ABSTRACT

Business angel investing through business angel syndicates (BAS) is a growing trend in the financing of early-stage entrepreneurial ventures, allowing solo investors to pool their experiences, skills and funds to invest in larger deals and to offer better support to entrepreneurs. This paper offers important new insights into BAS investment activity, considering how investment performance over time has influenced and been influenced by investment management processes and external factors. The paper is based on a longitudinal, case based study of one of Europe’s largest and oldest BAS, which has made 63 investments involving almost £90 million over its 16-year existence.

INTRODUCTION

Over the past few decades, business angel investors have become more widely recognised as the ‘entrepreneurial financiers’ of early stage ventures and occupy a significant place in the economies of many western countries (PWC Moneytree, 2009; Sohl, 2007; Bygrave et al 2003). Relatively little traditional venture capital (VC) goes to entrepreneurs and early or seed stage companies, and banks rarely lend to companies with little or no revenue and assets (Aernoudt & Erikson, 2002). Some studies have attempted to approximate the level of angel investing and its economic impact. It is estimated that US angels invested over $6 billion, compared to $346 million from VCs in 2004 (Wiltbank, 2005). Sohl (2007) suggests that US angels invest 16 times as often in seed ventures than do VCs and created 200,000 new jobs in 2007 (or 3.3 jobs per business angel investment). Don and Harrison (2006) suggest that angels in Scotland account for 27% of all private investment into new businesses.

In recent years, there has been a proliferation of business angel groups and syndicates (BAS). Business angel syndicates are now the dominant investment vehicle for supporting early stage investing in many western countries (EBAN, 2008). In the US, it is estimated there were 10 groups in 1996 that rose to over 200 by 2006 (Lee, 2006). Such groups have formed for various reasons, but syndication appears to offer two important benefits: larger pooled investments can attract larger and better deals and generate higher returns and a broader pool of experiences and skills can be used to support entrepreneurs and their companies (Sohl, 2007; Aernoudt, 2005; Gompers & Lerner, 2004). Yet, the business angel syndicate remains a poorly understood phenomenon (Shane, 2007). Mason (2007) identifies the need for stronger theoretical foundations in business angel research that apply to business angel syndicates. Literature suggests the need for longitudinal study to examine syndicate investment management processes, investment performance and investment trends (Mason & Harrison, 2004; Sohl, 2003). Few studies have examined the negotiation, valuation and contracting stages of angel investment or due diligence processes within a business angel syndicate context (Mason, 2007; Sohl, 2007) and further research is suggested in understanding the post-investment relationship between a syndicate and portfolio companies (Kelly and Hay, 2003). Research on angel syndicates confront similar challenges identified in studying solo business angels, namely that the risk capital market is largely invisible, fragmented and inherently private in nature, making access to statistics difficult and interpretation of investment performance challenging (Mason & Harrison, 2008; Shane, 2007; Mason, 2007; Freear & Wetzel, 1992). Most studies on private equity investment have focused on flows of investment rather than investment decision-making processes (Wright et al, 2006; Mason & Harrison 2004) or on the investment criteria used by investors (Kollmann & Kuckertz, 2009).

In this paper, we exploit the intersection of two research opportunities – namely, (a) the gap in our understanding of business angel syndicate investment performance and trends over time and the opportunity to accurately assess BAS investment flow to entrepreneurial ventures; and (b) the unique setting that longitudinal study and participant observation can provide in examining the BAS as a
‘social institution’ whose long-run performance is influenced by external factors and its own development. The paper is based on a two-year study of one of the largest and oldest business angel syndicates in Europe, which has made 63 investments involving £90 million over its 16-year existence.

Four themes are explored in the paper. First, in generating accurate investment data, what is the aggregate performance of a BAS? Here we examine investment flow to entrepreneurs, returns to investors, investment trends and deal characteristics. Establishing reliable measures of investment activity is expected to provide evidence of BAS impact and value. Second, in examining investment activity and syndicate development together, how does investment performance affect syndicate development? Does performance stimulate definitive phases of growth over time? Here we consider whether or not syndicate success and longevity depend primarily on investment return performance or are there other contributing factors? We also consider portfolio and investment growth effects on new investment activity and implications for investment management. Third, in comprehensively mapping out the investment management process (i.e. pre-investment, investment, post-investment stages), where does a BAS offer advantages over solo angel investing? Finally, in consolidating our findings, is there evidence to support our assertion that a ‘manager-driven’ BAS functions as an effective market mechanism that reduces costs and increases efficiencies (for solo investors) in the market? Here we wish to establish empirical support for an alternative BAS model that we present in the paper.

LITERATURE REVIEW

Business Angels

Business angels (BAs) are described as private investors who provide risk capital to new and growing businesses in which they have no family connection (Mason & Harrison, 1994). Business angels invest in what is termed the “equity gap,” providing amounts of finance often beyond the ability of entrepreneurs to raise from their own resources but usually below the minimum investment threshold of venture capital funds; a figure suggested that is in excess of £1m in the UK and $5m in the U.S. (Sohl, 2003). The nature of business angels investing is risky, given high failure rates of new businesses. Headd (2003) estimates that the percentage of new business failures ranges from 24% to 34% after two years, approximately 50% after four years, and approximately 60% after six years.

A well established literature describes business angels through a comparison with VCs. Business angels appear to be more flexible in their financial decisions that include longer investment horizons (“patient money”), shorter investment processes, and lower rates of return (Freear et al, 1994; Harrison & Mason, 1991, 1993). Van Osnabrugge (2000) suggests that VC screening, due diligence and contract formulation during the investment process is vastly different from the angel process. Angels rely heavily on trust in the management team (Mason & Stark, 2004) and are advised to enter into business relationships with people they believe ‘will behave reliably’ (Shane & Stuart, 2002). Business angels often possess the wealth and experience to help young businesses grow and differ from venture capitalists in that they contribute their personal business skills and offer hands-on involvement to furthering young businesses (Mason, 2007; Mason & Harrison, 1996).

Preston (2007) suggests that what differentiates angels from VCs is their focus on investing regionally and having a sense of social responsibility and community involvement. A high level of interaction with entrepreneurs is one reason why many business angels elect to invest locally to facilitate such involvement (Wetzel, 1983; Mason et al, 1995). At the same time, Preston (2007) suggests that angel investors share with VCs a primary goal of making money. Robinson & Van Osnabrugge (2000) order the motivations for angel investors in the following ranking: expectations of high financial reward, playing a role in the entrepreneurial process, fun and satisfaction of being involved in an entrepreneurial firm, creating a job for oneself and a sense of social responsibility. Coveney & Moore (1998) distinguish between three types of business angel based on their level of entrepreneurial activity and intensity of investment activity. Entrepreneur angels are identified as most active in terms of number of investments, the most experienced angels and the wealthiest, preferring to invest based on the personality of the entrepreneur, are motivated by the enjoyment of investing but are unlikely to play a role in the day-to-day management of their investments. Income seeking angels tend to invest in industries in which they are familiar, are more active in investment management but are less wealthy, less active and less motivated by enjoyment considerations. Finally, wealth maximizing angels are interested primarily in the financial return, are more likely to invest in industries they have experience in and are more likely to take a full-time position in their investments.
Business Angel Syndicates (BAS)
A business angel syndication can be understood as a kind of alliance in which two or more investors come together to take an equity stake in a company (Wright & Lockett, 2003). Studies suggest that syndication is high between the most experienced business angels (Kelly & Hay, 2000; Van Osnabrugge, 2000). The size of syndicates varies considerably as do their preference for investing in particular sectors. The annual survey by the European Business Angel Network (EBAN 2008) found that the majority of angel groups (86%) had less than 100 investors, with most angel groups investing in ICT (82%), followed by biotechnology (53%) and software/media (51%). Literature suggests a combination of factors contributing to the trend towards angel syndication. First, business angel syndicates can provide more capital availability for new investments as well as for follow-on cash needs (Gompers & Lerner, 2004; Kelly & Hay, 1996). The financial capability of a solo business angel is limited, with a median investment size estimated between US$50k and $250k (Aernoudt, 2005). Second, business angel syndicates can offer lower search costs for solo angels in supporting investment opportunities and securing investments (Mason et al, 1995; Freear et al, 1994). This includes deal screening procedures, scheduling presentations, formal due diligence and standard term negotiation help (Sharpe, 2007; Sohl, 2003). Third, raising funds from business angels does not involve high fees as is the case with VC (Harrison & Mason, 1991). Fourth, studies suggest that angels invest and join into groups for non-economic reasons that include the social camaraderie available within a syndicate of investors (Mason & Harrison, 2002; Kauffman Foundation, 2002); receiving views and input from other investors (Paul et al, 2007) and the ability to learn from more experienced investors and hence to activate latent business angel capital (Aernoudt et al, 2005).

In some countries, business angel syndication is encouraged through co-investment. For example, the Scottish Co-investment Fund (SCIF), established in 1993, provides matching funding for angel investments, following a lead investor under the same deal terms. Research by Don & Harrison (2006) on Scottish angel investment for 2000-04, found that the average deal size without co-investment was £179k compared to £475k with the SCIF, suggesting the high leveraging effect of co-investment. The European Business Angel Network annual survey in 2008 found that Scotland had the second highest average deal size in Europe (£335k) after Finland (£500k) and higher than the UK average (£327k), supporting earlier findings on the positive effect of such co-investment mechanisms (EBAN, 2008).

However, we find little evidence of how investment management occurs within a business angel syndicate. Preston (2007) suggests that formal angel alliances can either be member-led or manager-led and will depend on the needs and preferences of the investors. Member-led organizations will usually hire administrative support to handle member communications, meeting coordination, and data base maintenance (Preston, 2004). We also find little evidence on investment performance of business angel syndicates. The largely invisible, fragmented and inherently private nature of angel investing makes access to investment data difficult, investment performance assessment challenging and statistical reporting approximate at best (e.g. Mason & Harrison, 2008; Shane, 2007; Mason, 2007; Freear & Wetzel, 1992). Investment performance through the use of internal rate of return (IRR) provides the opportunity for comparison between investments and other benchmarks (Aernoudt, 2005; Mason & Harrison, 2002; Wiltbank, 2005; Wiltbank & Boeker, 2007). IRR is the discount rate that equates the present value of the expected or actual cash outflows with the present value of the inflows of cash (Kaplan, 2003). However, angels and angel groups do not track IRR in a consistent manner, and many do not track return rates at all (Wiltbank, 2005). Mason & Harrison (2002) provide one of the few studies examining informal investment performance where investment is approximately £250,000/US$500,000 or less. Their study of 28 exited investments found that angel returns were negatively skewed: 34% of exits resulted in a total loss of investment and 13% generated either a partial loss or broke even in nominal terms; only 10% generated IRRs in excess of 100%. Compared to VCs, they found that business angels had fewer investments that lost money but a significantly higher proportion of their investments that either break-even or generate only modest returns.

Theoretical Model
Mason (2007) identifies the need for stronger theoretical foundations in business angel research that apply to business angel syndicates (BAS). Syndications have been understood as a means to gain access to deal flow (Manigart et al, 2006), to diversify risk (Sohl, 2007; Bygrave & Timmons, 1992), to improve investment selection (De Clercq et al, 2007; Brander et al., 2002) and to mobilize competencies (Hochberg et al, 2007). In this paper, we identify limitations on existing theories and suggest the relevance of ‘theories of the firm’ and network theory to further explain the phenomenon of a ‘manager-led’ angel syndicate. We propose a theoretical framework that includes network theory and four theories of the firm: institutional theory, resource-based theory, nexus of contract theory and
We suggest that a BAS is a type of social institution that undertakes particular practices and generates market influence and power. Neo-institutional theory suggests that institutions are themselves potential objects for economic explanation because specific rules, norms and activities may enable and constrain economic activity (Langlois, 1986). While the BAS may reduce investment uncertainty for solo investors, this shared investment activity may generate a co-ordination problem (e.g. Casson, 1990). This raises the question of whether or not there is a ‘syndicate effect’ on investment performance, which will be addressed in this paper. We suggest that a BAS offers a rational substitute for the informal investment market when coordination and transaction costs of using markets becomes large relative to the costs of managing markets by solo investors (Alchian & Demsetz, 1972; Coase, 1937). We therefore view the BAS as a social institution and market mechanism that can minimise transaction costs and search costs through rational allocation of knowledge resources to identify, manage and support promising investments (i.e. to their most highly valued uses, e.g. Demsetz, 1988).

We suggest that a BAS co-ordinates and integrates tangible (financial capital, information systems) and intangible resources (human skills, knowledge, brand power) (Chandler & Hanks 1994; Penrose, 1959) and manages an organisational culture (Framholtz 1995) on behalf of its investors. We suggest that a BAS offers ‘capabilities’ to deploy resources using organisational processes, which we expect to observe developing over time – in anticipation of and in reaction to changes in the market (e.g. Amit & Schoemaker, 1993) and resulting from its own investment performance. We also identify the relevance of network theory and acknowledge work by Kelly and Hay (2000) suggesting that business angels with the best networks in place are alerted to the best investment opportunities. We suggest that a BAS leverages the interconnectivity of different networks of investors and derives value from these networks to benefit solo investors and their portfolio of companies (e.g. Koka and Prescott, 2002) by managing these networks and acting as a central knowledge node (e.g. Burt, 1992). Finally, we suggest that a BAS coordinates transactions and minimises the ‘incentive problem’ arising when solo investors must identify, manage and monitor their investments and undertake legal and other contractual activities. Nexus of contract theory would suggest that the BAS arises in response to the ‘co-ordination problem’ associated with separate production functions or division of labour of the solo investor (e.g. Jensen & Meckling, 1992; Langlois, 1991; Casson, 1982; Coase, 1960).

**Background to Research**

In reviewing the literature, we identify three problematic limitations associated with research on business angel syndicates that we wish to address in our study. First, accurate assessment of investment returns and BAS performance is challenged by issues of confidentiality and inconsistent BAS investment data capture and returns reporting. Various attempts at extrapolating investment returns have relied primarily on self-disclosed survey data, raising concerns over data reliability and validity of findings (e.g. Shane, 2007; Mason, 2007; Wright et al, 2006). Second, reported investment returns are usually presented as simple output measures that fail to account for potential effects of investment management or external market conditions. Third, little attention has been paid to the BAS as a market mechanism providing investment management on behalf of solo investors. In consideration of these observations, we identify the need to examine a full set of BAS investment data to establish the scale and scope of BAS investment activity and to accurately calculate investment returns. We also identify the need for more longitudinal study and participant observation to examine the BAS as a social phenomenon and explore the relationship between BAS development, investment performance and investment management activities over time.

To guide the research, we posed six interrelated research questions that attempt to address previous methodological issues and permit new insights on business angel syndicates:

Q1: What is the aggregate investment performance of a business angel syndicate (BAS) and what does this reveal about investment flow to entrepreneurs, returns to investors, investment trends, deal characteristics and syndicate growth?

Q2: How does investment performance affect BAS development? Does performance stimulate definitive phases of BAS growth over time?

Q3: Does BAS success and longevity depend primarily on investment return performance or are there other contributing factors?
Q4: Where does a BAS offer advantages over solo angel investing in the investment management process (i.e. pre-investment, investment, post-investment stages)?

Q5: Does BAS portfolio and investment growth negatively affect new investment activity? If so, what are the implications for BAS investment management?

Q6: In consolidating findings, is there evidence to support our BAS model?

To address these questions, we undertook a two-year investigation of one of Europe’s largest and oldest business angel syndicates and analysed 16 years of detailed archival data that includes 63 investment deals undertaken during this period. The next section provides an overview of the qualitative research method used in this study. We then present our findings and discuss the practical and theoretical implications of our results. Finally, we offer conclusions to the paper and recommendations along with limitations to the research.

**METHOD AND DATA**

To answer the research questions and address the methodological problems outlined above, we chose an exploratory case study research design, most appropriate for investigating phenomena that are poorly understood and difficult to measure (Yin, 2003; Eisenhardt, 1989). We follow process evaluation guidelines described as most relevant for ongoing assessment of perceptions of people, the context or ‘milieu’ where they are found and the less understood external factors affecting an organisation (e.g. Gregory & Martin 1996; Patton 1987). We deploy participant observation to explore the ‘tacit’ component of knowledge that resides in people and relevant data sources external to the business angel syndicate (Vincenti, 1990). The study employed a Kauffman Fellow (KF) from the US-based Kauffman Foundation who became a participating member of the syndicate management team for a two-year period. The KF had unlimited access to investors and the management team of the syndicate during the study. This was critical to the research, as most data on investments and returns were in the possession of syndicate management. The role of the KF as a member within the management team also ensured that syndicate data would be handled sensitively.

**Data Collection**

All available investment files (63) and relevant internal data sources were examined during the study. Most investment data were in files, but in some cases, data was missing or incomplete. In those cases, the KF obtained data either from an angel making the investment or from the management of the company in which the investment was made via email or phone call. Internal rates of return (IRR) were required to determine investment performance but were not available and needed to be calculated for the study. We adopt IRR as a performance measure for investment exits, given that the few studies of angel investment returns use IRR as a measurement of investment and portfolio return (and IRR is the preferred method in VC financing for measuring investment effectiveness). The KF created a “learning log” of observations and insights during the study that were focused on capturing the investment management processes which were in practice but had not been codified or documented. Information on BAS investment processes was obtained through the KF attending meetings of the investment group, by the KF participating in the steps of the investment processes, and from internal data collection mentioned above. This information was triangulated with results of interviews with investors and members of the executive team, who provided feedback on study findings as they emerged. To establish the differences in investment management between successful and unsuccessful investments, files of 11 successful and 28 unsuccessful companies in the portfolio were examined.

**FINDINGS**

Q1: What is the aggregate investment performance of a BAS? What does this reveal about investment flow to entrepreneurs, returns to investors, investment trends, deal characteristics and syndicate growth?

Figure 1 summarises syndicate investment performance. The syndicate provides equity in seed and early-stage deals that range from £300k to £1m. We find that, with few exceptions, syndicate investments have been made into early stage companies (pre-revenue and pre-sales) without formalised structures or management. Over 16 years, the syndicate has made 63 investments, with 8 exits, 3 dividend-paying investments, 25 failures, 4 moribund, and 23 active companies. Syndicate performance is almost 1:1 for active/exited (IPO and trade sale)/dividend paying companies (55%) versus failed/moribund companies (45%). A total of £50.7m has been invested by the syndicate in total, made up of £23.4m in active companies and £20m in exited companies (floats, trade sales, dividends), with £7.3m loss in failed/moribund companies. An average of £615K has been invested (excluding the 3rd IPO (OPTS) in 2006) with an average of 4 investment rounds per company. There is a focus more on products (69%) than services (31%). The size of the syndicate grew from 2 syndicate co-founders in 1992 to over 100 investors by 2008, with an average deal involving 22 angel investors. A total of 11 spin-outs from universities and the National Health Service (NHS) have been supported.
to date, representing 17% of investments. We find a strong leveraging effect of syndicate investment, with an additional £35m raised from ‘other’-investors.

**Figure 1: Syndicate Investment Activity & Performance (1992-2008)**

<table>
<thead>
<tr>
<th>Investment</th>
<th>£ Investment</th>
<th>Investment %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>£23.4m</td>
<td>37%</td>
</tr>
<tr>
<td>Exited</td>
<td>£20m</td>
<td>18%</td>
</tr>
<tr>
<td>Trade Sale</td>
<td></td>
<td>8%</td>
</tr>
<tr>
<td>Flotation</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Dividend</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Loss</td>
<td>£7.3</td>
<td>45%</td>
</tr>
<tr>
<td>Failed</td>
<td></td>
<td>39%</td>
</tr>
<tr>
<td>Moribund</td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>Total Amount invested (by BAS)</td>
<td>£50.7million</td>
<td>100%</td>
</tr>
<tr>
<td>Co-investments with other Investors</td>
<td>£35million</td>
<td></td>
</tr>
<tr>
<td>Total Investments</td>
<td>£85.6million</td>
<td></td>
</tr>
</tbody>
</table>

**Investment by Sector**

<table>
<thead>
<tr>
<th>Sector</th>
<th>% of Portfolio</th>
<th>Investment %</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT</td>
<td>39%</td>
<td>31%</td>
</tr>
<tr>
<td>Life sciences</td>
<td>27%</td>
<td>35%</td>
</tr>
<tr>
<td>High tech</td>
<td>16%</td>
<td>26%</td>
</tr>
<tr>
<td>Other</td>
<td>16%</td>
<td>4%</td>
</tr>
<tr>
<td>Holdings</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Summary of Investment Activity**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of investments</td>
<td>63</td>
</tr>
<tr>
<td>Number of total co-investments with Scottish Enterprise</td>
<td>27 (43%)</td>
</tr>
<tr>
<td>Number of investments involved venture capital</td>
<td>11 (17%)</td>
</tr>
<tr>
<td>Number of investments in university spin-outs/NHS</td>
<td>11 (17%)</td>
</tr>
<tr>
<td>Average size of investment (all rounds)</td>
<td>£615k</td>
</tr>
<tr>
<td>Average number of rounds per investment</td>
<td>4</td>
</tr>
<tr>
<td>Average number of angel investors per investment</td>
<td>22</td>
</tr>
<tr>
<td>Average number of investments per year</td>
<td>3.7</td>
</tr>
<tr>
<td>Estimated number of jobs created in portfolio companies</td>
<td>800</td>
</tr>
<tr>
<td>Overall Investment Performance</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2: Summary of Profitable Exits (n=6)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Company/sector</th>
<th>Exit type</th>
<th>Return</th>
<th>IRR</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>OST/</td>
<td>Trade sale</td>
<td>10.8X</td>
<td>84%</td>
<td>Sold to NASDAQ-listed company</td>
</tr>
<tr>
<td>1999</td>
<td>SS/</td>
<td>Trade sale</td>
<td>9.3X</td>
<td>69%</td>
<td>Sold to NASDAQ-listed company</td>
</tr>
<tr>
<td>2001</td>
<td>TSL/life sciences</td>
<td>IPO</td>
<td>3.5X</td>
<td>356%</td>
<td>AIM flotation</td>
</tr>
<tr>
<td>2003</td>
<td>AS/protective attire</td>
<td>Trade sale</td>
<td>1.3X</td>
<td>10%</td>
<td>MBO</td>
</tr>
<tr>
<td>2005</td>
<td>SCS/life sciences</td>
<td>IPO</td>
<td>1.7X</td>
<td>41%</td>
<td>AIM flotation</td>
</tr>
<tr>
<td>2006</td>
<td>OPTS/medical device</td>
<td>IPO</td>
<td>7.5X</td>
<td>41%</td>
<td>First investment to be listed on London Stock Exchange</td>
</tr>
</tbody>
</table>

Figure 1 shows historical investment spread across technology sectors. Although IT is the largest sector by company (39%), life sciences is the largest by total level of investment (35%). In 2008, life science investment as a percentage of current investment increased to 56%, while the number of portfolio companies by sector became more evenly distributed between life sciences, IT and high tech (35%, 31% and 26% respectively). Figure 2 summarises the syndicate’s profitable exit performance (1992-2008) showing 2 trade sales, 3 IPOs and one management buy-out (MBO).

**Figure 3** shows syndicate growth since 1992, represented by the number of new investments, failures, exits and portfolio size over the period 1992-2009.

Q2: How does investment performance affect syndicate development? Does performance stimulate definitive phases of syndicate growth over time?

Figure 3 shows syndicate growth since 1992, represented by the number of new investments, failures, exits and portfolio size over the period 1992-2009.
We describe the syndicate’s first five years (1992-97) as the ‘organic’ development phase. Only one investment was made in 1992 - in a ‘driven entrepreneur’ who had a vision of bringing an innovative, disruptive technology to the medical device sector. This venture would become the 3rd flotation for the syndicate 13 years later. Co-founder A states that “an understanding that our co-investment activities constituted ‘angel investing’ did not occur until a year after our first investment.” The co-founders attracted a small number of informal investors from their networks of friends and acquaintances, resulting in 10 investments, with one failure. We find that this loose association of new investors joining the syndicate was not driven by a need to expand membership in order to increase the size of investment deals, but rather in response to an increasing number of smaller investment opportunities.

We describe the next two years (1998-99) as the ‘early harvest’ phase, with two trade sales to NASDAQ-listed companies providing sizable returns (see Figure 2). A robust and growing IT sector in the US and the fact that both portfolio companies were selling into the US market are identified as contributing factors to the success of these exits.

In 2000, the syndicate experienced 3 failed exits and difficulties in following existing investments with follow-on funding, identifying for the co-founders the limitations of co-investing with a small number of investors. Two external events, the dot.com crash and genomics bubble, are identified as adversely affecting the syndicate’s investment portfolio during this time. Co-founder A states: “we needed to get more help, and contemplated calling it a day, as we couldn’t invest in any more new businesses.” The response from the corporate solicitor - who had originally introduced the co-founders to each other - and other investors was that the syndicate had become a force for good in the economy and had built up a recognised brand. It was at this point that the co-founders first recognised themselves as a business angel syndicate and recognised the value of their investment activities.

The co-founders appointed a chief executive officer (CEO) who was well-known to them and was also one of their investors. The first task of the new CEO was to “get the rulebook right - without destroying in any sense the informal nature of the syndicate” (Co-founder B). The CEO introduced more formal and detailed pre-investment, investment and post-investment activities (see Q4), improved how investment documents were organised and professionalized investor membership management. The CEO also took a lead role in recruiting high net worth individuals who shared the co-founders investment philosophy and inviting them to learn more about the syndicate. The co-founders took an active role in promoting the syndicate and evangelising the benefits of becoming an angel investor. We find that new investors performed their own due diligence on the syndicate prior to joining. One prominent investor (who would later become syndicate chairman) spent half a day in the
syndicate office, reviewed term sheets of past deals and talked with the CEO and then visited a number of syndicate companies before agreeing to join. We describe the 2000-01 period as the ‘operational systematisation’ phase of syndicate development, characterised by the acknowledged need by the co-founders for a higher level of professionalism to be applied to the investment process and to investor membership management. During this period, the syndicate evolved from a partnership of informal investors to become an ‘informal club’ of investors. The year 2001 was also a significant milestone in syndicate development as it realised its first floatation on AIM in the life sciences sector.

We identify two important public interventions that aided syndicate development during this period. The UK’s Financial Services and Management Act 2000 facilitated the syndicate’s expansion, providing legal guidelines on doing business with others who are qualified as high net worth individuals or as sophisticated investors. The Act allowed the syndicate the freedom to bring on more investors and to discuss investment in a more open manner than previously. The second factor was LINC Scotland, a government-funded agency formed in 1993 to support angel activity and who offered assistance in covering expenses related to expansion of investor management operations. We describe the 2002-04 period as the ‘consolidation phase’, characterised by a low level of new investments and a high failure rate (10 in total). Yet, syndicate performance during this period does not account for portfolio management activities involved in supporting two IPOs that would come later, in 2005 and 2006. We describe the 2005-06 period as the ‘late harvest’ phase, with two IPOs: SCS, another life science company listing on AIM; followed by OPTS, the syndicate’s first investment to be listed on the London Stock Exchange (main exchange). Since 2007, the syndicate appears to have entered a ‘second consolidation phase’, with a low level of failures, low level of new investments and significant investment tied up in the active (existing) portfolio (£20.1m committed to 12 companies). Implications on new investment activity during this phase will be further discussed in Q5.

Q3: Does syndicate growth and longevity depend primarily on investment return performance or are there other contributing factors?

We find evidence that investment return performance has strongly influenced syndicate growth, firstly, through the realisation by syndicate co-founders that angel syndication was profitable, and secondly, through the attraction and retention of a large number of solo investors and highly qualified syndicate managers. However, we identify other important contributing factors. A second factor is an explicit investment philosophy offering a clear focus to syndicate investment activities and guidance for new investors since 1992, when two individuals (co-founders A and B) identified an opportunity to pool their resources and invest in promising local business ideas. The two did not know each other, but were introduced by a well-known corporate solicitor whose legal firm is prominent in supporting early stage business and mediating investment deals in the UK. Both had retired from respective business positions, and co-founder A stressed that he did not want to be a business executive again. The concept of trust - of each other and of the intermediary - is identified by co-founders as a critical element in the decision to undertake co-investment activities.

The syndicate’s original ‘four pillars’ philosophy, created by the co-founders, includes: put something back into the economy; support young enterprise; have fun; and make money. The ‘four pillars’ philosophy resembles individual motivations driving solo angel investment, as suggested by Robinson and Van Osnabrugge (2000). The co-founders then established four guiding principles for the types of investments they would pursue:

1. To invest in new businesses that would benefit from their combined business experience and would accept their commercial guidance;
2. To find investments offering high returns (“can this company make a million?”);
3. To only invest in businesses less than 1.5 hour drive away (“to go fix any problems”);
4. To avoid lifestyle businesses but avoid being narrowly focused only on a few sectors.

We observe that the profile of syndicate co-founders does not match any of the three angel types (entrepreneur, income-seeking, wealth-maximising) suggested by Coveney & Moore (1998). We suggest that the co-founders represent another type of angel that we term experimental angels: which we describe as ‘not yet committed, potential angel investors who pool their money and business experiences to seek local, high-return investments and who become committed angel investors if their co-investment experiences and investment returns are perceived as positive.’ A third factors relates to the socio-cultural conditions that favour angel investing and angel syndication which include: 1) Scotland is a small country, densely networked, that facilitates knowing a large network of people and getting information quickly; 2) a distinct Scottish identity facilitates a focus for investing in Scottish entrepreneurs; 3) Scotland has a large number of wealthy individuals. A fourth factor is evidence identifying the valuable contributions of public intervention to syndicate development. The importance
of the Scottish Co-Investment Fund (SCIF) to syndicate growth cannot be overstated, with 43% of all syndicate investment deals involving the SCIF (Figure 1). The introduction of the Financial Services and Management Act 2000 facilitated growth in the syndicate’s investor base and assistance from LINC Scotland allowed the syndicate to professionalize its investment management activities (see Q2). 

Q4: Where does a BAS offer advantages over solo angel investing in the investment management process (i.e. pre-investment, investment, post-investment stages)?

In order to answer this question, we needed to capture an investment management process that existed in practice, but that had not been codified or formalised. We also needed to understand the relationship between the syndicate and solo investors. We find that the syndicate does not have a fund, is not a regulated financial institution and does not provide financial advice. As a result, each investor is responsible for making an individual decision to invest under common terms and is certified as a ‘sophisticated investor’ who understands the risks associated with early-stage investing. Co-founder B states: “our investors tend to invest with money that they can afford to lose”. The syndicate charges members a percentage of their investment only if they invest. Registered investors can serve on boards as well as working with the management team in strategic planning and fundraising. This is complemented by an extensive network of professionals and advisors that are generated and managed by the syndicate executive team. There are approximately 105 investors now registered with the syndicate, who represent a diverse group of local business leaders with experience in funding and building successful companies and high net worth individuals.

The syndicate is managed by an executive team of 3 people - a chief executive, accounts manager and office secretary – who are responsible for deal sourcing, due diligence, negotiations, initial fundraising, post-investment monitoring and mentoring, and follow-on fundraising. The executive team also liaises with new and existing syndicate members, as well as advisors and other support providers that work with the portfolio companies. The executive team is funded by a combination of fees that arise from investments and from some operational funding from LINC Scotland. Two regularly scheduled events are held annually and managed by the executive team: one event focused solely on investors and another event with a cross section of investors, companies and key members of the business community. Both events are identified as valuable benefits of membership by investors. The syndicate has a board of 5 core (or inner circle) members (2 of whom are the original syndicate co-founders) who lead all syndicate investments. The core and executive share the responsibility of building relationships with investors and policy makers and of developing networks with the wider business community to ensure outreach. We find that the inner circle of investors must share common investment principles; therefore, like-minded people are recruited as the syndicate’s ‘professional investors’, rather than a diverse and eclectic mix of investors. One core investor suggests that “most investors of the inner core are hard-nosed regarding their investments and are seeking healthy returns, but there is a sense of supporting local companies”. We thus define the syndicate in this study as ‘manager-led, core-member-driven’, rather than ‘manager-led, member driven’ as suggested by Preston (2007).

We now consider the pre-investment, investment and post-investment management processes. We identify a 7-stage pre-investment management process, where deals are sourced and screened by the executive team and the most promising opportunities are invited to present to the team. If due diligence is positive, then the entrepreneur presents to the core members and receives an indication of the syndicate’s interest. The syndicate has a policy of not charging entrepreneurs to present. Approximately 1% of the 250+ business plans received annually are funded. We find that the syndicate applies a 5-point due diligence ‘check-list’ to all new investments: 1) Market – macro (size, growth rate, concentration, barriers to entry), micro (economics, customers, segmentation); 2) Management – vision, experience (quality, quantity, relevancy), education, track record, capability; 3) Methodology – business model, value proposition, distribution strategy, competitive differentiation, growth strategy, technology; 4) Money – financial strategy, capital requirements, structure, valuation, liquidity path, use of proceeds; and 5) Metrics – P&L (sales forecast, expense forecast, margins), balance sheet, cash flow, budget, share capitalisation table.

We identify a 9-stage investment management process where the 5 core members must first reach consensus on any investment opportunity put forward to the wider membership (e.g. outer circle). A deal that passes this stage of the process has at least £100k committed by the core members (£20k each) and often more. At this point the executive team works with the entrepreneur to negotiate the investment terms, and the deal is then presented to the members along with the backing of the core group. The company then is invited to give a final presentation to the wider group. The rule requiring inner circle consensus on any investment arose when the syndicate began involving a second circle of
investors, i.e. during the organic phase of syndicate development (1992-97). As the syndicate is not allowed by law to make investment recommendations, consensus by the ‘inner circle’ may nevertheless provide a signal to other investors on the credibility of a potential investment. However, we observe that this two-ring investment process must be managed carefully within the syndicate, since the core investors are able, in some cases, to cover a high potential investment themselves and avoid opening the investment up to the wider membership. One core investor states: “this can be a bit unfair, because if the word gets out that we cash in on good deals, we could destroy the relationship with other investors”. We identify a 4-stage post-investment process which begins with the syndicate appointing a director to the board, sourced either from the core members, wider group or outer network, who will work with the company to define critical business milestones. A plan will be put in place to address any missing elements from the business, e.g. management, partners, etc.

We find that the syndicate’s structure and investment management process offers particular advantages over solo investing. At the pre-investment stage, the syndicate offers superior breadth and depth of knowledge that can be brought to bear on due diligence. The syndicate rarely spends money on external due diligence and relies heavily on the judgement of its executive management team, inner circle of investors and wider circle of friends and acquaintances. This broad network provides two essential functions: 1) pre-investment information on the companies and those involved; and 2) non-executive directorships for new and existing companies. At the investment stage, we suggest that consensus by the inner core offers a significant ‘de-risking’ of potential investments for solo investors and particularly for passive investors. At the post-investment stage, we identify three advantages for solo investors. The first advantage is the formal monitoring of company performance which includes assessment of company accounts and reports by one of the executive team; a chartered accountant. Each company is contacted on a monthly basis to discuss their performance, and the accountant assesses potential issues and challenges reflected in the numbers. He will notify the CEO and/or the company board of any particular problems. Problems may include a dispute between directors, a company staffing issue or a financial difficulty. A report on every syndicate company is generated each month, that includes a financial results and brief on what is happening. This report is provided to the monthly board meeting. The second advantage, particularly with a large syndicate is the extensive ‘gene-pool’ available to take board positions on new investments. The syndicate now insists on the right to appoint two directors, rather than one director as was in the past. Co-founder B makes it clear that that “these directors don’t represent anybody, but are focused on making the business a success.” The syndicate does not impose anyone on their companies, given that these companies are small and team oriented, and the board is expected to work as a team. We suggest that a third advantage for solo investors is in managing risk by sharing a collective ethos with other investors regarding exits. The syndicate promotes itself as patient investors and will rarely force an exit, with its most successful exit (IPO in 2006) taking 13 years. Co-founder B states: “for every 10 investments, he expects 4 to fail, 2 to be highly successful and the remainder somewhere in the middle.” Syndicate policy regarding exits is to follow the wishes of the company promoters. Co-founder B states that the syndicate will not operate impersonally like a “dragon’s den” and will allow the company management team to solve its problems. In rare cases, syndicate management may be required to engineer a change of management. This may arise when company managers perceive syndicate monitoring as a control mechanism, leading in some cases to confrontation and conflict. In other cases, company managers themselves may instigate a change in management. In the case of the syndicate’s 3rd IPO in 2006, the founder and syndicate CEO instigated a move to find and subsequently recruit a new company CEO.

Q5: Does portfolio and investment growth negatively affect new investment activity? If so, what are the implications for investment management?

In order to answer this question, we began by examining the current portfolio (2008). We find that 12 of the 23 active companies have investments of £1m (representing £20.1million), from which an additional £15m has been raised from other investors for a total £35.2m. The majority of these 12 companies are in life sciences, where more time is usually required to exit than IT or high tech companies. Recent syndicate performance shows an increasing trend towards both the amount of investment and the number of rounds required per company, as described in Q1. While this suggests a potential constraint in the syndicate’s ability to provide new investments, we examine data related to new investments over the past 7 years to generate a clearly picture; from 2002, when investment management became more systemised. Figure 4 shows a 6-year decline since 2004 (7) in the number of investments into new companies (4 in 2005, 3 in 2006 and in 2007, one in 2008 and none in 2009) compared with the average of 3.7 investments per year over a 16-year period (1992-2008).
We consider investment data in the context of descriptions of market conditions at the time to identify:

high follow-on funding demand from portfolio companies (2006); poor market conditions for trade sales (2007); poor demand combined with poor credit conditions in the market (2008); and lack of debt financing for growth (2009). A smaller number of larger new deals are identified in 2007 (£1.17m over 3 deals) and 2008 (750k for one deal). While acknowledging market effects on performance, we identify other effects potentially constraining new investment deals. At the pre-investment stage, syndicate growth and success has generated a larger number of disclosed opportunities but has resulted in a higher level of selectivity. This contrasts to the early 1990s, when the co-founders scrutinised a small number of deals, and invested in a higher proportion of the deals. With this came a larger number of failures, but also some spectacular successes (Figure 2). At the investment stage, syndicate growth, as measured by new investors, has increased investment capacity to invest in larger deals, but has generated greater demand for follow-on funding from a growing portfolio, with less funding available for new deals. Of the £20.1m invested in the active portfolio, approximately 71% (£14) is invested in companies that are five years or older. While this is hardly surprising for a portfolio biased towards life sciences, we observe a trend towards a greater number of investment rounds per company (4.7 in 2008 vs. 16-year average of 4), suggesting the ‘longer time to exit’ nature of life sciences investment. We identify two potential sources of constraint on new investment arising from a “patient investor” philosophy and “light-on-the-reins” approach post-investment. One is the problem of providing follow-on funding when companies have diverted from originally agreed plans or not met agreed milestones. Another problem may relate to the challenge of managing a growing portfolio (biased towards life sciences) in the absence of time-constrained investment (as with VC funds).

Summary of Findings

We summarise our findings on the four research themes guiding the paper. In examining BAS aggregate investment performance, we find that over 16 years, the syndicate has invested in 63 entrepreneurial ventures, with an average investment of £615k, involving 22 investors and 4 rounds of funding. The majority of ventures have been product-based (69%) vs. service-based (31%), with 39% from the IT sector, 27% from life science, 16% from high tech and the remainder representing other sectors, with life science the predominant sector by amount invested. Syndicate investment performance identifies 18% exits (£20m), 45% losses (£7.3m) and 37% active (£23.4m) in the portfolio. We find strong evidence of the effect of public programmes on syndicate investment activity, with 27 investment deals (43% of total) involving the SCIF. In finding a strong leveraging effect of syndicate investment, with an additional £35m raised from co-investors, we see that 17% of total investment has involved venture capital. We find a significant local economic development role played by the syndicate, with over 800 new jobs generated through the 63 investments.

In examining how investment performance may affect syndicate development, we identify six distinctive phases of syndicate development over 16 years: organic development (1992-97); early
harvest (1998-99); operational systemisation (2000-01); 1st consolidation (2002-04); late harvest (2005-06); and 2nd consolidation (2007 - ). We also suggest three broader development stages: informal partnership, informal club of investors and professional syndicate. Not surprisingly, we find that market conditions affect portfolio harvesting (e.g. strong US IT market during the early harvest phase) and consolidation phases (e.g. dot.com and genomics bubbles). However, we find that investment activity, not simply investment performance, affects syndicate development. During the ‘organic phase’, for example, we find that new investor recruitment was not driven to increase funds to invest in larger deals, but rather in response to an increasing number of smaller investment opportunities arising as the syndicate’s reputation attracted more interest from local entrepreneurs.

We find evidence that investment return performance alone cannot account for syndicate longevity and success. The original ‘four pillars’ philosophy and four principles guiding investment activity influence syndicate recruitment and retention (investors and syndicate managers) and contribute to a strong brand, reputation and high level of goodwill for the syndicate locally. Syndicate growth has been positively influenced by local socio-cultural conditions that favour angel investing and angel syndication and by important public interventions (SCIF, Financial Services and Management Act 2000, LINC Scotland). In mapping out the investment management process to assess where a BAS offers advantages over solo angel investing, we find that the BAS offers comprehensive support in deal sourcing, due diligence, negotiations, initial fundraising, post-investment monitoring and mentoring, and follow-on fundraising; offers a level of de-risking on potential investments; and offers formal, regular investment monitoring. Particular advantages of a large syndicate for solo investors include the breadth of knowledge that can be brought to bear on due diligence and the extensive ‘gene-pool’ available to take board positions on new investments.

In examining the effect of portfolio and investment growth on new investment activity, we find evidence that active portfolio size biased in life sciences may negatively affect new investment activity. We observe a 6-year decline in the number of new investments and find an increasing trend towards both the amount of investment and the number of rounds required per company. At the pre-investment stage, the syndicate’s size and reputation have attracted more investment opportunities but has also resulted in a higher level of selectivity. At the investment stage, syndicate growth, as measured by new investors, has increased investment capacity and the ability of the syndicate to invest in larger deals, but has generated a greater demand for follow-on funding. At the post-investment stage, we suggest that a “light-on-the-reins” approach to investment management and a large portfolio biased towards life sciences - in the absence of time-constrained investment (as with VC funds) – may reduce pressures to exit that affect new investment. From our findings, we suggest that the syndicate adopt a more in-depth review of portfolio management teams to ensure that companies have access to the right skills and knowledge required to build growth and be less forgiving if management milestones continue to be missed. Another recommendation is to implement an annual review of companies as a ‘deep dive’ into the strengths, opportunities, issues and risks facing the company, and assemble a strategic team with independents that are not closely involved with the business and/or investment. Finally, the syndicate should devise a mechanism to align management remuneration with projected investment returns, and implement a consistent model across all portfolio companies. Finally, more consideration of possible exit strategies with portfolio companies should be considered.

Limitations
The study is limited by the fact that data was obtained from a single business angel syndicate. Thus, it is not possible to generalise the findings across the sector as a whole. We have not presented detail on individual investor returns in order to ensure anonymity of solo investors in the syndicate. We also acknowledge the fact that evidence from a larger sample of solo investors of the outer circle was not generated in the study relating to BAS advantages over solo angel investing (Q4).

Conclusions
To the best of our knowledge, this paper is the first to provide an accurate aggregate measure of BAS investment performance and to consider how investment activity over time has influenced and been influenced by BAS development, investment management activities and external factors. Our findings offer a number of contributions. We identify BAS success with investment performance, longevity and recognised contribution to economic development. We suggest the following BAS ‘critical success factors’: the need for regular exits, recycling of profits, patient investor base, competent professional management and solid, reputable market brand. The paper makes three important points about the performance – development relationship of a business angel syndicate. First, syndicate growth has increased investment capacity, leading to larger deals, but a large life science portfolio, requiring greater follow-on funding, more investment rounds and longer times to exit, have resulted in a contraction of investment into new entrepreneurial ventures. Second, while acknowledging the ‘patient
investor’ and “light-on-the-reins” approach to post-investment management (e.g. differentiating angels from VC), we suggest that such an approach, combined with a large active life sciences portfolio and absence of time-constrained investment, may also reduce pressures to exit that affect new investment. Third, we observe an upward trend of failures as the portfolio reaches 26, at a time when the syndicate professionalized its investment management, recruited more investors and had its first flotation on AIM (IRR of 356%). Does this suggest an optimal syndicate size for managing investments? Finally, a small number of large investment returns can establish a strong reputation as an entrepreneurial financier in a local economy, despite a high level of failures and low level of new investments. Findings have important policy implications, for we find that a larger, more successful BAS is likely to reduce its number of new deals and to avoid smaller deals, potentially contributing to an equity gap at the low end of investment. The syndicate is no longer the dominant players in funding new ventures in Scotland. We suggest a need, therefore, to encourage the formation of new angel syndicates whose early lifecycles are likely to parallel that of the syndicate in this study; namely sourcing from a small number of deals and investing in a higher proportion of the deals assessed. In consolidating findings, we find evidence to support our ‘manager-led’ BAS model. Our study reveals a BAS that undertakes particular practices, rules, guidelines and norms and generates market influence (neo-institutional theory); minimises transaction and search costs through rational allocation of investment management resources for solo investors (institutional theory); co-ordinates and integrates resources, manages an organisational culture and offers ‘capabilities’ to deploy resources that benefits solo investors (resource-based theory); minimises contractual activities for solo investors (nexus of contract theory); and leverages multiple networks to support investments (network theory).

REFERENCES


