replaced (as a % of investments made)	12.58%	19.64%	16.66	16.85	More for Independent VC <10%
<u>Post-Investment Monitoring</u>					
Level of monitoring ^c	2.67	2.07	0.82	0.77	More for Independent VC <1%
Number of ventures the VC personally monitors	16.9	6.82	15.78	4.62	More for Captive VC at <1%
<u>Miscellaneous</u>					
% of outside investors in the VC fund	1.81%	96.98%	5.27	7.00	More for Independent VC <1% (by definition)

^a These variables were measured on a Likert Scale where 1=extensive; 4=none

^b These criteria were measured on a Likert Scale where 1=very important; 5=not important

^c This criteria was measured on a Likert Scales where 1=active; 4=passive

* Note: S/D = Standard Deviation

The empirical results appear to support the proposition that due to their greater concentration of external fund providers (and thus potentially greater agency pressures), independent VCs are slightly more thorough in the investment process than captive VCs, who may have slightly less agency pressure to show competent investment behaviour.

The VC literature renders some support to these findings. The independent VC's greater concern for high rates of return is endorsed by Wright & Robbie (1996), whilst it was also found that independents tend to have higher target rates of return than captives (Wright & Robbie, 1996; Robbie et al., 1997). However, support for the due diligence differences was more ambiguous. Wright & Robbie (1996) found that: "Independents place significantly greater emphasis than captives on more detailed specific sources of information (...) Captives place relatively more emphasis on such due diligence (own market evaluation) than independents." (p.166) Lastly, although past research has shown that independents may have more pressure to exit investments sooner (Sandberg et al., 1987; Wright & Robbie, 1996) and that captives may find the entrepreneur's track record more important (Wright & Robbie, 1996), these differences were not supported in the quantitative results of this research study.

Thus, possibly due to different levels of agency pressures (from their differing concentrations of outside fund providers), independent and captive VCs vary throughout their investment processes, with independents conducting more due diligence, having greater concern for expected rates of return, gaining more contractual control, and claiming to conduct slightly more post-investment monitoring of their investments.

7.4 - Conclusion

In this chapter, the heterogeneity of both investor groups has been highlighted. Although this is usually not analysed in research studies in the entrepreneurial financing area, its inclusion here has rendered further insight into the main differences between BA and VC investors, as outlined in Chapters 4-6. By looking at the results presented in this chapter, one can see how greater inclusion of one intra-group faction may influence the overall composition of that group in an inter-group comparison study. Therefore, to determine whether these intra-group variations have more explanatory power over the collected data variables (tested in Chapters 4-6) than the main BA/VC classification variable, multiple regressions were run. In testing the intra-group differences of both investor types, these multiple regressions (presented in Appendix C) clearly show that the BA/VC classification variable (used in the regression as a dummy variable) was primarily accountable for the variations seen in the raw data variables collected (i.e. dependent variables). Few of the other intra-group differences had much comparative explanatory power. Thus, out of all the classifications applicable to both investor groups (i.e. fitting all the raw data), the BA/VC classification appears to have the most explanatory power. This hopefully lends some support to the robustness of the overall BA/VC comparison findings.

Although this chapter has given a thorough analysis of a number of investor group variants which have not been examined before, it is clear that the heterogeneity of BAs and VCs deserves more, and more thorough, attention from future researchers.

Chapter Eight

Summary & Implications

Introduction

In this last chapter, the major aspects of this research study will be summarised. Particularly, the empirical and theoretical-based findings will first be reviewed so that their implications for the academic and non-academic communities can then be assessed. This chapter is divided as follows:

8.1 - Summary of the Research

8.2 - Implications of the Research

8.1 - Summary of the Research

With the economic importance of small firms in the UK and the US rising, more attention is focused on entrepreneurial firms, the high-growth minority which account for most of this economic potential. However, due to their inherently uncertain and high-risk nature, these firms often have difficulty securing financial backing from institutional investors and this often constrains their growth and economic potential. Fortunately, business angels (BAs) and, to a lesser degree, venture capitalists (VCs) do fund some of these high-growth firms. Yet, the majority of these firms still go unfunded, even though BAs, in particular, often have additional money available for such investments. To

lessen this funding concern, this study sought to increase our scant knowledge of the investment practices of BAs, especially in comparison to their closest counterpart, the VC. The first-ever comparison was, therefore, conducted between BAs and VCs throughout their full investment processes.

To aid the structure of this study, agency theory was used to form research hypotheses. In particular, it was hypothesised that, primarily due to the VC's additional agency relationship with fund providers (to whom the VC will wish to signal positive information), BAs and VCs use different approaches to limit potential agency risks in their investments (i.e. the risks associated with an entrepreneur's potential misuse of the investor's money). The academic literature identifies two theoretical approaches to limit such risks over all the stages of the investment process, although each approach places different levels of emphasis on risk-reduction at each stage. The first, the principal-agent approach, stresses reduction of these risks particularly before making the investment through extensive screening of investment opportunities, thorough due diligence, and the formulation of comprehensive contracts. The second, the incomplete contracts approach, asserts that since contracts can not foresee all future contingencies, particular emphasis should be placed on close monitoring of the investee firm post investment. It was hypothesised that VCs may use the former, and BAs the latter, approach.

To empirically test these research hypotheses, data was collected by conducting a thorough literature survey, 40 personal interviews with investors, a mass mail questionnaire (rendering 262 returns), and a comprehensive statistical analysis of the data.

In addition to giving detailed new insights into the pertinent issues of each stage of the investors' investment process, this study's main finding was that, as hypothesised, BAs appear to make greater use of the incomplete contracts approach, and VCs the principal-agent approach, when investing. Thus, by comparing investors who invest their own money directly (BAs) and financial intermediaries who invest other people's money (VCs), this research has shown that, although both investor types aim to reduce agency risks throughout the investment process, the latter are more rule-based and more concerned with reducing these risks in the pre-investment process as a means of signalling competence to their fund providers. The former, BAs, however, tend to place greater emphasis on ex post investment involvement as a risk reduction method. Hopefully, this finding is a worthy contribution to our understanding of these investor types, especially since this study was the first to apply such a theoretical base, and also the first to conduct a direct comparison between BAs and VCs throughout the investment process.

However, in so generating support, across the full investment process, for the main research hypothesis, a plethora of intricate findings were also collected about each stage of the process, and about the heterogeneity within each investor group. These findings, by themselves, may also aid our understanding of BAs and VCs. Their individual contributions are highlighted in Table 8.1.

Table 8.1 - Review of the Research Findings

Variables	First time specifically measured in UK/US literature		New finding confirms old research findings		New finding contradicts old research findings		First direct BA/VC comparison in UK/US literature
	BA	VC	BA	VC	BA	VC	
for each investor type:							
<u>Investor Characteristics</u>							
Education level				✓	✓		✓
Age of investor			✓	✓			✓
Small Business work experience		✓	✓	✓*			✓
Number of firms founded		✓	✓	✓*			✓
Number of unquoted investments		✓	✓	✓*			✓
<u>Scanning/Due Diligence Process</u>							
Investment scanning/comparison	✓			✓			✓**
Attrition rates			✓	✓			
Use of referrers			✓	✓			
Specialisation in sector			✓	✓			
Size of firms funded			✓	✓			
Sector experience of investors				✓	✓		UK
Sector research conducted	✓			✓			✓
Times met entrepreneur before £	✓	✓					✓
Number of independent references	✓	✓	✓*	✓*			✓
Calculation of return rates	✓	✓	✓*	✓*			✓
Gut feel in the investment			✓	✓			
Business plan comprehensiveness				✓	✓		✓**
Due diligence costs	✓			✓			✓
Number of people consulted		✓		✓*	✓		✓
Length of investment process			✓	✓			UK
<u>Investment Criteria</u>							
Investment motivations			✓	✓			
Industry sectors of investments			✓	✓			✓
<u>Various Investment Criteria:</u>							
Entrepreneur	✓	✓	✓*	✓*			✓
Product/Market	✓	✓	✓*	✓*			✓
Financials	✓	✓	✓*	✓*			✓
Business plan	✓		✓*	✓			✓
Other/miscellaneous	✓	✓	✓*	✓*			✓
Seriously considered investments	✓	✓		✓*			✓
Pre-investment hesitations	✓	✓					✓
<u>Negotiations</u>							
Rigor of negotiations			✓	✓			✓**
Length of negotiations			✓	✓			✓
Transaction costs	✓	✓		✓*			✓

Note: * Specific new data measurements confirm (and add to) old general beliefs.

** Qualitative comparison

Variables	First time specifically measured in UK/US literature		New finding confirms old research findings		New finding contradicts old research findings		First direct BA/VC comparison in UK/US literature
	BA	VC	BA	VC	BA	VC	
for each investor type:							
<u>Actual Investment & Control</u>							
Rigor of investment contracts			✓	✓			
Size of investment			✓	✓			
Investment made in stages?	US	✓	✓	✓*			✓
Investor's initial equity %			✓	✓			✓
Entrepreneur's initial equity %	✓		✓*	✓			✓
Number of entrepreneurs replaced	✓		✓*	✓			✓
<u>Post-Investment Monitoring</u>							
Passive ex post involvement			✓	✓			✓**
Active ex post involvement			✓	✓			
Telephone calls per month	UK	UK	✓	✓			UK
Visits per month			✓	✓			
Number of firms VC monitors		UK		✓*			
<u>Exit & Performance</u>							
Exit preferences			✓	✓			✓
Intended length of investment time			✓	✓			UK
Rates of return initially expected			✓	✓			✓
Rates of return now expect			✓	✓			✓
Post investment regrets	✓	✓					✓
<u>Intra-Group Heterogeneity</u>							
Early vs. late questionnaires		✓	✓	✓			✓
Early vs. late stage ventures	UK		✓	✓			✓
Investors' geographic distribution	UK	UK					✓
High-tech vs. low-tech ventures	✓	✓	✓*	✓*			✓
Successful vs. less successful firm	✓	✓					✓
BIS vs. non-BIS BAs	✓		✓*				
New analyses of Coveney typology	✓		✓*				
Serial vs. non-serial BAs	US		✓*				
Captive vs. independent VCs		✓		✓*			

Note: * Specific new data measurements confirm (and add to) old general beliefs.

** Qualitative comparison

By rendering empirical support to the hypothesised BA/VC differences, it is hoped that this study has given some insight into the investment practices of two of the most influential external financiers of small entrepreneurial firms. The next section will speculate about any implications these findings may have.

8.2 - Implications of the Research

Since this research study was principally guided by the need to enlarge our understanding of the procedures that BAs and VCs utilise when investing in early stage entrepreneurial firms, clearly the aim was to produce empirical data which might have some practical relevance for the entrepreneurial financing field. This section, therefore, will review the implications of the research in the following sections:

8.2.1 - Implications for Management Literature

8.2.2 - Implications for Methodology & Method

8.2.3 - Implications for Theory

8.2.4 - Implications for Practitioners

8.2.5 - Implications for Policy

8.2.6 - Implications for Further Research

These will now be addressed in order.

8.2.1 - Implications for Management Literature

Although the management literature, in general, is quite separate from the entrepreneurship research field, this study's findings may still be relevant to the former. Indeed, this research may aid managers running firms by providing factors important in securing finance, which may also have some bearing to topics of running a small firm, such as: marketing, human resource management, product development, and alliances. Synthesising such research from different areas of entrepreneurship and small firm

management will certainly increase our understanding of entrepreneurship and its applicability to practical areas (Sullivan, 1991).

8.2.2 - Implications for Methodology & Method

In both the BA and VC research fields, the use of comprehensive methodologies which utilise both qualitative and quantitative methods tends to be the exception, rather than the rule (Hofer & Bygrave, 1992; Mason, 1996a). Therefore, the triangulation of research approaches which this research study employed, through the use of a literature review, qualitative interviews, and quantitative postal questionnaires, may act as a guide for future research in the turbulent field of entrepreneurship. In particular, the procedures employed to formulate and distribute the postal questionnaires may be of special interest since they proved to be quite successful in generating a high response rate from both investor types. However, in addition to the comprehensive methodology and method, this study was particularly unusual since it employed a theoretical base for study, as will be addressed next.

8.2.3 - Implications for Theory

The call for theoretically-based studies in the BA and VC fields has been well documented, although few have taken up the challenge (Hofer & Bygrave, 1992; Norton, 1995). Indeed, in the BA field, Freear et al. (1996) state in their paper, *Informal Venture Capital: Milestones Passed and the Road Ahead*, that:

“Theoretical foundations need to be refined, especially: (1) the contributions of (...) agency theory to the understanding of decision models employed by business angels, (and, 2) empirical tests of the theoretical underpinnings of the informal venture capital markets.” (p.29)

Whilst in the VC field, Hofer & Bygrave (1992) note:

“the presentation of findings needs to go beyond the simple reporting of statistical testing. It should also discuss the implications of the findings for the conceptual framework, model, or theory on which the hypotheses were based.” (p.99)

Therefore, this study’s use of agency theory as a framework for the hypotheses generation and the empirical data collection might be considered novel and will hopefully act as a guide for future studies which wish to be theoretically based. But, in addition to its application of theory to the entrepreneurship research field, one of this study’s major contributions was the empirical testing of the two theoretical approaches to agency risk reduction identified in the literature (the principal-agent and the incomplete contracts approaches).

8.2.4 - Implications for Practitioners

However, despite the implications for the academic research community, as aforementioned, Freear et al. (1991, 1992) state that the central theme for research studies should be their practical usefulness. This was certainly the driving force behind this study’s main research question. Indeed, greater understanding by practitioners in the entrepreneurship field as to investment techniques and procedures is needed (Landstrom, 1993, 1995), especially since Bygrave & Timmons (1992) claim that “Innovative entrepreneurship is America’s best chance of realizing a national competitive advantage in the twenty-first century.” (p.285) Thus, the practical implications of this study will now be assessed for the following:

8.2.4(A) - Entrepreneurs

8.2.4(B) - Business Angels

8.2.4(C) - Business Introduction Services

8.2.4(D) - Venture Capitalists

8.2.4(E) - Venture Capital Fund Providers

8.2.4(F) - Banks

8.2.4(G) - Managers

8.2.4(A) - Entrepreneurs

Raising external financing for firms often challenges entrepreneurs. They frequently face an up-hill battle since, for investors, “good deals are more scarce than capital.” (Tyebee & Bruno, 1981, p.319) This research, therefore, may be particularly beneficial to entrepreneurs since it may give them a greater understanding of BAs and VCs, in general, how these investors review funding proposals, and the criteria of particular importance to them. This may make entrepreneurs more successful in their pursuit of funding.

In particular, there are a number of advantages this research may render to entrepreneurs. First, a greater understanding of investors’ investment criteria and investment processes will allow entrepreneurs to create better funding proposals and so increase their chances of success (Mason & Rogers, 1996; Hall & Hofer, 1993; Carter & Van Auken, 1994). In particular, MacMillan et al. (1985) believe that this knowledge will allow entrepreneurs to:

“assess how their ventures compare with these criteria and take the steps necessary to resolve any major flaws in their proposals before submitting them (...) some viable proposals are rejected because they have flaws that could have been removed if entrepreneurs were alerted to them before they were submitted.” (p.120)

This may be particularly important since Harrison & Mason (1992a) claim that proposals in the UK tend to be of a poor quality and the principal factor restricting BAs from making further investments is the lack of suitable investment proposals, not the lack of funds (Stevenson & Coveney, 1994). Second, gaining a greater understanding about investors will enable entrepreneurs to form more realistic expectations of what they can demand from an investor and what they should forfeit in return (Landstrom, 1990; Ehrlich et al., 1994; Sapienza et al., 1996). Currently, this area is not well understood by either investors or entrepreneurs (Rea, 1989) and, as a result, offers of investment are often rejected (Mason & Harrison, 1996b). Third, with greater understanding of investors, entrepreneurs will be better able to assess the suitability of the different types of finance providers and so may be better able to target those most sympathetic to their type of firm and most capable of adding the financial and non-financial input desired (Ehrlich et al., 1994; Freear et al., 1990, 1995b; Mason et al., 1995). Fourth, knowing what criteria investors look for as a measure of potential success will allow entrepreneurs to emphasise these factors in their firms in the hope of aiding their performance focus. However, this may also render them with the knowledge of what they should be looking for in prospective opportunities they may wish to start and grow (Muzyka, 1995).

Clearly, greater knowledge about the investment practices and criteria of entrepreneurial firm investors may allow entrepreneurs to save time in, and increase their chances of, securing external finance (Freear et al., 1992b; Rigby, 1997). Yet, one manager of a BIS

interviewed felt that the need for education was much greater among investors than entrepreneurs. This need will be addressed next.

8.2.4(B) - Business Angels

This study's findings may also have important implications for active and inactive (i.e. virgin) BAs. For the former, learning how VCs and other BAs make investments, and which criteria they find important, may be beneficial (Riding et al., 1993; Mason & Rogers, 1996). This may be of particular importance in the UK, where Harrison & Mason (1992b) claim that "informal investors are inefficient, or insufficiently experienced, in identifying proposals worthy of serious consideration (and) (...) less sophisticated and professional than their US equivalents." (p.468) Indeed, this research highlighted the serious need for BAs to conduct more due diligence and to be less naïve in the investment process; thus, more knowledge of what criteria are important will aid BAs in this endeavour (Mason et al., 1995; Mason, 1996a).

For wealthy private individuals with a business background who are interested in, but have not yet invested in, entrepreneurial firms (i.e. virgin angels), this research may raise their awareness of informal venture capital as a viable funding option for them, and possibly also offer them the insights into the funding process that will motivate them to get involved (Freear et al., 1994a; Mason, 1996a; Mason & Harrison, 1995). One VC commented: "There is a need for investors (BAs) to get educated. Many investors are very unimaginative." (VC15, 19/6/96) Indeed, Coveney (1996) found that 24% of both active and inactive BAs stated that gaining more insight into the successful investments of other BAs would encourage them to make more unquoted investments.

8.2.4(C) - Business Introduction Services

Mason (1993) claims that BISs are only able to get a partial view of the BA market and that research is vital to them in order to widen the picture. In particular, the procurement of more knowledge about their market may certainly allow BISs to develop more relevant and effective services (Mason, 1993). One manager of a BIS stated in an interview: "We really don't know the answers because there hasn't been enough research. It's good that you are doing the research now." (AC1, 25/3/96)

The findings of this research study, therefore, have significant implications for BISs. First, greater knowledge of BAs' investment processes will allow BISs to "more effectively tailor the structure and content of the information on investment opportunities to meet the needs of investors." (Mason & Rogers, 1996, p.7) In this way, they will be able to assess what information they should, and should not include in their investment databases and in the presentation of their materials (Mason & Harrison, 1994). Second, the findings from this research may allow BISs to identify potentially deficient areas where advice, training and counselling can be provided to BAs and entrepreneurs, either through workshops or literature (Mason et al., 1995). Clearly, this research highlights the need for more extensive due diligence by BAs, an area in which BISs can certainly provide valuable advice. Third, this research may allow BISs to change the misconception that many BAs, entrepreneurs, and other players in the market have of BISs as a source of last resort funding with low quality investment opportunities and few value-added activities (Mason et al., 1995; Mason & Rogers, 1996). Fourth, by rendering more insight to VCs about the potentially valuable role of BAs in supporting the start-up entrepreneurial ventures which they (VCs) may eventually fund, VCs might

be induced to refer some early stage investment opportunities (which they have rejected) to BISs to seek BA funding.

Although BISs are no panacea for the funding gap of small firms, they do effectively address some inefficiencies in the entrepreneurial investment market. This research may, thus, aid them to examine their own services to potentially make the matching process more effective and efficient. After all, as Mason & Harrison (1993a, 1993b) point out, a BIS must attract high-quality entrepreneurial investment proposals, otherwise it will be unable to retain its list of investor clients for too long. But, as one BA noted, the quality of the investors using the BIS is also important: “An introduction service is only as good as its mailing list.” (BA18, 27/3/96)

8.2.4(D) - Venture Capitalists

To date, only limited academic research data exists on VCs in the UK (Sweeting, 1991) and, therefore, this research study may be able to render some significant insights. First, since Hall & Hofer (1993) claim that the success rate of VC-backed companies tends to be higher than for new ventures in general, a better understanding of the investment criteria utilised by VCs may render a greater understanding of the reasons for this success. Second, VCs may find it useful to compare their investment practices to those of other VCs in the market (Robinson, 1987), especially since:

“For venture capital firms knowledge of others’ practices could prove useful in selecting their domain, planning their portfolio, choosing which competencies to develop, and setting operating policies.” (Sapienza et al., 1996, p.442)

Seeing how other VC firms determine their governance efforts and deliver value to their investee firms may be of particular interest (Sapienza et al., 1996). Third, this study's findings will provide VCs with information which they could disseminate to entrepreneurs to make them more aware of what VCs are looking for in opportunities, and so this may generate higher quality investment proposals for VCs to consider (Carter & Van Auken, 1994). Fourth, this research study has highlighted the 'almost forgotten' area of early stage financing and the empirical results may induce a few VCs to reconsider this area. Fifth, since US VCs have increasingly looked abroad to the UK and Europe to diversify their investment activities, this study may render them some further insight into UK investment practices and potential (Bank of England, 1990). Sixth, just as the older VC market in the US has acted as a guide for the UK VC industry, so too has the VC industry in the UK influenced the growing VC culture in Europe (Murray, 1995a; Dixon, 1991). Clearly, this study's research results may be of particular interest to the less developed institutional VC market in Europe (Murray, 1995a). Lastly, the greater understanding that this research will render about the full investment process of VCs, and how this differs from other investor types, may offer a good starting point for evaluating (and possibly improving) the efficiency and effectiveness of the VC investment process (Hall & Hofer, 1993; Carter & Van Auken, 1994).

8.2.4(E) - Venture Capital Fund Providers

For those fund providers who provide funding to VCs, this research study has detailed how the investment procedures of VCs are formulated to comply with the demands and concerns of their fund investors. The agency theory approach utilised and the empirical data found will surely provide valuable insights for fund providers and compliment the

VCS' provision of timely investment information. This may be especially important since Robbie et al. (1997) claim that there is a continuing need to educate fund providers on VC activity. In addition to aiding current fund providers, this research may also raise awareness of venture capital investing for some potential fund providers in the UK (which have not yet supported VCs), such as university foundations and endowment funds, whose counterparts in the US have supported this sector for years (Bank of England, 1996).

8.2.4(F) - Banks

By adopting a typology of the different fund providers, this study hopefully clarifies the role that banks play in the funding of small entrepreneurial firms. Due to their regulatory environment and investment limitations, the general misconception that banks play a lead role in start-up finance for the small percentage of high growth firms was clarified by this study. In addition to aiding our view of the banking establishment, this study provided valuable information which banks could pass on to their customers as yet another service provision. Mason & Harrison (1996a) state:

“(T)he banks are a major source of information and advice to the small business sector and are ideally placed to educate their small business customers on the role of equity finance, encouraging them, where appropriate, to consider the possibility of raising external equity and, crucially, providing information on how to find business angels. At present, banks play a very minor role in networking between the small business sector and the informal venture capital community.” (p.11)

Lastly, the research results may also render bank staff with a better understanding of how they should evaluate more established entrepreneurial firms who approach for funding (Bank of England, 1996).

8.2.4(G) - Managers

For managers of large corporations, this research may have some valuable implications. First, by rendering detailed insights into how VCs allocate their funds, this research may provide insights which “are also valuable to managers in large companies who wish to improve their allocation of resources to internal ventures competing for new business development funds.” (Tybjee & Bruno, 1984, p.1065) Second, this study may also raise awareness of corporate venturing, as a viable means of investment for large firms (Bank of England, 1996; Stevenson & Coveney, 1994). Corporate venturing usually involves the direct or indirect funding of entrepreneurial firms by large companies as means of using this alliance for potential gains and access to leading edge technologies (Bank of England, 1994; Rosenstein et al., 1990). Indeed, compared to the US, this form of finance is underutilised in the UK (Mason & Harrison, 1991; Bank of England, 1996) and is now being forwarded by the Bank of England (1996) as “a valuable alternative source of finance” (p.31) for entrepreneurial firms.

8.2.5 - Implications for Policy

The use of government policy can be “a powerful - probably the most powerful - promoter or inhibitor of venture capital-backed entrepreneurship. It is a long-term process; policy initiatives taken in the 1990s will have an effect on entrepreneurship well into the next century.” (Bygrave & Timmons, 1992, p.285) There may, therefore, be a legitimate role for government policy in shaping national and local economic development and promoting the appropriate elements of capital formation (Duxbury et al., 1996; Mitchell, 1980; Bygrave & Timmons, 1992). Certainly in the UK, a plethora of policy initiatives have been introduced to aid the entrepreneurial climate (Deakins,

1996; Sapienza et al., 1996). However, designing policy which is well tailored to all objectives is extremely difficult (Mitchell, 1980; Wetzel, 1986a). Therefore, new research is constantly needed on entrepreneurship issues since "The better we understand this market, the better we can fix it." (Wetzel, 1993, p.10) Indeed, research on the UK market has much practical significance for the shaping of government policy (Mason & Harrison, 1990; Freear et al., 1996). Unfortunately, though, Mason (1996a) cautions that the formation and implementation of policy is running ahead of knowledge and so more empirical evidence is needed. One VC interviewed even stated angrily: "The Government is completely unaware of what it is that you need to drive these businesses forward in these critical, sensitive, early-stage times when there is very high risk and they are more likely to fail than not." (VC9, 10/6/96) By thoroughly researching the UK market for entrepreneurial investment, this research study's findings may have some very important implications for future UK policy. In particular, this study focused on investments in early-stage and high-growth firms, two areas where academics believe particular policy attention should be paid (Storey, 1994; Deakins, 1996; Murray, 1994). Sapienza et al. (1996) state:

"One implication is that if policy-makers are going to try to stimulate growth through venture capital, incentives should be aimed at stimulating more early stage venture capital where the greatest bang for the buck appears to be achieved. If entrepreneurial companies are truly engines of economic growth and of the renewal of the industrial fiber, then policy-makers should direct special attention to providing incentives for VCFs' (venture capital firms') investment in early stage ventures." (p.465)

However, in addition to early-stage entrepreneurial firms, this research may also shed some light on a number of policy changes which have been proposed, such as: government support for the 'risk rating' of entrepreneurial firms (Bank of England,

1996), more favourable tax treatment of capital gains from entrepreneurial investments (KPMG, 1992), government subsidies for BISs, the encouragement of the IPO market (Bygrave & Shulman, 1988), special policies which consider the heterogeneity of investors (Mason & Harrison, 1996a), and the creation of public sector VC funds (Lonsdale, 1996). Clearly, this study's findings may provide additional insight on policy issues relevant to the entrepreneurial climate.

8.2.6 - Implications for Further Research

Rendering greater understanding to an issue which may have important practical implications is one of the main reasons for conducting extensive research. Yet, in addition to creating a knowledge base for today, research should also provide a platform upon which future academics can build the subject area. This section will, therefore, now highlight some of the distinctive aspects of this study which may increase knowledge and provide some guidance for future researchers.

First, by thoroughly addressing the subject area, this study has given a good summary of: the macro environment for entrepreneurial financing, the micro issues relating to the individual investors, the existing knowledge gaps in the literature, the differences between the two most important external investors in early stage entrepreneurial firms, the heterogeneity within these investor types, and a full overview of previous academic studies in the field. By raising the awareness of this subject area and by identifying additional research opportunities throughout the presentation of the research, this study will hopefully motivate further analysis and so act as a useful stepping stone for future researchers in the subject area.

Second, this study has demonstrated how theory can be utilised to formulate a framework for hypotheses formulation, and the collection, analysis, and presentation of empirical data. In particular, governance issues of VC firms, although usually ignored, were emphasised in this study using the theoretical approach. Especially in the entrepreneurship field, such a theoretical base is unusual, although most beneficial.

Lastly, the methodology and methods utilised in this research study may also render beneficial guidance. In particular, by using an extensive and triangulated data collection process (of both qualitative and quantitative methods), reviews of the literature, face-to-face interviews, and postal questionnaires were employed. In addition, the healthy response rate on the postal questionnaires may be testament to the care taken with the research procedure. Furthermore, this study took the unique approach of focusing on the investment process and on actual investment deals made (rather than investment preferences), and utilised comprehensive statistical analysis to render insight on the data findings. The combination of data collection approaches demonstrated in this study may offer some guidance to future researchers in the formulation of their research methods.

Although the entrepreneurial process can be highly dynamic and complex, this research study has attempted to add some structure and clarity to this important area. By offering a comprehensive analysis of the investment procedures of two types of financiers which spark the growth of small firms, it is hoped that this study may, in some small way, add fuel to the flames of entrepreneurship.

BIBLIOGRAPHY

- Acs, Z.J., and Phillips, B.D. (1997) *Why does the relative share of employment stay constant?*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Advisory Council on Science and Technology (ACOST) (1990) *The enterprise challenge: overcoming barriers to growth in small firms*, HMSO, London; cited in Mason, C.M. (1996a) (ed.) *International Informal Venture Capital Research Newsletter*, Number 4, Summer.
- Aghion, P., and Bolton, P. (1992) An incomplete contracts approach to financial contracting, *Review of Economic Studies*, 59:473-494.
- Alvarez, F., Banerjee, S., Bygrave, W.E., Petty, J.W., and Shulman, J.M. (1997) *Financing issues in the 21st century*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Amit, R., Glosten, L.R., and Muller, E. (1990) Does venture capital foster the most promising entrepreneurial firms? *California Management Review*, 32(3): 102-111; cited in Brophy, D.J. (1992) *Financing the new venture: a report of recent research*, chapter 15 in Sexton, D.L., and Kasarda, J.D. (1992) *The state of the art of entrepreneurship*, Boston: PWS-Kent Publishing Company.
- Anderlini, L., and Felli, L. (1994) Incomplete written contracts: undescrivable states of nature, *Quarterly Journal of Economics*, 109.
- Aram, J.D. (1989) Attitudes and behaviors of informal investors toward early-stage investments, technology-based ventures and coinvestors, *Journal of Business Venturing*, 4:333-347.
- Armstrong, J.S., and Overton, T.S. (1977) Estimating nonresponse bias in mail surveys, *Journal of Marketing Research*, 14:396-402.
- Atkin, R., and Esiri, M. (1993) *Informal investment - investor and investee relationships*, Business Development Centre, University of Greenwich, London.
- Audretsch, D.B. (1995) *Innovation and industry evolution*, Cambridge, MA: The MIT Press.
- Balch, M., McFadden, D., and Wu, S. (eds.) (1974) *Essays on economic behavior under uncertainty*, New York: Elsevier Publishing.

- Bank of England (1990) Venture capital in the United Kingdom, *Bank of England Quarterly Bulletin*, February.
- Bank of England (1996) *The financing of technology-based small firms*, October; downloaded from the internet.
- Bannock, G. (1991) Venture capital and the equity gap, London: National Westminster Bank; cited in Mason, C.M., Harrison, R.T., and Allen, P. (1995) Informal venture capital: a study of the investment process, the post-investment experience and investment performance, *Venture Finance Research Project, Working Paper No.12*, University of Southampton and Ulster Business School.
- Barney, J.B., Busenitz, L.W., Fiet, J.O., and Moesel, D. (1994) Determinants of a new venture team's receptivity to advice from venture capitalists, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Barry, C.B., Muscarella, C.J., Peavy, J.W.,III, and Vetsuypens, M.R. (1990) The role of venture capital in the creation of public companies, *Journal of Financial Economics*, 27: 447-471.
- Bates, T. (1990) Entrepreneur, human capital inputs and small business longevity, *Review of Economics and Statistics*, 72, 551-559; cited in Westead, P., Storey, D.J., and Cowling, M. (1993) *An explanatory analysis of the factors associated with the survival of independent high-technology firms in Great Britain*, Working Paper No. 21, Warwick Business School.
- Baty, G.B. (1964) *The initial financing of the new research-based enterprise in New England*, Federal Reserve Bank of Boston, Boston, Mass., cited in Wetzel, W.E. (1986b) Informal risk capital: knowns and unknowns, chapter 4 in Sexton, D.L., and Smilor, R.W. (eds.) (1986) *The art and science of entrepreneurship*, Cambridge, MA: Ballinger Publishing Co.
- Baty, G.B. (1991) *Entrepreneurship for the 1990s*, Englewood Cliffs, NJ: Prentice-Hall.
- Benjamin, G.A., and Margulis, J. (1996) *Finding your wings: how to locate private investors to fund your venture*, New York: John Wiley & Sons, Inc.
- Bereford, P. (1991) The Sunday Times book of the rich, London: Penguin; cited in Mason, C.M., and Harrison, R.T. (1993a) Strategies for expanding the informal venture capital market, *International Small Business Journal*, 11(4), 23-38.
- Berglof, E. (1994) A control theory of venture capital finance, *The Journal of Law, Economics, & Organisation*, 10(2).
- Berle, A.A., and Means, G.C. (1932) *The modern corporation and private property*, New York: Macmillan.

- Bester, H. (1985) Screening vs. rationing in credit markets with imperfect information, *The American Economic Review*, 75(4).
- Bewley, T.F. (ed) (1987) *Advances in Economic Theory, Fifth World Congress*, Cambridge University Press.
- Bhattacharya, S., and Thakor, A.V. (1993) Contemporary banking theory, *Journal of Financial Intermediation*, 3, 2-50.
- Bhide, A. (1992) Bootstrap finance: the art of start-ups, *Harvard Business Review*, November-December.
- Bhide, A. (1994) Deficient Governance, *Harvard Business Review*, November-December.
- Binks, M.R. (1991) Small businesses and their banks in the year 2000, in Stanworth, J., and Gray, C. (eds) *Bolton Twenty Years on: The Small Firm in the 1990s*; London: Paul Chapman; cited in Harrison, R.T., and Mason, C.M. (1996a) Developments in the promotion of informal venture capital in the UK, *International Journal of Entrepreneurial Behaviour & Research*, 2(2) 6-33.
- Binks, M.R., and Ennew, C.T. (1997) *Assessing the importance of the relationship between banks and their small business customers*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Binks, M.R., Ennew, C.T., and Reed, G.V. (1992) Information asymmetries and the provision of finance to small firms, *International Small Business Journal*, 11(1), 35-46.
- Birch, D., Haggerty, A., Parsons, W., and Rossel, C. (1993) *Entrepreneurial hot spots*, Boston: Cognetics; cited in Freear, J., Sohl, J.E., and Wetzel, W.E. (1995b) Angels: personal investors in the venture capital market, *Entrepreneurship & Regional Development*, (7)85-94.
- Bolton, P., and Whinston, M.D. (1993) Incomplete contracts, vertical integration, and supply assurance, *Review of Economic Studies*, 60:121-148.
- Bowden, A. (1994) Who wants to be a millionaire?, *Investors Chronicle*, 24 June; cited in Mason, C.M., and Harrison, R.T. (1996a) The UK clearing banks and the informal venture capital market, *International Journal of Bank Marketing*, 14(1), 5-14.
- British Venture Capital Association (BVCA) (1993) *The sensor*, No.2, London: BVCA; cited in Mason, C.M., and Harrison, R.T. (1995) Informal venture capital and the financing of small and medium-sized enterprises, *The Journal of SEAAZ*, (3) Nos 1 and 2, 33-56.

- British Venture Capital Association (BVCA) (1994) Report on investment activity 1993, London: BVCA; cited in Murray, G.C. (1995b) *A synthesis of six European case studies of successfully - exited, venture capital financed, new technology based firms*, Warwick Business School: working paper (submitted to Entrepreneurship Theory and Practice).
- British Venture Capital Association (BVCA) (1995) Report on investment activity, BVCA: London; cited in Bank of England (1996) *The financing of technology-based small firms*, October; downloaded from the internet.
- Brophy, D.J. (1992) Financing the new venture: a report of recent research, chapter 15 in Sexton, D.L., and Kasarda, J.D. (1992) *The state of the art of entrepreneurship*, Boston: PWS-Kent Publishing Company.
- Brophy, D.J., and Shulman, J.M. (1992) A finance perspective on entrepreneurship research, *Entrepreneurship, Theory and Practice*, spring.
- Bruno, A.V. (1986) A structural analysis of the venture capital industry, in Sexton, D.L., and Smilor, R.W. (eds.) (1986) *The art and science of entrepreneurship*, Cambridge, MA: Ballinger Publishing Co.
- Bruno, A.V., and Tyebjee, T.T. (1985) The entrepreneur's search for capital, *Journal of Business Venturing*, 1, 64-74.
- Bruton, G., Fried, V., and Hisrich, R. (1994) CEO dismissal and the role of the venture capitalist, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Bryman, A. (1989) *Research methods and organization studies*, London: Routledge.
- Bryman, A., and Cramer, D. (1990) *Quantitative data analysis for social scientists*, London: Routledge.
- Buckland, R., and Davis, E.W. (eds.) (1995) *Finance for growing enterprises*, London: Routledge.
- Bull, I., and Thomas, H. (1993) Editor's note: a perspective on theory building in entrepreneurship, *Journal of Business Venturing*, 8, 181-182.
- Burrell, G., and Morgan, G. (1979) *Sociological paradigms in organisational analysis*, London: Heinemann.
- Busenitz, L.W., Moesel, D.D., and Fiet, J.O. (1997) *The impact of post-funding involvement by venture capitalists on long-term performance outcomes*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Bygrave, W.D. (1989) The entrepreneurship paradigm (I): a philosophical look at its research methodologies, *Entrepreneurship, Theory and Practice*, Fall.

- Bygrave, W.D., and Shulman, J.M. (1988) Capital gains tax: bane or boom for venture capitalists, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Bygrave, W.D., and Timmons, J.A. (1986) Networking among venture capital firms, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Bygrave, W.D., and Timmons, J.A. (1992) *Venture capital at the crossroads*, Boston: Harvard Business School Press.
- Cable, D.M., and Shane, S. (1997) A prisoner's dilemma approach to entrepreneur-venture capitalist relationships, *Academy of Management Review*, 22(1), 14-176.
- Carter, N.M., Williams, M., and Reynolds, P.D. (1997) Discontinuance among new firms in retail: the influence of initial resources, strategy, and gender, *Journal of Business Venturing*, 12, 125-145.
- Carter, R.B., and Van Auken, H.E. (1994) Venture capital firms' preferences for projects in particular stages of development, *Journal of Small Business Management*, January.
- Cary, L. (1989) *The venture capital guide to venture capital in the UK*, 4th edition, London: Pitman.
- Cary, L. (1995) *The venture capital report guide to venture capital in the UK & Europe*, seventh edition, Henley on Thames: Venture Capital Report Ltd.
- Clegg, C., Kemp, N., and Legge, K. (eds) (1985) *Case studies in organisational behaviour*, London: Harper and Row.
- Conlin, E. (1989) Adventure Capital, *INC.*, September.
- Coveney, P. (1994) *Informal investment in Britain: An examination of the behaviours, characteristics, motives and preferences of British Business Angels*, Oxford University: unpublished Masters thesis.
- Coveney, P. (1996) *Informal investment in Britain: An examination of the investment activity, characteristics and preferences of British Business Angels*, Oxford University: unpublished Doctoral thesis.
- Coveney, P., and Moore, K. (1997) *Untapping the potential of British angels*, forthcoming, London: John Wiley & Sons.
- Daly, M., Campbell, M., Robson, G., and Gallacher, C. (1991) *Job-creation 1987-89: the contributions of small and large firms*, *Employment Gazette*, November, 589-94; cited in Deakins (1996).
- de Meza, D., and Webb, D. (1995) Entrepreneurial wealth, the level of investment and credit policy, *LSE Financial Markets Group, Discussion Paper No.228*.

- Deakins, D. (1996) *Entrepreneurship and small firms*, London: McGraw-Hill.
- Dean, B.V., and Giglierno, J.J. (1990) Multistage financing of technical start-up companies in Silicon Valley, *Journal of Business Venturing*, 5:375-389.
- Dennis, W.J., Jr. (1997) More than you think: an inclusive estimate of business entries, *Journal of Business Venturing*, 12, 175-196.
- Diamond, D.W. (1984) Financial intermediation and delegated monitoring, *Review of Economic Studies*, 51:393-414.
- Dixon, R. (1991) Venture capitalist and the appraisal of investments, *Omega*, 333-344.
- Dorsey, T. (1979) *Operating guidelines for effective venture capital fund management*, Austin: University of Texas; cited in Zacharakis, A.L., and Meyer, G.D. (1995) The venture capitalist decision: understanding process versus outcome, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Drake, T. (1995) An investor's check list, *Venture Capital Report*, October.
- Duggins, R. (1993) Strategic analysis of the venture capital industry, *Venture Capital Report*, April.
- Duxbury, L., Haines, G., and Riding, A. (1996) A personality profile of Canadian informal investors, *Journal of Small Business Management*, 34(2)44-55.
- Eglin, R. (1994) Small businesses that are too big and important to ignore, *Management Today*, March.
- Ehrlich, S.B., Noble, A.F., Moore, T., and Weaver, R.R. (1994) After the cash arrives: a comparative study of venture capital firms and private investor involvement in entrepreneurial firms, *Journal of Business Venturing*, 9, 67-82.
- Eisenhardt, K.M. (1989) Agency theory: an assessment and review, *Academy of Management Review*, 14, 1, 57-74.
- Emory, C.W. (1976) *Business research methods*, Illinois: Richard D. Irwin, Inc.
- European Venture Capital Association (EVCA) (1994) EVCA '94 yearbook, London: KPMG; cited in Murray, G.C. (1995b) *A synthesis of six European case studies of successfully - exited, venture capital financed, new technology based firms*, working paper, Warwick Business School (submitted to Entrepreneurship Theory and Practice).
- Fabowale, L., Orser, B., and Riding, A. (1995) Gender, structural factors, and credit terms between Canadian small businesses and financial institutions, *Entrepreneurship, Theory and Practice*, Summer.

- Fama, E., and Jensen, M.C. (1983) Separation of ownership and control, *Journal of Law & Economics*, 26.
- Fiet, J.O. (1991) Network reliance by venture capital firms: an empirical and theoretical test, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Fiet, J.O. (1995a) Reliance upon informants in the venture capital industry, *Journal of Business Venturing*, 10, 195-223.
- Fiet, J.O. (1995b) Risk avoidance strategies in venture capital markets, *Journal of Management Studies*, 32,4, 551-574.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1990) Raising venture capital: entrepreneurs' view of the process, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1991) Raising venture capital to finance growth, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1992a) The investment attitudes, behavior and characteristics of high net worth individuals, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1992b) *The truth about angels more than a myth*, working paper, Center for Venture Research, University of New Hampshire.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1993) Summary: Angel profiles: a longitudinal study, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1994a) Angels and non-angels: are there differences?, *Journal of Business Venturing*, 9, 109-123.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1994b) The private investor market for venture capital, *The Financier: ACMT*, 1(2), 7-15.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1995a) Who bankrolls software entrepreneurs, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1995b) Angels: personal investors in the venture capital market, *Entrepreneurship & Regional Development*, (7)85-94.
- Freear, J., Sohl, J.E., and Wetzel, W.E. (1996) *The informal venture capital market: milestones passed and the road ahead*, paper presented at the 4th State of the Art in Entrepreneurship Research Conference, May 9-11.
- Freear, J., and Wetzel, W.E. (1988) Equity financing for new technology-based firms, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.

- Freear, J., and Wetzel, W.E. (1989) Equity capital for entrepreneurs, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Freear, J., and Wetzel, W.E. (1990) Who bankrolls high-tech entrepreneurs?, *Journal of Business Venturing*, 5, 77-89.
- Freear, J., and Wetzel, W.E. (1991) *The informal venture capital market in the year 2000*, paper presented at the Third Annual International Research Symposium on Small Business Research, Florida State University, April 24-26, 1991.
- Freear, J., and Wetzel, W.E. (1992) The informal venture capital market in the 1990s, chapter 18 in Sexton, D.L., and Kasarda, J.D. (1992) *The state of the art of entrepreneurship*, Boston: PWS-Kent Publishing Company.
- Fried, V.H., and Hisrich, R.D. (1989) Venture capital from the investors' perspective, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Gallagher, C., and Miller, P. (1991) New fast growing companies create jobs, *Long Range Planning*, vol. 24, no. 1; cited in Deakins, D. (1996) *Entrepreneurship and small firms*, London: McGraw-Hill.
- Gapper, J. (1993) Lessons of the '80s spark policy review, *Financial Times*, 27 February, p.5; cited in Harrison, R.T., and Mason, C.M. (1996a) Developments in the promotion of informal venture capital in the UK, *International Journal of Entrepreneurial Behaviour & Research*, 2(2) 6-33.
- Gaston, R.J. (1989) Finding private venture capital for your firm: a complete guide, New York: Wiley & Sons; cited in Mason, C.M., and Harrison, R.T. (1990) Informal risk capital: a review and research agenda, *Venture Finance Research Project, Working Paper No. 1*, December 1990.
- Gaston, R.J. & Bell, S.E (1988) The informal supply of capital, Washington D.C: Office of Economic Research, U.S. Small Business Administration; cited in Freear, J., and Wetzel, W.E. (1991) *The informal venture capital market in the year 2000*, paper presented at the Third Annual International Research Symposium on Small Business Research, Florida State University, April 24-26, 1991.
- Gay, K. (1996) Alternative funding, *Black Enterprise*, 26(12).
- Gill, J., and Johnson, P. (1991) *Research methods for managers*, London: Paul Chapman Publishing Ltd.
- Glaser, B.G., and Strauss, A.L. (1967) *The discovery of grounded theory: strategies for qualitative research*, New York: Aldine Publishing Company.
- Gompers, P.A. (1996) Grandstanding in the venture capital industry, *Journal of Financial Economics*, 42(1), 133-156.

- Gorman, M., and Sahlman, W.A. (1989) What do venture capitalists do?, *Journal of Business Venturing*, 4, 231-248.
- Government of Ontario (1990) The state of small business; cited in Harrison, R.T., and Mason, C.M. (1992a) The roles of investors in entrepreneurial companies: a comparison of informal investors and venture capitalists, *Venture Finance Research Project, Working Paper No.5*, University of Southampton and Ulster Business School.
- Green, M.B. (ed.) (1991) *Venture capital: international comparisons*, London: Routledge.
- Gujarati, D.N. (1995) *Basic econometrics*, London: McGraw Hill.
- Gupta, A.K., and Sapienza, H.J. (1988) The pursuit of diversity by venture capital firms: antecedents and implications, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Haar, N.E., Starr, J., and MacMillan, I.C., (1988) Informal risk capital investors: investment patterns on the east coast of the U.S.A., *Journal of Business Venturing*, 3:11-29.
- Hakim, C. (1987) *Research design: strategies and choices in the design of social research*, New York: Routledge.
- Hale, D. (1992) For new jobs, help small business, *The Wall Street Journal*, 10 August, 1992, B10; cited in Freear, J., Sohl, J.E., and Wetzel, W.E. (1995b) Angels: personal investors in the venture capital market, *Entrepreneurship & Regional Development*, (7)85-94.
- Hall, P. (1988) *Investment evaluation in UK venture capital funds: the appraisal of risk and return*, unpublished MBA thesis, City College, London.
- Hall, J., and Hofer, C.W. (1993) Venture capitalists' decision criteria in new venture evaluation, *Journal of Business Venturing*, 8, 25-41.
- Hamilton Fazey, I. (1986) The regions: pioneer funds may herald expansion, *Financial Times*, venture capital survey, 30 November; cited in Mason, C.M., and Harrison, R.T. (1991) Venture capital, the equity gap and the 'north-south' divide in the United Kingdom, chapter 8 in Green, M.B. (ed.) (1991) *Venture capital: international comparisons*, London: Routledge.
- Harper, D.A. (1996) *Entrepreneurship and the market process: an enquiry into the growth of knowledge*, London: Routledge.
- Harrison, R.T., and Mason, C.M. (1991a) Informal venture capital in the UK and the USA: a comparison of investor characteristics and decision-making, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.

- Harrison, R.T., and Mason, C.M. (1991b) Informal investment networks: a case study from the United Kingdom, *Entrepreneurship & Regional Development*, 269-279.
- Harrison, R.T., and Mason, C.M. (1992a) The roles of investors in entrepreneurial companies: a comparison of informal investors and venture capitalists, *Venture Finance Research Project, Working Paper No.5*, University of Southampton and Ulster Business School.
- Harrison, R.T., and Mason, C.M. (1992b) International perspectives on the supply of informal venture capital, *Journal of Business Venturing*, 7, 459-475.
- Harrison, R.T., and Mason, C.M. (1996a) Developments in the promotion of informal venture capital in the UK, *International Journal of Entrepreneurial Behaviour & Research*, 2(2) 6-33.
- Harrison, R.T., and Mason, C.M. (1996b) *Informal venture capital: evaluating the impact of business introduction services*, London: Woodhead-Faulkner Ltd.
- Hart, O. (1995a) *Firms, contracts, and financial structures*, Oxford: Oxford University Press.
- Hart, O. (1995b) Corporate governance: some theory and implications, *The Economic Journal*, 105, 678-689.
- Hart, O., and Holmstrom, B. (1987) The theory of contracts, Chapter 3 in Bewley, T.F. (ed) (1987) *Advances in Economic Theory, Fifth World Congress*, Cambridge University Press.
- Hart, O., and Moore, J. (1988) Incomplete contracts and renegotiation, *Econometrica*, 56(4):755-785.
- Hart, O., and Moore, J. (1990) Property rights and the nature of the firm, *Journal of Political Economy*, 98(6).
- Hay, D., and Morris, D.J. (1984) *Unquoted companies: their contribution to the United Kingdom economy*, London: Macmillan Press Ltd.
- Hisrich, R.D. (ed.) (1986) *Entrepreneurship, intrapreneurship, and venture capital*, Homewood, IL: Irwin.
- Hisrich, R.D., and Jankowicz, A.D. (1990) Intuition in venture capital decisions: an exploratory study using a new technique, *Journal of Business Venturing*, 5, 49-62.
- Hisrich, R.D., and O'Kinneide, B. (1989) Summary: The entrepreneur and the angel: an exploratory cross cultural study, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.

- Hofer, C.W., and Bygrave, W.D. (1992) *Researching entrepreneurship, Entrepreneurship, Theory and Practice*, Spring.
- Hoffman, C.A. (1972) *The venture capital investment process: a particular aspect of regional economic development*, Ph.D. dissertation, the University of Texas at Austin; cited in Wetzal, W.E. (1986b) Informal risk capital: knowns and unknowns, chapter 4 in Sexton, D.L., and Smilor, R.W. (eds.) (1986) *The art and science of entrepreneurship*, Cambridge, MA: Ballinger Publishing Co.
- Huey, J. (1994) Working up to the new economy, *Fortune*, 27 June, 1994; cited in Freear, J., Sohl, J.E., and Wetzal, W.E. (1995b) Angels: personal investors in the venture capital market, *Entrepreneurship & Regional Development*, (7)85-94.
- Huntsman, B., and Hoban, J.P. (1980) Investment in new enterprise: some empirical observations on risk, return, and market structure, *Financial Management*, Summer, 44-51; cited in Murray, G.C. (1995b) *A synthesis of six European case studies of successfully - exited, venture capital financed, new technology based firms*, working paper, Warwick Business School (submitted to *Entrepreneurship Theory and Practice*).
- International Herald Tribune (1997) Monday, March 10, p.3
- Jacobson, G. (1996) Early-stage IPOs: companies are going public without products or revenues, *Success*, August.
- Jensen, M.C. (1993) The modern industrial revolution, exit, and the failure of internal control systems, *The Journal of Finance*, July.
- Jensen, M.C., and Meckling, W.H. (1976) Theory of the firm: managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3, 305-360.
- Kanellos, M. (1996) Finding venture capital is no easy road, *Computer Reseller News*, 702, 145-146.
- Kaplan, R.S., and Atkinson, A.A. (1989) *Advanced management accounting*, Englewood Cliffs, NJ: Prentice-Hall; cited in Landstrom, H. (1992) The relationship between private investors and small firms: an agency theory approach, *Entrepreneurship & Regional Development*, 4, 199-223.
- Keeble, D.E., and Wever, E. (eds.) (1986) *New firms and regional development in Europe*, Beckenham, Kent: Croom Helm, cited in Martin, R. (1989) The growth and geographical anatomy of venture capitalism in the United Kingdom, *Regional Studies*, 25(5), 389-403.
- Keeley, R.H., and Knapp, R.W. (1993) *New company evolution: a comparison of large and small start-ups*, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.

- Keeley, R.H., and Knapp, R.W. (1994) Founding conditions and business performance: 'high performers' vs. small vs. venture capital-backed start-ups, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Keeley, R.H., Roure, J.B., and Loo, R. (1991) New ventures which obtain funding and those which do not: what's the difference?, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Keeley, R.H., and Turki, L.A. (1992) New ventures: how risky are they?, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Kelly, P., and Hay, M. (1996) *Serial investors: an exploratory study*, working paper, London Business School.
- Kent, C.A., Sexton, D.L., and Vesper, K.H. (eds) *Encyclopaedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice-Hall, Inc.
- King, R.G., and Levine, R. (1993) Financial intermediation and economic development, Chapter 6 in Mayer, C., and Vives, X. (eds) (1993) *Capital markets and financial intermediation*, Cambridge: Cambridge University Press.
- Klofsten, M., and Olofsen, C. (1985) Bast med ven-capsatningen, Affarsvalden, nr 39; cited in Landstrom, H. (1990) Co-operation between venture capital companies and small firms, *Entrepreneurship & Regional Development*, 2, 345-362.
- Knight, R.M. (1992) Summary: Criteria used by venture capitalists: a cross cultural analysis, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Kozmetsky, G., Gill, M., and Smilor, R. (1985) Financing and managing fast growth companies: the venture capital process, New York: Lexington Books; cited in Coveney, P. (1996) *Informal investment in Britain: An examination of the investment activity, characteristics and preferences of British Business Angels*, Oxford University: unpublished Doctoral thesis.
- KPMG Management Consulting (1992) *Investment networking*, Glasgow: Scottish Enterprise.
- Krasner, O.J., and Tymes, E.R. (1983) Informal risk capital in California, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Landstrom, H. (1990) Co-operation between venture capital companies and small firms, *Entrepreneurship & Regional Development*, 2, 345-362.
- Landstrom, H. (1992) The relationship between private investors and small firms: an agency theory approach, *Entrepreneurship & Regional Development*, 4, 199-223.
- Landstrom, H. (1993) Informal risk capital in Sweden and some international comparisons, *Journal of Business Venturing*, 8, 525-540.

- Landstrom, H. (1995) A pilot study of the investment decision-making behavior of informal investors in Sweden, *Journal of Small Business Management*, July.
- Landstrom, H., and Winborg, J. (1995) Small business managers' attitudes towards and use of financial sources, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Leland, H.E., and Pyle, D.H. (1977) Informational asymmetries, financial structure, and financial intermediation, *The Journal of Finance*, 22(2).
- Lloyd (1989) Still breaking records, *Banking World*, January: 30-31; cited in Duggins, R. (1993) Strategic analysis of the venture capital industry, *Venture Capital Report*, April.
- Long, K.M., and Manstead, A.S. (1997) Group immersion and intergroup differentiation: contextual shifts in categorization, *British Journal of Social Psychology*, 36, 291-303.
- Lonsdale, C. (1996) Government and the UK equity gap: the need for a policy overhaul, *Venture Capital Report*, March
- Lorenz, E. (1988) Neither friends nor strangers: informal networks of subcontracting in French industry, in Gambretta, E. (ed.) *Trust: the making and breaking of cooperative relations*, Oxford: Basil Blackwell; cited in Mason, C.M., and Harrison, R.T. (1991) Venture capital, the equity gap and the 'north-south' divide in the United Kingdom, chapter 8 in Green, M.B. (ed.) (1991) *Venture capital: international comparisons*, London: Routledge.
- Lumme, A., Mason, C., Suomi, M. (1996) The returns from informal venture capital investments: some evidence from Finland, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- MacDonald, M. (1991) *Creating threshold technology companies in Canada: the role for venture capital*, Ottawa: Science Council of Canada; cited in Mason & Harrison (1995).
- MacMillan, I.C., Kulow, D.M., and Khoylian, R. (1988) Venture capitalists' involvement in their investments: extent and performance, *Journal of Business Venturing*, 4, 27-47.
- MacMillan, I.C., Zemann, L., and Subbanarasimha, P.N. (1987) Criteria distinguishing successful from unsuccessful ventures in the venture screening process, *Journal of Business Venturing*, 2, 123-137.
- MacMillan, I.C., Siegel, R., and Subbanarasimha, P.N. (1985) Criteria used by venture capitalists to evaluate new venture proposals, *Journal of Business Venturing*, 1, 119-128.

- Manigart, S., Wright, M., Desbrieres, P., Robbie, K., Sapienza, H., and De Waele, K. (1997) *Venture capitalists, rates of return and valuation: a comparative study of the US, UK, France, Belgium and Holland*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Martin, R. (1989) The growth and geographical anatomy of venture capitalism in the United Kingdom, *Regional Studies*, 25(5), 389-403.
- Mason, C.M. (1993) *Informal investment in the UK; knowns and unknowns*, presentation to a Department of Trade and Industry Informal Investment Seminar, 18 October.
- Mason, C.M. (1996a) Informal venture capital: is policy running ahead of knowledge?, *International Journal of Entrepreneurial Behaviour & Research*, 2(1): 4-14.
- Mason, C.M. (1996b) (ed.) *International Informal Venture Capital Research Newsletter*, Number 4, Summer.
- Mason, C.M., and Harrison, R.T. (1990) Informal risk capital: a review and research agenda, *Venture Finance Research Project, Working Paper No. 1*, December 1990.
- Mason, C.M., and Harrison, R.T. (1991) Venture capital, the equity gap and the 'north-south' divide in the United Kingdom, chapter 8 in Green, M.B. (ed.) (1991) *Venture capital: international comparisons*, London: Routledge.
- Mason, C.M., and Harrison, R.T. (1992) The supply of equity finance in the UK: a strategy for closing the equity gap, *Entrepreneurship & Regional Development*, 4: 357-380.
- Mason, C.M., and Harrison, R.T. (1993a) Strategies for expanding the informal venture capital market, *International Small Business Journal*, 11(4), 23-38.
- Mason, C.M., and Harrison, R.T. (1993b) Promoting informal venture capital: an evaluation of a British initiative, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Mason, C.M., and Harrison, R.T. (1994) Why business angels say no: a case study of opportunities rejected by an informal investor syndicate, *Venture Finance Research Project, Working Paper No.7*, University of Southampton and Ulster Business School.
- Mason, C.M., and Harrison, R.T. (1995) Informal venture capital and the financing of small and medium-sized enterprises, *The Journal of SEANZ*, (3) Nos 1 and 2, 33-56.
- Mason, C.M., and Harrison, R.T. (1996a) The UK clearing banks and the informal venture capital market, *International Journal of Bank Marketing*, 14(1), 5-14.

- Mason, C.M., and Harrison, R.T. (1996b) Informal venture capital: a study of the investment process, the post-investment experience and investment performance, *Entrepreneurship & Regional Development*, 8, 105-125.
- Mason, C.M., and Harrison, R.T. (1997) Business angels in the UK: a response to Stevenson & Coveney, *International Small Business Journal*, Jan/March, downloaded from the internet.
- Mason, C.M., Harrison, R.T., and Allen, P. (1995) Informal venture capital: a study of the investment process, the post-investment experience and investment performance, *Venture Finance Research Project, Working Paper No.12*, University of Southampton and Ulster Business School.
- Mason, C.M., Harrison, R.T., and Chaloner, J. (1991a) Informal risk capital in the UK: a study of investor characteristics, investment preferences and investment decision-making, *Venture Finance Research Project, Working Paper No. 2*, University of Southampton and Ulster Business School.
- Mason, C.M., Harrison, R.T., and Chaloner, J. (1991b) *The operation and effectiveness of LINC: part 1, a survey of investors*, Urban Policy Research Unit, working paper, University of Southampton
- Mason, C.M., Muzyka, D., Hay, M., Harrison, R., Landstrom, H., and Lumme, A. (1994) The perception of opportunity by European venture 'angels', *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Mason, C.M., and Sackett, N. (1996) *BVCA: Report on business angel investment activity 1995/6*, London: British Venture Capital Association.
- Mason, C.M., and Rogers, A. (1996) *Understanding the business angel's investment decision*, Venture Finance Research Project, Working Paper No.14, University of Southampton and Ulster Business School.
- Mayer, C. (1986) The assessment. Financial innovation: curse or blessing?, *Oxford Review of Economic Policy*, 2, 4.
- Mayer, C., and Vives, X. (eds) (1993) *Capital markets and financial intermediation*, Cambridge: Cambridge University Press.
- Mayfield, W.M., Hynes, B., and O'Cinneide, B. (1997) *Celtic cousins: insights into small business maturation in Scotland and Ireland*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- McDonald Wood, I. (1985) Venture capital: a guideline for the smaller firm, *Accountancy*, July.

- McInerney, F.E. (1994) *The future of U.K. small businesses: a view from the bridge*, MC Management & Communications Limited, Middlesex, UK.
- McRae, M.B. (1994) Influence of sexual stereotypes on personnel decisions of black managers, *Journal of Applied Psychology*, 79(2)306-369.
- Mitchell, J.E. (1980) Small firms: a critique, *Three Banks Review*.
- Moore, B. (1993) Financial constraints to the growth and development of small, high-technology firms, Small Business Research Centre, Cambridge; cited in Murray, G.C. (1994) The second 'equity gap': exit problems for seed and early stage venture capitalists and their investee companies, *International Small Business Journal*, 12(4):59-76.
- Moore, B. (1994) Financial constraints to the growth and development of small high-technology firms, Chapter 4 in Hughes, A., and Storey, D.J. (eds) (1994) *Finance and the Small Firm*, London: Routledge.
- Moore, B., and Segaghat, N. (1992) *Factors constraining the growth of small high-technology companies: a case study of the Cambridge sub-region*, Working Paper No. 21, Small Business Research Centre, University of Cambridge.
- Mowday, R.T., and Steers, R.M. (1979) *Research in organizations: issues and controversies*, Santa Monica, CA: Goodyear Publishing Company, Inc.
- Murray, G.C. (1991) Change and maturity in the UK venture capital industry, 1991-95; London: BVCA; cited in Duggins, R. (1993) Strategic analysis of the venture capital industry, *Venture Capital Report*, April.
- Murray, G.C. (1992) An evaluation of the first three years of the European Seed Capital Fund (ESCF) initiative, paper presented to a conference on studies in the new Europe, University of Nottingham; cited in Mason, C.M., and Harrison, R.T. (1992) The supply of equity finance in the UK: a strategy for closing the equity gap, *Entrepreneurship & Regional Development*, 4: 357-380.
- Murray, G.C. (1994) The second 'equity gap': exit problems for seed and early stage venture capitalists and their investee companies, *International Small Business Journal*, 12(4):59-76.
- Murray, G.C. (1995a) Evolution and change: an analysis of the first decade of the UK venture capital industry, *Journal of Business Finance & Accounting*, 22(8).
- Murray, G.C. (1995b) *A synthesis of six European case studies of successfully - exited, venture capital financed, new technology based firms*, working paper, Warwick Business School (submitted to Entrepreneurship Theory and Practice).

- Murray, G.C. (1995c) Third-party equity - the role of the UK venture capital industry, Chapter 6 in Buckland, R., and Davis, E.W. (eds.) (1995) *Finance for growing enterprises*, London: Routledge.
- Murray, G.C., and Lott, J. (1992) Summary: Have UK venture capital firms a bias against investment in technology-related companies, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Muzyka, D., Birley, S., LeLeux, B., Rossell, G., and Bendixen, F. (1993) Financial structure and decisions of venture capital firms: a pan-european study, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Muzyka, D., Birley, S., and LeLeux, B. (1995) *Trade-offs in the investment decisions of European venture capitalists*, working paper, London: Imperial College.
- Myers, S. (1984) The capital structure puzzle, *Journal of Finance*, 39: 572-592; cited in Mason, C.M., and Harrison, R.T. (1995) Informal venture capital and the financing of small and medium-sized enterprises, *The Journal of SEAAANZ*, (3) Nos 1 and 2, 33-56.
- Myers, S.C., and Majluf, N.S. (1984) Corporate financing and investment decisions when firms have information that investors do not have, *Journal of Financial Economics*, 13:187-221.
- Neiswander, D.K. (1985) Informal seed stage investors, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Norton, E. (1995) Venture capital as an alternative means to allocate capital: an agency-theoretic view, *Entrepreneurship Theory and Practice*, Winter.
- Norton, E., and Tennebaum, B.H. (1992) Factors affecting the structure of U.S. venture capital deals, *Journal of Small Business Management*, July.
- Norton, E., and Tennebaum, B.H. (1993) The effects of venture capitalists' characteristics on the structure of the venture capital deal, *Journal of Small Business Management*, October.
- Norusis, M.J. (1994) *SPSS Advanced statistics 6.1*, Chicago: SPSS Inc.
- Oakey, R. (1984) *High technology small firms*, London: Francis Pinter.
- Ou, C. (1987) Holdings of privately-held business assets by American families: findings from the 1983 Consumer Finance Survey, Washington D.C.: unpublished manuscript, Office of Economic Research, U.S. Small Business Administration; cited in Freear, J., and Wetzel, W.E. (1991) *The informal venture capital market in the year 2000*, paper presented at the Third Annual International Research Symposium on Small Business Research, Florida State University, April 24-26, 1991.

- Ouchi, W. (1977) The relationship between organizational structure and organizational control, *Administrative Science Quarterly*, 22: 95-113; cited in Landstrom, H. (1992) The relationship between private investors and small firms: an agency theory approach, *Entrepreneurship & Regional Development*, 4, 199-223.
- Pace, R. (1939) Factors influencing questionnaire returns from former university students, *Journal of Applied Psychology*, 23, 388-397; cited in Coveney, P. (1996) *Informal investment in Britain: An examination of the investment activity, characteristics and preferences of British Business Angels*, Oxford University: unpublished Doctoral thesis.
- Parker, M., and McHugh, G. (1991) Five texts in search of an author: a response to John Hassard's 'multiple paradigms and organizational analysis', *Organization Studies*, 12(3):450-456.
- Pence, C.C. (1982) *How venture capitalists make investment decisions*, Michigan: UMI Research Press.
- Pettit, R.R., and Singer, R.F. (1985) Small business finance: a research agenda, *Financial Management*, 14(3), 47-59.
- Poindexter, J.B. (1976) The efficiency of financial markets: the venture capital case, unpublished doctoral dissertation, New York University; cited in Tyebjee, T.T., and Bruno, A.V. (1984) A model of venture capitalist investment activity, *Management Science*, 30(9).
- Porter, M.E. (1980) *Competitive strategy*, New York: Free Press.
- Postma, P.D., and Sullivan, M.K. (1990) Informal risk capital in the Knoxville Region, unpublished report, The University of Tennessee; cited in Mason, C.M., and Harrison, R.T. (1995) Informal venture capital and the financing of small and medium-sized enterprises, *The Journal of SEAANZ*, (3) Nos 1 and 2, 33-56.
- Pratt, G. (1990) Venture capital in the United Kingdom, *Bank of England Quarterly Review* 30: 78-83; cited in Mason, C.M., and Harrison, R.T. (1991) Venture capital, the equity gap and the 'north-south' divide in the United Kingdom, chapter 8 in Green, M.B. (ed.) (1991) *Venture capital: international comparisons*, London: Routledge.
- Ravid, A., and Spiegel, M. (1997) Optimal financial contracts for a start-up with unlimited operating discretion, *Journal of Finance & Quantitative Analysis*, 32(3):269-286.
- Rea, R.H. (1989) Factors affecting success and failure of seed capital/start-up negotiations, *Journal of Business Venturing*, 4, 149-158.

- Reid, G.C. (1996) Fast growing small entrepreneurial firms and their venture capital backers: an applied principal-agent analysis, *Small Business Economics*, 8(3), 235-248.
- Riding, A., and Short, D. (1987) On the estimation of the investment potential of informal investors: a capture-recapture approach, *Journal of Small Business and Entrepreneurship*, 5(4):26-40; cited in Mason, C.M., and Harrison, R.T. (1993a) Strategies for expanding the informal venture capital market, *International Small Business Journal*, 11(4), 23-38.
- Riding, A., Dal Cin, P., Druxbury, L., Haines, G., and Safrata, R. (1993) *Informal investors in Canada: the identification of salient characteristics*, Ottawa: Carleton University; cited in Mason, C.M., and Rogers, A. (1996) *Understanding the business angel's investment decision*, Venture Finance Research Project, Working Paper No.14, University of Southampton and Ulster Business School.
- Rigby, M. (1997) What is the venture capital investor looking for in a prospective deal?, *Venture Capital Report*, March.
- Riquelme, H., and Rickards, T. (1992) Hybrid conjoint analysis: an estimation probe in new venture decisions, *Journal of Business Venturing*, 7, 505-518.
- Robbie, K., Wright, M., and Chiplin, B. (1997) *The monitoring of venture capital firms*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Roberts, E.B. (1991) *Entrepreneurs in high-technology: lessons from MIT and beyond*, New York: Oxford University Press.
- Robinson, R.B., Jr. (1987) Emerging strategies in the venture capital industry, *Journal of Business Venturing*, 2, 53-77.
- Robinson, K.C., and Hofer, C.W. (1997) *A methodological investigation of the validity and usefulness of parametric and nonparametric statistical data analysis techniques for new venture research*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Roll, R., and Ross, S. (1994) On the cross-sectional relationship between expected returns and betas, *Journal of Finance*, 49, 101-121.
- Rosenstein, J., Bruno, A.V., Bygrave, W.D., and Taylor, N.T. (1989) Do venture capitalists on boards of portfolio companies add value besides money?, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Rosenstein, J., Bruno, A.V., Bygrave, W.D., and Taylor, N.T. (1990) How much do CEOs value the advice of venture capitalists on their boards? *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.

- Rosenthal, R., and Rosnow, R. (1991) *Essentials of behavioral research: methods and data analysis*, New York: McGraw-Hill, Inc.
- Ross, S. (1974) On the economic theory of agency and the principle of similarity, Chapter 8 in Balch, M., McFadden, D., and Wu, S. (eds.) (1974) *Essays on economic behavior under uncertainty*, New York: Elsevier Publishing.
- Ross, S. (1977) The determination of financial structures: the incentive signalling approach, *Bell Journal of Economics*, 8:23-40.
- Ross, S. (1978) The current status of the capital asset pricing model, *Journal of Finance*, Papers and Proceedings.
- Rubenstein, A.H (1958) Problems of financing and managing new research-based enterprises in New England, Federal Reserve Bank of Boston, Boston, Mass; cited in Wetzell, W.E. (1986b) Informal risk capital: knowns and unknowns, chapter 4 in Sexton, D.L., and Smilor, R.W. (eds.) (1986) *The art and science of entrepreneurship*, Cambridge, MA: Ballinger Publishing Co.
- Ruhnka, J., Feldman, H., and Dean, T. (1992) The 'living dead' phenomenon in venture capital investments, *Journal of Business Venturing*, 7(2), 137-155.
- Sahlman, W.A. (1988) Aspects of financial contracting in venture capital, *Journal of Applied Corporate Finance*, 1(2), 23-36; cited in Norton, E. (1995) Venture capital as an alternative means to allocate capital: an agency-theoretic view, *Entrepreneurship Theory and Practice*, Winter 1995.
- Sahlman, W.A. (1990) The structure and governance of venture-capital organizations, *Journal of Financial Economics*, 27:473-521.
- Sahlman, W.A., and Stevenson, H.H. (1985) Capital market myopia, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Sandberg, W.R., Schweiger, D.M., and Hofer, C.W. (1987) Determining venture capitalists' decision criteria: the use of verbal protocols, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Sapienza, H.J. (1992) When do venture capitalists add value?, *Journal of Business Venturing*, 7, 9-29.
- Sapienza, H.J., and Korsgaard, M. (1996) The role of procedural justice in entrepreneur-venture capitalist capital relations, *Academy of Management Journal*, 39:544-574; cited Cable, D.M., and Shane, S. (1997) A prisoner's dilemma approach to entrepreneur-venture capitalist relationships, *Academy of Management Review*, 22(1), 14-176.
- Sapienza, H.J., and Timmons, J.A. (1989) The roles of venture capitalists in new ventures: what determines their importance? *Academy of Management Best Papers*

- Proceedings 74-78; cited in Sapienza, H.J. (1992) When do venture capitalists add value?, *Journal of Business Venturing*, 7, 9-29.
- Sapienza, H.J., Manigart, S., and Herron, L. (1992) Summary: Venture capitalist involvement in portfolio companies: a study of 221 portfolio companies in four countries, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Sapienza, H.J., Manigart, S., and Vermeir, W. (1996) Venture capitalist governance and value added in four countries, *Journal of Business Venturing*, 11, 439-469.
- Sappington, D.E. (1991) Incentives in principal-agent relationships, *Journal of Economic Perspectives*, 5(2):45-66.
- Schumpeter, J.A. (1951) *The theory of economic development*, Cambridge, MA: Harvard University Press; cited in Sullivan, M.K. (1991) Entrepreneurs as informal investors: are there distinguishing?, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Sexton, D.L., and Kasarda, J.D. (1992) *The state of the art of entrepreneurship*, Boston: PWS-Kent Publishing Company.
- Sexton, D.L., and Smilor, R.W. (eds.) (1986) *The art and science of entrepreneurship*, Cambridge, MA: Ballinger Publishing Co.
- Short, D.M., and Riding, A.L. (1989) Informal investors in the Ottawa-Carleton region: experiences and expectations, *Entrepreneurship & Regional Development*, (1)99-112.
- Singleton, C., Wilson, N., and Peel, M. (1997) *Banking relationships and financial constraints to growth: an empirical study of small businesses*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Smith, D. (1994) The financing gap that taxes the minds of ministers, *Management Today*, August.
- Smith, K.G., Ganon, M.J., and Sapienza, H.J. (1989) Selection methodologies for entrepreneurial research, *Journal of Entrepreneurship, Theory & Practice*, Fall.
- Spier, K.E. (1992) Incomplete contracts and signalling, *RAND Journal of Economics*, 23(3).
- Stanworth, J., Purdy, D., and Kirby, D. (1992) The management of success in 'growth corridor' small firms; cited in CBI (1993) Finance for growth: meeting the financing needs of small and medium enterprises, *A report of the Confederation of British Industry (CBI) Smaller Firms Council*.
- Steinberg, C. (1996) Friends or Foes? Forge a win-win relationship with venture capitalists, *Success*, October.

- Stevenson, H., and Coveney, P. (1994) Survey of business angels: fallacies corrected and six distinct types of angel, Henley-on-Thames: *Venture Capital Report Ltd.*
- Stevenson, H. (1997) *Britain's 100 fastest growing private companies*, Templeton College, Oxford: The Oxford Executive Research Briefings.
- Storey, D.J. (1980) Job generation and small firm policy in Britain, *Centre for Environmental Studies, Policy Series 11*, London.
- Storey, D.J. (1994) *Understanding the small business sector*, London: Routledge.
- Storey, D.J., and Westhead, P. (1995) *Financing technology-based firms in the United Kingdom*, Working Paper No.28, Warwick Business School.
- Sullivan, M.K. (1991) Entrepreneurs as informal investors: are there distinguishing?, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Sullivan, M.K., and Miller, A. (1990) Applying theory of finance to informal risk capital research: promise and problems, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Sweeting, R.C. (1991) UK venture capital funds and the funding of new technology-based businesses: process and relationships, *Journal of Management Studies*, 28(6).
- Tewksbury, J.G., Crandall, M.S., and Crane, W.E. (1980) Measuring the societal benefits of innovation, *Science*, 209, 8 August.
- Timmons, J.A. (1990) Planning and financing the new venture, Acton, MA: Brick House Publishing Co.; cited in Mason, C.M., and Harrison, R.T. (1996b) Informal venture capital: a study of the investment process, the post-investment experience and investment performance, *Entrepreneurship & Regional Development*, 8, 105-125.
- Timmons, J.A. (1994) New venture creation: entrepreneurship for the 21st century, Homewood IL: Irwin; cited in Zacharakis, A.L., and Meyer, G.D. (1995) The venture capitalist decision: understanding process versus outcome, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Timmons, J.A., and Bygrave, W.D. (1986) Venture capital's role in financing innovation for economic growth, *Journal of Business Venturing*, 1:161-176.
- Timmons, J.A., and Sapienza, H.J. (1992) Venture capital: the decade ahead, Chapter 16 in Sexton, D.L., and Kasarda, J.D. (1992) *The state of the art of entrepreneurship*, Boston: PWS-Kent Publishing Company.
- Townsend, R.M. (1979) Optimal contracts and competitive markets with costly state verification, *Journal of Economic Theory*, 21:265-293.

- Tull, D.S., and Hawkins, D.I. (1980) *Marketing research: measurement and methods*, 2nd ed., New York: MacMillan; cited in Short, D.M., and Riding, A.L. (1989) Informal investors in the Ottawa-Carleton region: experiences and expectations, *Entrepreneurship & Regional Development*, (1)99-112.
- Tyebee, T.T., and Bruno, A.V. (1981) Venture capital decision making: preliminary results from three empirical studies, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Tyebee, T.T., and Bruno, A.V. (1984) A model of venture capitalist investment activity, *Management Science*, 30(9).
- Vyakarnam, S., and Jacobs, R. (1991) How bank managers construe high technology entrepreneurs, paper presented at the National Small Firms Policy and Research Conference, Lancashire Enterprises Ltd/ Manchester Business School; cited in Mason, C.M., and Harrison, R.T. (1996a) The UK clearing banks and the informal venture capital market, *International Journal of Bank Marketing*, 14(1), 5-14.
- Wagstaff, G.F., Huggins, J., and Perfut, T.J. (1996) Equality ratio equity, general linear equity and framing effects in judgements of allocation divisions, *European Journal of Social Psychology*, 26, 29-41.
- Wetzel, W.E. (1982a) Project I-C-E: an experiment in capital formation, *Frontiers of Entrepreneurship Research*, Wellesley MA: Babson College.
- Wetzel, W.E. (1982b) Risk capital research, Chapter 8 in Kent, C.A., Sexton, D.L., and Vesper, K.H. (eds) *Encyclopedia of Entrepreneurship*, Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Wetzel, W.E. (1983) Angels and informal risk capital, *Sloan Management Review*, Summer, 23-34.
- Wetzel, W.E. (1986a) Entrepreneurs, Angels, and Economic Renaissance, chapter 6 in Hisrich, R.D. (ed.) (1986) *Entrepreneurship, intrapreneurship, and venture capital*, Homewood, IL: Irwin.
- Wetzel, W.E. (1986b) Informal risk capital: knowns and unknowns, chapter 4 in Sexton, D.L., and Smilor, R.W. (eds.) (1986) *The art and science of entrepreneurship*, Cambridge, MA: Ballinger Publishing Co.
- Wetzel, W.E. (1987) The informal venture capital market: aspects of scale and market efficiency, *Journal of Business Venturing*, 2:299-313.
- Wetzel, W.E. (1993) *Statements to the House Banking, Finance and Urban Affairs Committee, Subcommittee of Economic Growth and Credit Formation, Roundtable Hearing, November 16, 1993.*

- Wetzel, W.E. (1996) Economic policy in an entrepreneurial world: seven treacherous misconceptions and half-truths, *Venture Capital Report*, April.
- Wetzel, W.E., and Freear, J. (1993) Starting a private investor network: reflections on the history of VCN, in Harrison, R.T., and Mason, C.M. (eds.) *Informal venture capital: information, networks and public policy*, Hemel Hempstead: Woodhead Faulkner; cited in Mason, C.M., and Harrison, R.T. (1993a) Strategies for expanding the informal venture capital market, *International Small Business Journal*, 11(4), 23-38.
- Wetzel, W.E., and Freear, J. (1994) Promoting informal venture capital in the United States: reflections on the history of the venture capital network, in Harrison, R., and Mason, C.M. (eds.) *Informal Venture Capital: Information, Networks and Public Policy*, Hemel-Hempstead: Woodhead-Faulkner.
- Wetzel, W.E., and Seymour, C.R. (1981) Informal risk capital in New England, Washington D.C.: Office of Advocacy, U.S. Small Business Administration; cited in Freear, J., and Wetzel, W.E. (1991) *The informal venture capital market in the year 2000*, paper presented at the Third Annual International Research Symposium on Small Business Research, Florida State University, April 24-26, 1991.
- Wetzel, W.E., and Wilson, I.G. (1985) Seed capital gaps: evidence from high-growth ventures, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Wilson, H.I. (1994) Sources of start-up and early-stage capital available to high technology entrepreneurs in the UK: a regional study, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.
- Wilson, J. (1985) *The new venturers*, Reading MA: Addison-Wesley; cited in Norton, E. (1995) Venture capital as an alternative means to allocate capital: an agency-theoretic view, *Entrepreneurship Theory and Practice*, Winter.
- Winborg, J., and Landstrom, H. (1997) *Financial bootstrapping in small businesses - a resource-based view on small business finance*, paper presented at the Babson College-Kauffman Foundation Research Conference, Babson College, MA., April 16-19.
- Winer, B.J. (1962) *Statistical principles in experimental design*, New York: McGraw-Hill Book Company.
- Woolfman, G.J. (ed.) (1993) A summary of the current investment preferences of the UK venture capital industry with a brief look at trend, taken from the *1993 UK Venture Capital Database*, produced and published by Levy Gee, Chartered Accountants.
- Wright, M., and Robbie, K. (1995) Summary: Venture capitalists target rates of return and investment appraisal, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.

- Wright, M., and Robbie, K. (1996) Venture capitalists, unquoted equity investment appraisal and the role of accounting information, *Accounting and Business Research*, 26(2)153-168.
- Wright, M., Robbie, K., and Ennew, C. (1997) Venture capitalists and serial entrepreneurs, *Journal of Business Venturing*, 12, 227-249.
- Zacharakis, A.L., and Meyer, G.D. (1995) The venture capitalist decision: understanding process versus outcome, *Frontiers of Entrepreneurship Research*, Wellesley, MA: Babson College.

Appendix A - Postal Questionnaire Utilised



Hertford College
UNIVERSITY OF OXFORD
Catte Street, Oxford OX1 3BW

Mark van Osnabrugge, Doctoral Student in Management Studies; Telephone: 01865 554195

Mr. John Smith
25 Old Cottage Lane
Ashford
Kent

9 October, 1996

Dear Mr. Smith,

Since very little is known about the evaluation procedures and investment criteria of individuals who fund small entrepreneurial firms in Britain, Oxford University's School of Management Studies is working in conjunction with Venture Capital Report (VCR) to further our knowledge of this important, but virgin, area.

Private individual investors (like yourself) who have funded small early stage entrepreneurial ventures are usually difficult to identify, and this has restricted past research efforts. To alleviate this, VCR has assisted in forwarding to you (and to other individuals who have invested through their service) the enclosed **anonymous single-sheet questionnaire** in the hope that you will take about **5-10 minutes** to complete it. With your help, this research study could have important practical and policy implications for the funding of small entrepreneurial ventures in Britain.

The results of this research study will comprise a major part of my doctoral thesis (D.Phil.) in Management Studies. Financial assistance for this study has been obtained through a generous grant from the British Venture Capital Association's Tony Lorenz Memorial Trust Fund and through an ORS scholarship from the British Government.

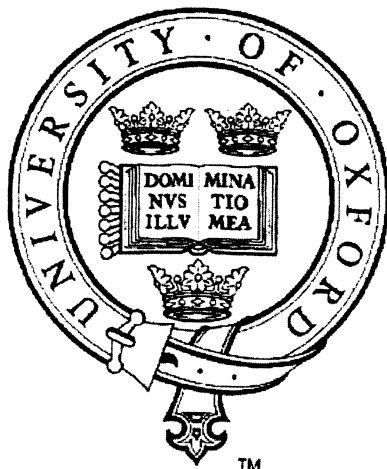
To show my appreciation for your cooperation, I would like to send you a **free copy of the research results** by early 1997. To receive this 10 page summary, please print your name and address on the back of the enclosed (pre-addressed & stamped) return envelope - doing so will still **guarantee you strict confidentiality**.

If you have any queries concerning this short questionnaire or the research project, please feel free to contact me at Tel: (01865) 554195, or if you prefer, you can speak to my research supervisor, Dr. Keith Grint, at Tel: (01865) 735422, or to Lucius Cary of VCR at Tel: (01865) 784466.

Thank you in advance for your help and involvement with this research project.

Yours sincerely,

Mark van Osnabrugge



School of Management Studies

Small Firm Finance Questionnaire

Funded by:

***The Tony Lorenz Memorial Trust Fund
(British Venture Capital Association)***

&

***An ORS Scholarship
(British Government)***

From:

***Mark van Osnabrugge (Doctoral Student)
9 Winchester Road
(Hertford College Annex)
Oxford OX2 6NA***

Please return this questionnaire in the enclosed (pre-addressed & stamped) envelope.

1. Questions Concerning your Last Investment in a Small Unquoted Entrepreneurial Company

Please answer the following questions regarding your most recent investment made as a private investor (through the help of a business introduction service) in one entrepreneurial unquoted firm (preferably in its start-up/early stage of development). (Please feel free to add any additional comments)

1. What sector was this venture in? When did you make this investment?
Was this venture technologically intensive? yes no
2. What stage was this venture in when you invested? (tick one box):
☐ Pre start-up ☐ Start-up ☐ Early ☐ Established ☐ Receivership ☐ Other.....
3. Did you do any research in the sector of the unquoted venture that you invested in? (tick one box):
☐ None ☐ Minimal ☐ Some ☐ Extensive
4. Do you have experience in the sector of this venture that you invested in? (tick one box):
☐ None ☐ Minimal ☐ Some ☐ Extensive
5. With how many people did you discuss this unquoted investment before signing the cheque? person(s)
6. How many independent references did you take on the entrepreneur (if any)? independent reference(s)
7. Specifically, how long did it take from first seeing (and evaluating) the investment opportunity to signing the cheque for the entrepreneur?
8. What was the length of time between the first face-to-face meeting with the entrepreneur(s) and the decision (in principle) to invest?
9. How long were negotiations with the entrepreneur(s)?
10. How many times did you seriously meet the entrepreneurs before investing? times
11. Did you calculate the expected rates of return before investing? yes no
If so, what financial measurements did you use?
12. What specific aspect of this venture that you funded made you most hesitant about investing in:
13. How much did you initially invest in this venture? £..... Was this invested in stages? yes no
14. What was your initial equity %? % What was the entrepreneur(s)'s equity %? %
15. How much in transaction costs (legal, etc.) did you incur on this investment deal (if any at all)? £.....
16. How much in research/due diligence costs did you incur on this investment deal (if any at all)? £.....
17. What two characteristics of this unquoted firm attracted you most to this investment? (please state in order of preference):
1).....
2).....

18. How important were the following factors in ATTRACTING YOU to this most recent unquoted venture you invested in?: Please rate (from 1 to 5) each factor listed. (Circle only ONE answer per factor)
(these factors do not relate to your ideal preferences, but to the decision criteria that you used to make your investment)
(Circle n/p if a particular factor was not present in the investment opportunity)

Financials

	Very Important		Of Concern		Not Important	Not Present
high margins of the business	1	2	3	4	5	n/p
low overheads	1	2	3	4	5	n/p
perceived financial rewards (for the investor)	1	2	3	4	5	n/p
low initial cost to test the market	1	2	3	4	5	n/p
ability to reach break-even without further funding	1	2	3	4	5	n/p
low initial capital expenditures needed (i.e. on assets)	1	2	3	4	5	n/p
size of the investment	1	2	3	4	5	n/p
expected rate of return	1	2	3	4	5	n/p

The People/Entrepreneur

	Very Important		Of Concern		Not Important	Not Present
investor liked entrepreneur(s) upon meeting	1	2	3	4	5	n/p
expertise of the entrepreneur(s)	1	2	3	4	5	n/p

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track record of the entrepreneur(s)	1	2	3	4	5	n/p
enthusiasm/commitment of the entrepreneur(s)	1	2	3	4	5	n/p
trustworthiness/honesty of the entrepreneur(s)	1	2	3	4	5	n/p
Other Business Attributes	Very Important		Of Concern		Not Important	Not Present
investor's involvement possible (contribute skills)	1	2	3	4	5	n/p
venture is local (geographically close)	1	2	3	4	5	n/p
potential exit routes (potential liquidity)	1	2	3	4	5	n/p
investor (you) understands the business/industry	1	2	3	4	5	n/p
(potential) co-investors present	1	2	3	4	5	n/p
investor's (your) strengths fill gaps in business	1	2	3	4	5	n/p
The Market/Product	Very Important		Of Concern		Not Important	Not Present
product's overall competitive protection	1	2	3	4	5	n/p
product's sales potential	1	2	3	4	5	n/p
niche market	1	2	3	4	5	n/p
growth potential of the market	1	2	3	4	5	n/p
product's formal competitive protection (patents)	1	2	3	4	5	n/p
quality of product	1	2	3	4	5	n/p
nature of competition	1	2	3	4	5	n/p
product's informal competitive protection (know-how)	1	2	3	4	5	n/p

19. Having invested in this unquoted venture, how actively do you monitor it?
 (tick one box) ☐ actively involved "hands-on" (one day or more per week at the venture)
☐ part-time "hands-on" (more than one day per month at the venture)
☐ strategic, not "hands-on" (not more than 1 day/month; attend board meetings/ monitor/ give advice)
☐ passively involved
20. How often do you telephone the venture? (on average) ➤.....
21. How often do you visit the venture? (on average) ➤.....
22. What is your intended length of investment time in this venture? ➤..... years
23. Roughly, what annual rate of return did you *initially* expect on this investment? ➤..... % (p.a. compound R.O.I.)
24. Roughly, what annual rate of return do you *now* believe you will realistically achieve? ➤..... % (p.a. compound R.O.I.)
25. Looking back on this investment, what (if anything) would you have done differently? ➤.....
26. This question relates to **another** unquoted firm (of roughly similar size and stage) that you may have seriously considered financing but ultimately decided **not** to fund: What specific aspect of this other firm made you most hesitant about investing in it? ➤.....

II. General Unquoted Investment Preferences & Characteristics

Please answer the following questions in regards to your general unquoted investment preferences (as a private investor):

- | | (tick <u>one</u> box) | Yes | No | Indifferent |
|---|---|--------------------------|--------------------------|-------------|
| 1. Do you place much emphasis on the projected cash flows of the unquoted (start-up/early-stage) ventures you invest in? | ☐ | ☐ | ☐ | |
| 2. Is it essential that the product has a competitive edge over others in the market? | ☐ | ☐ | ☐ | |
| 3. Is it essential that the market of the venture you invest in has high growth potential? | ☐ | ☐ | ☐ | |
| 4. Do you in general like the presence of co-investors in the unquoted venture you invest in? (tick <u>one</u> box): | ☐ yes ☐ yes, <u>but</u> only if the co-investors are passive investors ☐ no ☐ other (specify) | | | |
| 5. Is the presence of exit routes a major attraction for you when investing in unquoted companies? (tick <u>one</u> box): | ☐ yes, they are essential ☐ prefer them but they are not essential ☐ no ☐ other (specify) | | | |

III. Personal Characteristics

1. Have you ever worked in a small business? (excluding the unquoted firm funded) ☐ yes ☐ no
2. In your career, how many businesses (with 5 or more employees) have you founded as an entrepreneur? ➤.....businesses
3. How many investments have you made in unquoted companies? ➤.....investments
4. In how many of these investments (if any) have you replaced the entrepreneurs with new management? ➤.....investments

Thank you very much for taking the time to complete this confidential questionnaire.



Hertford College
UNIVERSITY OF OXFORD
Catte Street, Oxford OX1 3BW

Mark van Osnabrugge, Doctoral Student in Management Studies; Telephone: 01865 554195

Mr. John Jones
Venture Capital Supreme Ltd.
25 Oxford Street
London

10 October, 1996

Dear Mr. Jones,

Since very little is known about the evaluation procedures and investment criteria of individuals who fund small entrepreneurial firms in Britain, Oxford University's School of Management Studies is conducting a comprehensive study to further our knowledge of this important, but virgin, area.

Through a generous grant from the British Venture Capital Association's Tony Lorenz Memorial Trust Fund and an ORS scholarship from the British Government, I am targeting venture capitalists (like yourself) who have funded at least one early stage entrepreneurial venture in the last few years. Since so few venture capitalists fund small non-established firms, I would be much obliged if you would take about **5-10 minutes** to complete the enclosed **anonymous single-sheet questionnaire**. With your help, this research could have important practical and policy implications for the funding of small entrepreneurial ventures in Britain.

The results of this research study will comprise a major part of my doctoral thesis (D.Phil.) in Management Studies, due to be submitted by January 1998.

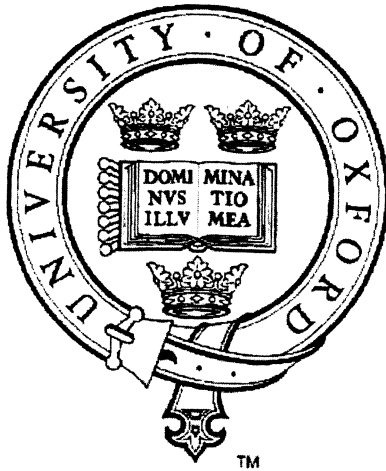
To show my appreciation for your cooperation, I would like to send you a **free copy of the research results** by early 1997. To receive this 10 page summary, please print your name and address on the back of the enclosed (pre-addressed & stamped) return envelope - doing so will still **guarantee you strict confidentiality**.

If you have any queries concerning this short questionnaire or the research project, please feel free to contact me at Tel: (01865) 554195, or if you prefer, you can speak to my research supervisor, Dr. Keith Grint, at Tel: (01865) 735422.

Thank you in advance for your help and involvement with this research project.

Yours sincerely,

Mark van Osnabrugge



School of Management Studies

Small Firm Finance Questionnaire

Funded by:

***The Tony Lorenz Memorial Trust Fund
(British Venture Capital Association)***

&

***An ORS Scholarship
(British Government)***

From:

***Mark van Osnabrugge (Doctoral Student)
9 Winchester Road
(Hertford College Annex)
Oxford OX2 6NA***

Please return this questionnaire in the enclosed (pre-addressed & stamped) envelope.

Please answer the following questions regarding your most recent investment (*made as a venture capitalist*) in one

entrepreneurial unquoted firm (in Britain) which was preferably in its start-up/early stage of development when you funded it.

17. What two characteristics of this unquoted firm attracted you most to this investment? (please state in order of preference):

Financials

Financials	Very Important		Of Concern		Not Important	Not Present
high margins of the business	1	2	3	4	5	n/p
low overheads	1	2	3	4	5	n/p
perceived financial rewards (for the investor)	1	2	3	4	5	n/p
low initial cost to test the market	1	2	3	4	5	n/p
ability to reach break-even without further funding	1	2	3	4	5	n/p
low initial capital expenditures needed (i.e. on assets)	1	2	3	4	5	n/p
size of the investment	1	2	3	4	5	n/p
expected rate of return	1	2	3	4	5	n/p
The People/Entrepreneur	Very Important		Of Concern		Not Important	Not Present
investor liked entrepreneur(s) upon meeting	1	2	3	4	5	n/p
expertise of the entrepreneur(s)	1	2	3	4	5	n/p
track record of the entrepreneur(s)	1	2	3	4	5	n/p

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enthusiasm/commitment of the entrepreneur(s)	1	2	3	4	5	n/p
trustworthiness/honesty of the entrepreneur(s)	1	2	3	4	5	n/p
Other Business Attributes	Very Important		Of Concern		Not Important	Not Present
investor's involvement possible (contribute skills)	1	2	3	4	5	n/p
venture is local (geographically close)	1	2	3	4	5	n/p
potential exit routes (potential liquidity)	1	2	3	4	5	n/p
investor (you) understands the business/industry	1	2	3	4	5	n/p
(potential) co-investors present	1	2	3	4	5	n/p
investor's (your) strengths fill gaps in business	1	2	3	4	5	n/p
The Market/Product	Very Important		Of Concern		Not Important	Not Present
product's overall competitive protection	1	2	3	4	5	n/p
product's sales potential	1	2	3	4	5	n/p
niche market	1	2	3	4	5	n/p
growth potential of the market	1	2	3	4	5	n/p
product's formal competitive protection (patents)	1	2	3	4	5	n/p
quality of product	1	2	3	4	5	n/p
nature of competition	1	2	3	4	5	n/p
product's informal competitive protection (know-how)	1	2	3	4	5	n/p

19. Having invested in this unquoted venture, how actively do you monitor it?
 (tick one box) ☐ actively involved "hands-on" (one day or more per week at the venture)
☐ part-time "hands-on" (more than one day per month at the venture)
☐ strategic, not "hands-on" (not more than 1 day/month; attend board meetings/ give advice)
☐ passively involved
20. How often do you telephone the venture? (on average) ➤.....
21. How often do you visit the venture? (on average) ➤.....
22. What is your intended length of investment time in this venture? ➤..... **years**
23. Roughly, what annual rate of return did you *initially* expect on this investment? ➤..... % (p.a. compound R.O.I.)
24. Roughly, what annual rate of return do you *now* believe you will realistically achieve? ➤..... % (p.a. compound R.O.I.)
25. Looking back on this investment, what (if anything) would you have done differently? ➤.....

26. This question relates to **another** unquoted firm (of roughly similar size and stage) that you may have seriously considered financing but ultimately decided **not** to fund: What specific aspect of this other firm made you most hesitant about investing in it? ➤.....

II. General Unquoted Investment Preferences & Characteristics

Please answer the following questions in regards to your general unquoted investment preferences (as a venture capitalist):

- | | (tick <u>one</u> box) | Yes | No | Indifferent |
|---|--------------------------|--------------------------|--------------------------|-------------|
| 1. Do you place much emphasis on the projected cash flows of the unquoted (start-up/early-stage) ventures you invest in? | ☐ | ☐ | ☐ | |
| 2. Is it essential that the product has a competitive edge over others in the market? | ☐ | ☐ | ☐ | |
| 3. Is it essential that the market of the venture you invest in has high growth potential? | ☐ | ☐ | ☐ | |
| 4. Do you in general like the presence of co-investors in the unquoted venture you invest in? (tick <u>one</u> box):
☐ yes ☐ yes, <u>but</u> only if the co-investors are passive investors ☐ no ☐ other (specify) | | | | |
| 5. As a venture capitalist, what additional things do you do as an investor to comply with government regulations and your SRO requirements? ➤..... | | | | |

III. Personal & Venture Capital Firm Characteristics

1. Have you ever worked in a small business? (excluding a venture capital firm you may have started) ☐ yes ☐ no
2. In your career, how many businesses (with 5 or more employees) have you founded as an entrepreneur? ➤.....businesses
3. How many investments have you made in unquoted companies? (as a venture capitalist) ➤.....investments
4. In how many of these investments (if any) have you replaced the entrepreneurs with new management? ➤.....investments
5. How many firm investments do you personally manage/monitor for your venture capital firm? ➤.....ventures
6. What percentage of the funds in your latest venture capital fund are from outside investors, rather than from funds provided by your venture capital firm itself? ➤.....%
7. How many close competitors do you feel your venture capital firm has in the venture capital market? ➤.....competitors

Thank you very much for taking the time to complete this confidential questionnaire.

Appendix B - Characteristics of the 40 Investors Interviewed

In addition to speaking informally to a number of academics and practitioners in the entrepreneurial field, 42 people (25 BAs, 15 VCs, 1 BIS manager, and 1 academic) were formally interviewed face-to-face for 60-90 minutes each. Tape recordings of these interviews provided the quotes used throughout this thesis. The characteristics of these individuals formally interviewed are given below.

Business Angels

	Date of Interview	Location in UK	Gender	Age	Firms Found-ed	Unquoted Invest-ments	Sector of Last Unquoted Investment
BA1	14/12/95	South East	Male	48	2	3	High Tech
BA2	8/2/96	London	Male	56	1	1	Consumer Manufac.
BA3	14/2/96	South East	Male	52	2	3	Industrial Manufac.
BA4	16/2/96	London	Male	30	1	1	Consumer Manufac.
BA5	16/2/95	London	Male	68	1	5	Consumer Manufac.
BA6	23/2/96	London	Male	37	1	7	Industrial Manufac.
BA7	23/2/96	London	Male	57	1	6	Consumer Manufac.
BA8	23/2/96	London	Male	45	3	2	Services
BA9	15/3/96	London	Male	34	1	15	Consumer Manufac.
BA10	19/3/96	London	Male	52	10	20	Consumer Manufac.
BA11	19/3/96	South East	Male	41	3	3	Industrial Manufac.
BA12	22/3/96	South West	Male	54	1	4	Consumer Manufac.
BA13	25/3/96	South West	Male	48	6	6	Construction
BA14	25/3/96	South West	Male	45	2	10	Services
BA15	25/3/96	South West	Male	55	2	1	Consumer Manufac.
BA16	26/3/96	South West	Male	55	1	1	High Tech
BA17	26/3/96	South West	Male	68	1	1	High Tech
BA18	27/3/96	South East	Male	52	1	3	High Tech
BA19	28/3/96	South East	Male	55	1	2	Services
BA20	29/3/96	South East	Male	59	3	7	Industrial Manufac.
BA21	2/4/96	East Anglia	Male	53	1	1	Services
BA22	2/4/96	East Anglia	Male	63	2	4	Services
BA23	3/4/96	South East	Male	47	5	15	High Tech
BA24	11/4/96	London	Female	39	2	2	Services
BA25	18/4/96	W. Midlands	Male	33	6	3	Consumer Manufac.

Venture Capitalists

	Date of Interview	Location in UK	Gender	Age	Firms Founded	Unquoted Investments	Sector of Last Unquoted Investment
VC1	5/6/96	London	Male	59	2	5	Medical
VC2	5/6/96	London	Male	33	1	7	High Tech
VC3	5/6/96	London	Male	48	0	6	High Tech
VC4	6/6/96	London	Male	37	0	15	High Tech
VC5	6/6/96	London	Female	42	0	5	Medical
VC6	6/6/96	London	Male	44	0	10	Consumer Manufac.
VC7	7/6/96	London	Male	50	5	12	Services
VC8	7/6/96	London	Male	37	2	27	High Tech
VC9	10/6/96	London	Male	47	0	30	Retail/ Wholesale
VC10	10/6/96	London	Male	56	5	10	High Tech
VC11	10/6/96	London	Male	48	0	25	High Tech
VC12	13/6/96	London	Male	33	0	20	High Tech
VC13	13/6/96	London	Male	37	1	20	Services
VC14	17/6/96	London	Male	34	2	35	Retail/ Wholesale
VC15	19/6/96	London	Male	48	0	5	High Tech

Non-Investor Interviews

AC1	25/3/96	Manager of a regional business introduction service
AC2	31/5/96	Oxford University academic with past venture capital experience

Appendix C - Ordinary Least Squares Regression Data

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

Independent Variable is:											R ²
Dependent Variable	Constant	1 if VC 0 if BA	1 if late return 0 if early return questionnaire	1 if established 0 if early-stage venture	1 if in London 0 if in rest of UK	1 if Tech 0 if non-tech firm	1 if successful 0 if less-successful investment				
<i>Investor Characteristics</i>											
Worked in small business? (1=yes)	1.179**	.417**	0.080	.117	-0.121	-0.095	-0.105	0.230			
Number of firms founded	1.421**	-1.692**	-0.754	0.136	1.081*	1.079*	0.436	0.151			
Number of unquoted investments	2.827	29.539**	4.547	-11.309	4.907	1.92	4.22	0.239			
<i>Due Diligence Process</i>											
Stage of firm funded (1=start-up)	2.675**	0.0928	-0.002	1.450**	-0.110	-0.293*	-0.00485	0.412			
Size of firm funded (capitalisation)	219532.4	2233375**	-499314	1012441	950150	-558105	915530.9	0.167			
Sector experience of investor ^a	2.940**	-0.659**	0.248	-0.322	-0.00998	-0.0485	-0.410*	0.166			
Sector research conducted ^a	2.689**	-0.955**	-0.00398	-0.195	-0.182	0.01102	-0.409**	0.327			
Times met entrepreneur before \$	5.182**	2.181*	-1.764	1.677	1.331	0.360	0.641	0.061			
Number of independent references	0.332	3.046**	-0.00938	0.467	0.981*	-0.568	1.170*	0.261			
Calculation of return rates (1=yes)	1.682**	-0.559**	-0.0882	-0.0129	-0.0651	0.04147	0.0794	0.360			
Due diligence costs	-2061.36	12076.4**	-682.945	10842.996**	4781.843	-6393.294**	1013.101	0.311			
Due diligence costs (% investment)	1.262**	0.426	0.489	-0.430	-0.0923	-0.521	0.591	0.036			
Number of people consulted	2.720**	2.067**	1.365**	0.373	0.423	-0.0479	0.119	0.212			
Total time of investment process	16.550**	2.855	-5.166	-1.601	0.714	4.990	-4.828	.086			
Time from meeting to decision	10.053**	-1.651	-3.419	-2.417	2.600	4.347	-2.964	0.059			

** significant at the 1 percent level

* significant at the 5 percent level

^a Note: 1 = extensive, 4 = none

Independent Variable is:

Dependent Variable	Constant	1 if VC 0 if BA	1 if late return 0 if early return	1 if established venture	1 if in London 0 if in rest of UK	1 if Tech firm	1 if successful 0 if less-successful investment	R ²
Investment Criteria^b								
Investor like entrepreneur when met	1.598**	0.09767	0.179	-0.107	-0.0319	0.02018	-0.120	0.16
Expertise of entrepreneur	1.584**	-0.377**	-0.0161	-0.103	0.152	0.08143	0.07762	0.066
Track record of entrepreneur	2.159**	-0.533**	0.152	-0.268	-0.0115	0.224	-0.129	0.086
Enthusiasm of entrepreneur	1.348**	0.04404	-0.0197	0.01781	-0.133	0.05289	0.02569	0.020
Trustworthiness of entrepreneur	1.268**	-0.139	0.268*	-0.0139	-0.0407	0.232*	-0.0416	0.080
Product's overall compet. protection	2.966**	-0.526**	0.428	-0.206	-0.241	-0.398*	-0.168	0.149
Product's sales potential	1.582**	0.05766	-0.0462	0.115	0.251*	-0.121	-0.254*	0.074
Niche market	2.043**	0.283	-0.0765	-0.0689	-0.279	0.09748	0.119	0.035
Growth potential of the market	1.867**	-0.133	-0.216	0.276	0.00390	-0.249	0.112	0.048
Product's patent protection	3.377**	-0.143	0.260	0.160	0.236	-0.456	-0.0348	0.049
Quality of product	1.805**	0.123	0.309	0.119	-0.180	0.09263	-0.140	0.208
Nature of competition	2.608**	-0.125	0.03262	-0.0869	-0.305	-0.0522	0.006478	0.032
Products informal compet. protection	2.554**	-0.138	0.233	-0.0955	-0.0600	-0.340	0.05354	0.037
High margins of the business	2.674**	-0.0626	-0.0746	-0.0946	-0.152	-0.157	-0.312	0.035
Low overheads	2.202**	0.647**	0.112	-0.0369	0.01827	0.122	0.413*	0.120
Perceived financial rewards	1.888**	-0.342*	-0.0241	-0.0707	-0.0765	0.002049	-0.251	0.062
Low initial cost to test the market	2.376**	0.755**	0.116	0.464	0.259	-0.111	0.002179	0.140
Ability to break-even w/o further \$	2.315**	0.243	0.470	-0.420	-0.139	0.199	0.182	0.069
Low initial capital costs (on assets)	1.966**	0.727**	0.275	-0.0103	0.445*	0.198	0.428	0.160
Size of the investment (funds sought)	2.366**	0.586**	0.240	-0.125	0.265	-0.121	0.588**	0.123
Expected rate of return	2.244**	-0.375*	0.212	-0.156	-0.146	0.05654	-0.339*	0.078

^b Note: 1 = very important attraction, 5 = not important attraction

** significant at the 1 percent level

* significant at the 5 percent level

Independent Variable is:

Dependent Variable	Constant	1 if VC 0 if BA	1 if late return 0 if early return	1 if established 0 if early-stage	1 if in London 0 if in rest of	1 if Tech 0 if non-tech	1 if successful 0 if less-successful	R ²
			questionnaire	venture	UK	firm	investment	
<i>Investment Criteria^b</i> (continued)								
Investor's investment possible	2.660**	0.414	0.01461	-0.127	-0.282	0.02924	-0.0262	0.030
Venture is local	2.531**	0.618*	0.225	0.261	0.559*	-0.0115	0.217	0.103
Potential exit routes (liquidity)	2.814**	-0.650**	0.179	0.175	-0.0756	0.245	-0.559**	0.121
Investor understands the business	3.10**	-0.365	0.240	-0.316	-0.236	0.267	-0.597**	0.087
(Potential) co-investors present	2.564**	0.780**	-0.0639	0.597	0.154	-0.284	0.09665	0.090
Investor's strengths fill gaps in firm	2.202**	1.283**	0.14	0.109	0.182	0.113	-0.118	0.237
<i>Negotiations</i>								
Length of negotiations	6.813**	-0.445	-2.246	-0.129	2.672	1.528	-2.882	0.058
Transaction costs	-15559.4*	38233.65**	8559.73	33291.29**	13215.025	-4490.479	11045.446	0.304
Transaction costs (% of investment)	2.336	1.075	1.928	0.985	1.098	1.177	-0.502	0.041
<i>Actual Investment & Control</i>								
Size of investment	-241162	1006243**	534486.6*	266041.4	489364.7**	-269736	-2077.977	0.295
Investment made in stages? (1=yes)	1.776	0.06633	0.01991	0.127	-0.0180	-0.177*	-0.0557	0.066
Investor's initial equity %	21.194**	11.406**	7.223	1.639	3.098	-5.333	-1.350	0.134
Entrepreneur's initial equity %	57.365**	-0.247	-3.443	4.333	-13.375**	-1.673	1.766	0.103
Number of entrepreneurs replaced	-1.189	5.079**	0.02855	-1.450	2.364*	1.227	1.543	0.189
Number replaced (% of investments)	5.895	8.205**	-1.582	0.324	3.682	5.791	-2.252	0.107

** significant at the 1 percent level

* significant at the 5 percent level

b Note: 1 = very important attraction, 5 = not important attraction

Independent Variable is:

Dependent Variable	Constant	1 if VC 0 if BA	1 if late return 0 if early return questionnaire	1 if established venture	1 if in London 0 if in rest of UK	1 if Tech firm	1 if successful investment	R ²
<i>Post-Investment Monitoring</i>								
How actively monitor the firm? ^c	2.319**	0.07178	0.06661	0.09660	-0.212	0.04933	-0.128	0.019
Telephone calls per month	6.224**	-1.474	2.028	0.383	-0.368	0.06077	1.124	0.034
Visits per month	2.385**	-1.283*	0.733	0.906	-0.549	1.282*	-0.388	0.071
<i>Exit & Performance</i>								
Intended length of investment time	5.321**	0.149	0.01692	-0.615	-0.167	0.118	-0.529	0.030
Rates of return initially expected	24.376**	8.423**	1.579	-5.654	4.278	-1.518	16.668**	0.254
Rates of return now expected	14.792**	12.998**	-1.378	-3.185	-1.644	1.229	47.097**	0.440
Excess return over what expected	-8.584*	4.374	-2.736	0.679	-5.619	2.176	29.030**	0.247

** significant at the 1 percent level

* significant at the 5 percent level

c Note: 1 = actively, 4 = passively

Appendix D - Personal Reflections on the Research Process

"I was working on the proof of one of my poems all the morning and took out a comma, in the afternoon I put it back again." - Oscar Wilde

After witnessing many months' worth of revisions reshape my final thesis draft, one of my supervisors commented:

"It is interesting to see how your doctoral research project has evolved, recently and over the last few years, but I am sure that some readers will also be interested in how you, as a person, have changed during, and because of, this research process. You should give the prospective doctoral student some insight on what they have to look forward to."

With this in mind, I shall now give a frank reflection on the last three years.

My first observation relates to the progression of the thesis work. In particular, I am most astounded by how dramatically my thesis structure has evolved and changed over the last few years, hardly resembling what I initially proposed when I started the doctoral programme. In some ways, I was naïve of the academic and personal requirements needed to finish the degree. The topic, methodology, access to data, time commitment, and thesis write-up all turned out to be more complex and demanding than I had initially imagined. But this is all part of the learning process, both academically and personally.

Indeed, doctoral research possesses a number of less-rewarding traits that I initially misjudged. First, the feeling of being lost and unsure of where the research should be heading, and whether you are doing it correctly, is often prevalent in the early stages. But with guidance from supervisors and greater awareness of the subject area, this fortunately subsides. Second, the data collection and analysis processes are never as straight forward as expected, persistence and hard work are certainly the key to getting over the many barriers. Third, as one progresses to the writing-up stage, the 5-6 month commitment to continuous thesis writing and revisions can be a draining one. Eating, sleeping and breathing your thesis becomes a way of life for all doctoral students. To combat this inherent loneliness of the research process, engaging in extra-curricular activities and socialising with friends is essential to recharging one's academic batteries.

Given the many personal and financial costs, why go through the doctoral degree? The advantages certainly have greatly outweighed the disadvantages. First, the excitement that one experiences when a research project starts to come together, and render serious results, is exhilarating. The initial belief that the research will change the world is slowly replaced by a more realistic outlook, but this is still most rewarding. Second, although a lonely process, the independence that doctoral research brings is particularly favourable. It allows you to work at your own pace, but also enables you to shape the project just as you want to, because in the end it is your name that adorns its front cover. But effort is strongly correlated with results, so strong self-motivation is quite essential. Third, seeing the finished fruits of your efforts makes it all worthwhile. Although probably only a

minor contribution to new knowledge, the thesis is still a piece of work that the researcher has shaped from an idea into a substantial piece of academic work - a 'masterpiece', at least to its author! When an abstract of this thesis's major findings is published and distributed, any potential insight it may render to practitioners in the entrepreneurial field will be particularly rewarding for me.

However, conducting doctoral research can be a bit of a gamble because 3-4 years' worth of work will ultimately be judged by the quality of a thesis and a few hours of oral examination. To increase the odds of passing these evaluations, reliance on one's supervisors is naturally key. I have three major observations about this supervisory process. First, it was interesting to see how, as my research progressed and I met academic milestones, my supervisors became more trusting of me and allowed me greater freedom within which to work. As I got to know my supervisors better, I felt that I was increasingly being treated as an equal by them, rather than as just one of their many students. Second, the influence of my supervisors in shaping my research work was more valuable and influential than what I initially imagined it would be. They steered me away from numerous pitfalls and, at times, forbade me from taking the easy road on certain issues, which ultimately aided the quality of the thesis work. Third, having two academic supervisors and an external advisor gave me a wide perspective on my research work. Although at times their respective advice conflicted, it gave me an objective view from which to proceed. Having more than one supervisor has been logistically more time-consuming, but the positive results have greatly outweighed the few disadvantages.

As I reflect upon the last three years of doctoral work, it is hard to believe how quickly they have passed. Although the doctoral research process has rendered me with a high degree of knowledge about my particular field, this was certainly not its most significant contribution. The maturity and skills that I have gained through identifying, evaluating, and solving academic problems have benefited me in my daily life. Doctoral research has taught me to view the world around me more objectively and to proceed through it with greater awareness.