

THE TRANSFORMATION OF THE BUSINESS ANGEL MARKET: EVIDENCE FROM SCOTLAND

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ABSTRACT.

Business angel investing – a key source of finance for entrepreneurial businesses – is evolving from a fragmented and largely anonymous activity dominated by individuals investing on their own to one that is increasingly characterised by groups of investors investing together through managed angel syndicates. The implications of this change have been largely ignored by scholars. Based on research in Scotland, which has experienced a particularly rapid growth in angel groups, the paper examines the following issues: the drivers of this change, the characteristics of the groups; their investment activity and outcomes; the investment process of angel groups; and the characteristics and role of group ‘gatekeepers’. The paper concludes with an assessment of the impact of this growth of angel groups on the economy and considers the implications for other regions and countries.

Key words: entrepreneurial finance, business angels, angel groups, angel syndicates, regional development

INTRODUCTION

It is widely accepted that business growth should be based on equity rather than debt finance. In practice, the funding for each stage in company growth is typically associated with a particular source. Businesses initially get started on the basis of the personal finances of the founder/founding team (including the owner's 'sweat' equity) and their family and friends (the "3Fs"), and then access business angels, venture capital, development capital and ultimately public markets in order to finance their growth. This has typically been conceptualised as a funding escalator. Although this model can be criticised for being oversimplistic it is nevertheless the case that, at least in the US, a significant proportion of firms which raised venture capital had previously raised finance from business angels (Freear and Wetzel, 1990; Madill et al, 2005) while 52 firms (8%) achieving a NASDAQ listing between 2001 and 2007 had previously raised funding from both business angels and venture capital funds (Johnson and Sohl, 2012). However, this funding escalator no longer functions effectively. Changes in the supply of institutional finance which have been observed for at least the past thirty years (Bygrave and Timmons, 1992; Gompers and Lerner, 2001; Mason, 2009a) have involved a shift from classic venture capital, which specialises in investing new capital in young growing companies (Bhidé, 2008; Lerner et al 2012), in favour of private equity which invests in established companies to buy out their existing owners and restructure their activities with the intention of making them more efficient. One of the consequences has been that business angel-funded businesses are less likely to be able to raise follow-on funding from venture capital funds, thereby compromising the so-called 'relay race' of financing a growing business "in which angel investment runs the critical first leg of the race, passing the baton to [the] venture capital [fund] only after the company has begun to find its stride" (Benjamin and Margulis, 1996:71). There has also been a decline in the number of IPO listings in the post-bubble era (since 2001), notably amongst smaller

companies (Mason, 2011). This is attributed to a variety of factors: an array of regulatory changes designed to advance low cost trading, which unintentionally removed the value components that are required to support the market, and smaller caps in particular, such as quality sell side research, capital commitment and sale (Weild and Kim, 2009; 2010); lack of investor interest in small caps; and the preference of venture capital funds to exit via a trade sale rather than an IPO (Bessler and Seim, 2011).

Given the geographical concentration of private sources of venture capital in core regions (Mason and Harrison 2002a; Zook 2004; Mason, 2007) the funding escalator is at its most dysfunctional in peripheral regions, where public sector-backed venture capital funds have sought to fill this gap (Murray, 1998; Mason and Pierrakis, 2013) but with limited effectiveness (Murray, 1998; 2007; Nightingale, et al, 2009; Lerner, 2009). As a result, business angels are now playing an increasingly important role in financing new and young businesses, as well as supporting them through their hands-on involvement.

The importance of business angels in supporting the development of a dynamic entrepreneurial economy has been recognised by both national and regional governments in various countries. Angel investment activity is encouraged in a variety of ways, notably through tax incentives and support for business angel networks and other types of intermediary which 'introduce' angels and entrepreneurs seeking finance to one another (Mason, 2009; OECD, 2011). This has brought business angel investing into the realm of economic development, giving government a legitimate interest in what would otherwise be a private activity. The different objectives of investors and economic development agencies creates a potential source of tension, an issue that we revisit in the conclusion.

The starting point for this paper is that this key source of entrepreneurial finance -- business angel investment -- is changing from an atomistic, fragmented and largely invisible market comprising almost entirely individuals investing on their own or in *ad hoc* small groups to one that is increasingly characterised by highly visible angel groups and syndicates which consolidate and channel finance from individual investors to entrepreneurial ventures. The implications of this evolution of the angel market have been largely ignored by scholars. The consequence is that our understanding of the operation of the market remains based on studies of individual angels -- which is now only part of the overall angel market - and does not provide insights into the operation and investment activity of angel groups. This paper is the first to explicitly and systematically examine this transformation of the angel market, building on previous papers of the overall evolution of the early stage risk capital market (Harrison et al 2010), the evolution of specific business angel syndicates (Sudek 2006; Gregson et al 2013), and the emergence of the angel group gatekeeper as a new actor in the market (Paul and Whittam 2010). Based on a case study of Scotland, where this market evolution has proceeded the furthest, the paper addresses the following key issues: first, what are the implications of the growth of angel groups for the financing of entrepreneurial ventures, second, to what extent does this render redundant our existing understanding of the investment process which is derived from studies based on individual investors, and third, what is the contribution of angel investing to economic development?

THE CHANGING ANGEL MARKET

Business angels are high net worth individuals who invest their own money, either alone or with others, directly in unquoted businesses in which there is no family connection. They normally invest in the form of equity finance in the hope of achieving a significant financial return through some form of exit (although this is rarely planned when the investment is

made). Typically they will also take an active involvement in their investee businesses (Mason, 2006). Business angels are particularly important from a regional economic development perspective because the majority of their investments are local (Harrison et al, 2010b; Avdeitchikova, 2010), hence they are typically recycling and reinvesting locally-created wealth. Given the geographical concentration of venture capital investing in core regions (Mason, 2007; Mason and Pierrakis, 2013) business angels are particularly important in peripheral regions.

In the 1980s and 1990s angels operated anonymously, investing for the most part on their own or with small groups of friends and business associates in ventures that they came across through personal social and business networks. Not surprisingly, the angel market operated inefficiently, with both investors and entrepreneurs incurring high search costs in identifying one another, and often giving up as a result (Wetzel, 1986). It was very much an *ad hoc* activity for most investors and levels of professionalism were correspondingly low (Blair, 1996). Meanwhile, entrepreneurs typically did not understand how to make themselves ‘investment ready’ (Mason and Harrison, 2000; 2001). An early market intervention, pioneered in the USA (Wetzel, 1984; Wetzel and Freear, 1996) and Canada (Blatt and Riding, 1996) but subsequently adopted in Europe, was the creation of business angel networks – essentially introduction services – which provided a communication channel to enable entrepreneurs to get their investment proposal to the attention of potential investors and for angels to examine investment opportunities without compromising their privacy (Mason and Harrison, 1996a). Subsequently some of these networks also delivered investment readiness programmes (Mason and Kwok, 2010) and angel training (San José et al, 2005). The difficulties in developing a commercially viable model for this service has meant that most networks have relied on government funding, and several in the UK have

closed after losing this support. Those which operate commercially levy a fee on the investments that they facilitate. This business model requires a focus on larger deals (Mason and Harrison, 2000). Evidence on the effectiveness of networks is mixed but broadly positive (Mason and Harrison, 1996c; Mason and Harrison, 1999; 2002c; Collewaert et al, 2010).

The angel market began to transform in the late-1990s as angels started to organise themselves into groups to invest collectively. This trend has proceeded furthest in the USA. The Band of Angels, which was founded in Silicon Valley in 1995, is generally regarded as the first organised syndicate to be formed. Others, such as Tech Coast Angels (1997), Sierra Angels (1997), Common Angels (1997) and The Dinner Club (1999), soon followed (Preston 2007). Between 1996 and 2006 the number of identifiable business angel organisations in the US grew from 10 to over 250 (Preston 2007). The Angel Capital Association, covering the USA and Canada, was created in 2003 for the purposes of transferring best practice, lobbying and data collection. It now comprises 187 formal angel groups, plus some affiliate members (<http://www.angelcapitalassociation.org/directory/>). There is growing evidence of specialisation by industry sector (e.g. health care angel syndicates) and type of investor (e.g. women-only angel syndicates). In Europe, there has been a similar expansion in the angel market but, with the exception of Scotland (Harrison et al 2010; Gregson et al 2013) – which is the focus for this paper - it has evolved differently, favouring angel networks which provide mechanisms connecting angels with entrepreneurs seeking finance (Mason, 2009b). In the case of Scotland, the number of identifiable syndicates has grown from 2 to over 20 between 2000 and 2012, the most radical shift in market organisation of any region in Europe. Moreover, Archangels was founded in 1992, and so is older than its better known US counterparts. Indeed, if Scotland was a US state it would be the 11th largest in terms of angel group investment activity (Grahame, personal communication) whereas it ranks only 29th in

terms of GDP per capita. Angel groups have also emerged in several other countries, notably Canada, Australia and New Zealand (OECD 2011). However, with the exception of a handful of case studies (May and Simmons, 2001; May, 2002; Cerullo and Sommer, 2002; Payne and Mccarty, 2002; May and O'Halloran, 2003; Sudek, 2006) and some general discussion (Mason, 2006; Sohl, 2007; 2012; Gregson et al 2013) scholars have been slow to react to this organisational transformation of the angel market.

Angel syndicates have emerged for two main reasons. First, business angels have difficulties of investing alongside venture capital funds because of the investment instruments which VCs use, notably, liquidation preferences, anti-dilution rights, special subscription rights and enhanced follow-on rights. This became apparent during the dot.com crash of the early 2000s. At this time many of the companies that had been financed in the 'bubble' of the late 1990s were running out of cash. The huge fall in valuations in the crash meant that venture capitalists had to write down the value of many of the investments that they had already made. The consequence was that those companies that did raise further funding were refinanced at lower prices. As the initial investors in these businesses, angels were particularly vulnerable in these, so-called, down-rounds. Unable, or unwilling, to provide new cash their investments were typically wiped out. This resulted in angels losing trust in venture capitalists and since then many have sought to avoid investing in deals that are likely to require follow-on funding from venture capitalists, leading to a growing segmentation in the early stage risk capital market (Harrison et al, 2010a) A further difficulty is that business angels and venture capital funds have different objectives. This is particularly clear at the exit stage where, as Peters (2009) has noted, venture capital funds will refuse to exit at a valuation that is perfectly acceptable to angel investors but is below their 'hurdle rate' because it would affect their ability to raise a new fund. Second, the decline in the venture capital industry

since the dot.com crash has meant that opportunities for angels to pass on their investments to venture capital funds for follow-on funding are much more restricted, necessitating angels to make follow-on investments themselves.

These developments have prompted individual angels to recognise the advantages of working together, notably in terms of better deal flow, superior evaluation and due diligence of investment opportunities, as well as social attractions. Moreover, by grouping together they can aggregate their investment capacity and so have the ability to make bigger investments and follow-on investments, with the potential to take businesses to an exit themselves without the need for follow-on funding from venture capital funds. The ability for angel groups to achieve 'early exits' (Peters, 2009) have been enhanced by a fundamental change in 'start up economics'. It costs considerably less to start a technology business now compared with ten years ago or longer as a consequence of such developments as cloud-based software, web and social media and e-commerce platforms. When combined with lean start-up techniques to provide capital efficiency (Blank, 2005; Reiss, 2011) companies can start with little or no capital and sustain a low burn rate for some time before needing to raise external finance. This has meant that it has become more feasible for angels to finance businesses to the point where it achieves commercial feasibility, particularly in ITC sectors without the need for venture capital funding. However, businesses that are not sold at this point will require further funding to grow the business and secure customers.

Angel groups are distinctive from BANs. Table 1 highlights the differences and describes the standard design of a group. However, in practice they take various forms. The key difference is whether the person appointed to be the external face of the group and manage the

Table 1. Business Angel Groups vs. Business Angel Networks

Business Angel Group	Business Angel Network (BAN)
<p>Angel groups in the US (and in some other countries) are primarily focused on recruiting members and managing deal flow for those members. Education, social engagement, pitch coaching entrepreneurs and other activities may also be important functions.</p> <p>(1) Members are recruited to join the group, appealing to accredited investors with the deal flow and best practices offered by the network. Members are often required to sign rules of membership agreement stipulating their expected engagement (meeting attendance, participating in due diligence, annual investment numbers, etc.) and committing neither to “steal deals” nor to solicit entrepreneurs for consulting or members of business.</p> <p>(2) Entrepreneurs are solicited to pitch to the group, through websites and other networking activities in the community. A small group of members or staff pre-screen deals for presentation to the members. Investor-readiness training is seldom provided by US angel groups.</p> <p>(3) Once an entrepreneur has pitched to the members, a due diligence committee of members (and perhaps staff) is initiated, representing the group. The deal lead negotiates a single term sheet for the round of investment with the entrepreneur. Once the term sheet and due diligence are complete, the deal is offered to all members of the group for investment. In some cases, very popular deals may offer a limited investment amount or time, on a first come, first served basis. Members are investing for their own accounts, consequently members can invest larger or smaller sums, or pass on a deal.</p> <p>There are several models for managing angel groups, including both member management and manager management. The angel group does not make investments or recommend investments to members, rather members make their own decisions based on the shared due diligence and term sheets.</p>	<p>In general, BANs seem to have two primary focuses:</p> <p>(1) Soliciting a large mailing list of potential angel investor members (and others, such as service providers) and organizing pitching meetings for them. Members have limited obligations to the group, that is, small or no annual dues, no duty to invest as part of the group (versus pocketing deals for themselves), no participation requirements (attendance, due diligence), no leadership mandate and no minimum investment expectations.</p> <p>(2) Engaging with the entrepreneurial community, sometimes by providing investor-ready services and pitch coaching, with a focus, for the most qualified entrepreneurs, on inviting them to pitching events.</p> <p>After the pitching session, the entrepreneurs and investors are left to their own devices to do a deal. There is no organized group deal processing; instead each angel engages with the entrepreneur, finds co-investors (within or outside the BAN), completes due diligence, negotiates a term sheet and closes the deal.</p> <p>There appear to be two models for the BAN operational platform: (a) a not-for-profit model, often driven by economic development agencies and (b) a for-profit model pursued by experienced investors and funded by success fees and tolls charged to entrepreneurs and investors.</p>

Source: Bill Payne: <http://gust.com/angel-investing/startup-blogs/2013/04/05/angel-groups-business-angel-networks/>

investment process - often termed the 'gatekeeper' (Paul and Whittam, 2010) - is one of the group members or a professional employed by the group. Some of the larger and longer established US groups have established sidecar funds – that is, committed sources of capital that invest alongside the angel group. The investors in such funds are normally the syndicate members but may also include other high net worth individuals (HNWIs) or institutions. These funds give the syndicate additional capital to invest in deals to avoid dilution, enable syndicate members to achieve greater diversification by exposing them to more investments than they can make directly through the syndicate, and is a means of attracting 'right-minded' investors who want to participate in seed and early stage deals but cannot be active members of a syndicate.

The emergence of angel syndicates is of enormous significance for the development and maintenance of an entrepreneurial economy. First, they reduce sources of inefficiency in the angel market. The angel market has traditionally been characterised by inefficiency on account of the fragmented and invisible nature of angels. There was no mechanism for angels to receive a steady flow of investment opportunities. Angel syndicates, in contrast, are generally visible and are therefore easier for entrepreneurs to approach, thereby reducing the search costs of both entrepreneurs and angels and increasing deal flow. A further source of inefficiency was that each investment made by an investor has typically been a one-off that was screened, evaluated and negotiated separately. However, the volume of investments that angel syndicates make enables them to develop efficient routines for handling investment enquiries, screening opportunities and making investment agreements. The increased number of investors scrutinising potential risks also improves due diligence.

Second, they have stimulated the supply-side of the market. Syndicates offer considerable attractions for high net worth individuals (HNWIs) who would not otherwise invest in emerging companies, for example, because they lack the time, referral sources, investment skills or the ability to add value. However, angel groups are also attractive to many existing solo angels because of the reduction in risk that arises from investing as part of a syndicate, notably the ability to spread their investments more widely and thereby achieve greater diversification, and by access to group skills and knowledge to evaluate investment opportunities and provide more effective post-investment support. Other attractions of syndicates are that they enable individual angels to invest in particular opportunities that they could never have invested in as individuals, offer the opportunity to learn from more experienced investors and provide opportunities for camaraderie and networking with like-minded individuals. Thus, angel syndicates are able to attract and mobilise funds that might otherwise have been invested elsewhere (e.g. property, stock market, collecting; Mason and Harrison, 2000), thereby increasing the supply of early stage venture capital, and to invest it more efficiently and effectively.

Third, angel groups are helping to fill the 'new' equity gap. The diminished number of venture capital funds have consistently raised their minimum size of investment and are increasingly abandoning the early stage market, either to invest in larger and later stage deals or simply because they have been unable to raise new funds from institutional investors. Angel syndicates are now increasingly the only source of funding for new and emerging businesses seeking investments in the range £250,000 to £1 million (under \$1m in the USA: Sohl, 2012). Moreover, as a consequence of their greater financial resources angel groups have the ability to provide follow-on funding. This overcomes one of the potential problems of raising money from individual business angels, namely that they often lack the financial

capacity to provide follow-on funding. Consequently, the entrepreneur is often forced to embark on a further search for finance. Moreover, in the event that the need for additional finance is urgent then both the entrepreneur and the solo angel will find themselves in a weak negotiating position with potential new investors, resulting in a dilution in their investments and the imposition of harsh terms and conditions. With the withdrawal of many venture capital funds from the small end of the market individual angels and their investee businesses have increasingly been faced with the problem of the absence of follow-on investors. Because angel syndicates generally have greater financial firepower than individual angels or *ad hoc* angel groups to be able to provide follow-on financing, it more efficient for the entrepreneur who avoids the need to start the search for finance anew each time a new round of funding is required.

Fourth, the ability of angel groups to add value to their investments should be much greater. The range of business expertise that is found amongst angel syndicate members – described by May and Simmons (2001: 156), leading angel syndicate practitioners in the USA, as a “smorgasbord of advice and strategic services” - means that in most circumstances they are able to contribute much greater value-added to investee businesses than an individual business angel, or even most early stage venture capital funds. Finally, angel groups are the most frequent partners in public sector co-investment schemes (Mason, 2009b; Harrison et al, 2010a), acting as the focal point for the leveraging of additional funds into the entrepreneurial ecosystem.

However, others are less sanguine about the emergence of angel groups. For example, Sohl (2012: 37) has suggested that “as angels are becoming more organised they are morphing into a portrait of venture capital funds and are losing some of the valuable characteristics of the

angel investor ...”¹ This, in turn, raises two specific concerns (Sohl, 2007; 2012). First, the emergence of angel groups will result in a reallocation of angel capital away from smaller, seed investing to bigger and later stage deals. Second, angel groups will simply attract “inexperienced wealthy individuals seeking a passive investment” rather than active angels who can contribute value added to their investee businesses (Sohl, 2007: 360). But whether these developments are inevitable remains contested. Others have expressed concerns about the cost raising finance, and specifically the practice of angel groups requiring entrepreneurs to ‘pay to pitch’ (Entrevestor.com, 2013) and taking fees in the form of a proportion of any funds that they raise.

DATA SOURCES AND ANALYSIS

The study is based on two sources: aggregate data on investment activity, which provides the basis for the next section, and interviews with angel group gatekeepers which is the key source for the following two sections. Quantitative information on angel investment activity is derived from LINC Scotland and the most recent *Scottish Risk Capital Market Report* published by Scottish Enterprise (Harris and Mason, 2012). LINC Scotland provided information on aggregate investment activity compiled on the basis of data provided by its members. The Scottish Risk Capital Market Report is based on an examination of Companies House 88(2) returns for all companies that were known to have raised equity finance in the period 2009-2011. These returns give the date and number of new shares issued, in most cases the price, but not the names of the investors which had to be identified from other

¹ This is illustrated by a recent report from the Boston Business Journal (15 April 2013), headlined “Common Angels eyes larger new fund, as group seeks to act more like a VC” which describes how Common Angels, a group of about 50 angels in the Boston area is in discussions to raise a pooled fund which will exceed its existing \$13m fund. The new fund would make a similar number of investments but would invest more capital into each business. The report also notes that it has centralised its decision-making in an eight member committee. The report concludes that the end result of these changes is that “Common Angels is now operating more like a VC firm ...”
(<http://www.bizjournals.com/boston/blog/startups/2013/04/commonangels-fund-venture-capital-boston.html?page=2>)

sources (see Mason and Harrison, 2008 and Harrison et al, 2010a for further discussion of this source).

This is complemented by information from 22 semi-structured interviews with gatekeepers of 19 groups, 18 of which invest in Scotland.² In three groups the gatekeeper role was shared by two individuals. In each case both individuals were interviewed. The groups that were interviewed included all 17 that are publicly listed on LINC Scotland's web site. Three other groups are also members of LINC Scotland but prefer anonymity. These groups were also invited to participate, via LINC Scotland, but declined to do so. Two additional groups were interviewed. One was a UK-wide group with a very active Scottish branch but has no association with LINC. The other group is a Scottish Co-investment Fund partner that also has no association with LINC. The Scottish Risk Capital Market Report (Harris and Mason, 2012) identified 24 angel groups. However, the groups not included in this study either no longer exist or are private offices of high net worth families whose investments and operations are much closer to venture capital investing than angel investing. So, although the study could be criticized for being LINC-centric it would appear that we have captured most of the participants in the market.

Securing the participation of such a high proportion of angel groups in the Scottish market was a considerable achievement. In many cases the initial response was not positive and follow-up approaches were required. As a consequence, the recruitment process took three months. It started with an initial email to the gatekeeper to request an interview. In several cases it was not possible to identify the gatekeeper, but in these cases the recipient of the email forwarded it to the relevant individual.

² Halo, which is based in Northern Ireland, is also a member of LINC Scotland

Of the 22 interviewees, 20 were face-to-face and two were conducted on the telephone. All agreed for the interview to be recorded for later transcribing. The interviews ranged in length from 37 to 93 minutes, with the average being about one hour. The face-to-face interviews took place at a location of the interviewee convenience. Venues included the group's office, coffee shops and the researcher's office. We agreed with participants that information on individual groups would not be disclosed and that findings would be aggregated. Any references to specific groups are therefore based on information that is in the public domain (e.g. media, presentations).

One of the main challenges of qualitative methods, such as interviews, is how to analyse the information that is collected. Several sections of the interviews were based on objective and measurable questions, such as the amount invested, number of deals, and age of the syndicate. However, other parts of the questionnaire, notably on the skills that a gatekeeper requires and their own learning in the role, were based on opinion and perceptions. This information has been examined by thematic analysis (Howitt and Cramer, 2007) which is one of the most frequently used methods of qualitative analysis for "identifying, analyzing and reporting patterns within data" (Braun and Clarke (2006, p. 79). Boyatzis (1998) describes the technique as a process of 'encoding qualitative information'. This process consists of six steps (Braun and Clarke, 2006). In the first step the researcher becomes familiarized with the data. This was relatively straight forward since one of the authors was actively involved in the interviews. The second step involves the creation of an initial set of codes to capture the key content of the interviews. The third step consists of searching for themes based on the previously developed codes. In the fourth stage the researcher reviews the themes and test theme against the original data. The fifth step requires the researcher to define and name the

themes. By doing so, the researcher is identifying the “core” of what each theme captures. This requires accuracy and precision. The last step involves the write-up of the thematic analysis. The process is iterative with the researcher being able to revisit previous steps to refine and confirm the analysis.

ANGEL GROUPS IN SCOTLAND: GROWTH AND INVESTMENT ACTIVITY

The paper is based on Scotland. This is a particularly appropriate context in which to undertake this study. Scotland has experienced a rapid growth in the number of angel groups. The initial groups – Archangels and Braveheart – were established in the 1990s. In 2002 LINC Scotland’s membership comprised 300 solo angels and just these two syndicates with about 70 angel members between them. Ten years later (2012) a total of 24 groups have been created, although some subsequently either closed or amalgamated. LINC Scotland currently has 19 groups in membership, which it estimates comprise about 700 investors in total. There are a small number of other groups that are not members of LINC Scotland. Individual membership of LINC Scotland is now below 100. Of the 18 Scottish-based angel groups interviewed for this study, nearly one-third (six, or 30%) were three years old or less, underlining the recent growth in the formation of syndicates. Collectively they had just over 1,000 members, although this will include some double counting of investors who are members of more than one group. Two groups have significant numbers of non-Scottish based members. Membership ranges from less than 10 to over 100. Reflecting the skewed nature of the visible market observed previously (Mason and Harrison, 2010; 2011), the five groups with more than 100 members account for 70% of the total (Figure 1).

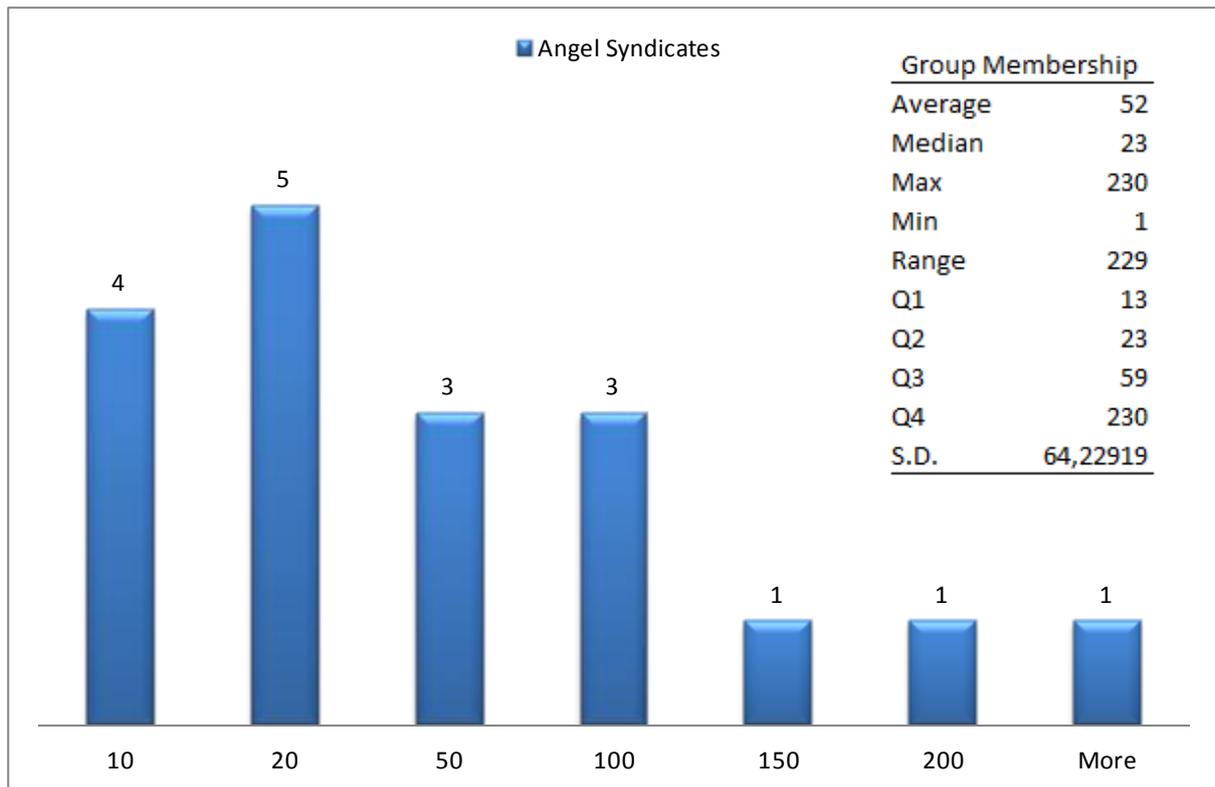


Figure 1 – Size Distribution of Angel Syndicate membership (source: LINC Scotland)

Two key drivers in the Scottish environment have resulted in this significant increase in angel syndicate groups. First, LINC Scotland was created³ in 1992 as part of the Scottish Business Birth Rate Strategy as a conventional business angel network, responsible for both the demand and supply sides of the market and seeking to make ‘introductions’ between investors and entrepreneurs that would lead to investments. Some ten years later Scottish Enterprise, took increasing responsibility for the demand side, leaving LINC Scotland with an agreed remit to develop the supply side of the market. It took the strategic decision, influenced by the early successes of Braveheart and Archangels, that this was most effectively achieved through the development of angel syndicates. Scottish Enterprise co-

³ It was actually created out of an existing organisation operated by Glasgow Opportunities to give it a pan-Scotland focus.

funds certain activities with LINC but does not provide core funding. LINC's main sources of funding come from ERDF⁴ and the private sector.

LINC actively sought to encourage its individual investors to band together. The older, established groups were willing to share their knowledge with the new groups. This helps to explain why, as we comment later, most of the groups have similar operating models. The visibility of angel groups and publicity for LINC's activities created a momentum and other groups emerged independently of LINC's efforts. These new groups typically emerged from existing groups of investors who were already working together informally and so had a 'club' mentality. However, they were required to find a chairman/gatekeeper, either from their own members or, less commonly, externally, in order to start investing. LINC Scotland was able to support new angel groups financially on account of its access to ERDF funding.

The second driver was the Scottish Co-Investment Fund (SCIF) which came on stream in 2003 in response to the acute shortage of risk capital in the aftermath of the dotcom crash. The SCIF was designed to invest alongside private sector investment partners on a *pari passu* basis, investing up to £1 for every £1 invested by the partner to a maximum of £1m per business (and with the introduction of follow-on funding from the Venture Fund deal sizes can be even larger). The intention was to improve liquidity in the market, enabling partners to make bigger investments, or follow-on investments, and freeing up part of their funds to invest in new businesses rather than follow-on investments. The SCIF carried out due diligence on prospective partners before accepting them onto the scheme. The partners make their own investment decisions. SCIF did not undertake its own investment analysis. Their only decision was to confirm that the business fell within the rules of the scheme. The

⁴ LINC Scotland has enterprise agency status which gives it direct access to apply for ERDF funding

eligibility criteria were known to investors. Partners could seek initial approval of a prospective investment's eligibility in principle at an early stage in their appraisal process. Once investment terms were agreed by the partner, SCIF approval, or not, was generally made within 24 hours of bringing an investment to the Fund. This high level of certainty was built into the scheme following consultation with the initial angel groups and, arguably, has been a key feature of its success. Although angel groups accounted for less than half of the Fund's investment partners, the fund's maximum investment limit meant that the vast majority of the deals that qualified were brought by angel groups rather than venture capital funds.

The existence of the SCIF encouraged the emergence of syndicates in two respects. First, the SCIF wanted to expand its number of investment partners so welcomed the formation of new groups, especially in areas of the country where they were lacking. LINC Scotland was specifically contracted to support the creation of three new groups per annum to be co-investment partners. Second, angel groups received a 2.5% fee on completion of every co-investment deal that they participated in. This provided useful additional income to fund the syndicate's running costs, supporting salaries of a gatekeeper and possibly one or more administrative staff.

Investment activity by angel groups has grown steadily since 2002-3, in terms of both number and amount invested. There were 81 deals in 2012 compared with just 22 in 2002-3⁵ (Figure 2). Only part of the recent rise in investments is due to activity of new groups that did not exist in 2010 (these groups made 8 investments in 2012). Moreover, investment activity is

⁵ LINC changed its reporting period from financial year to calendar year in 2009.

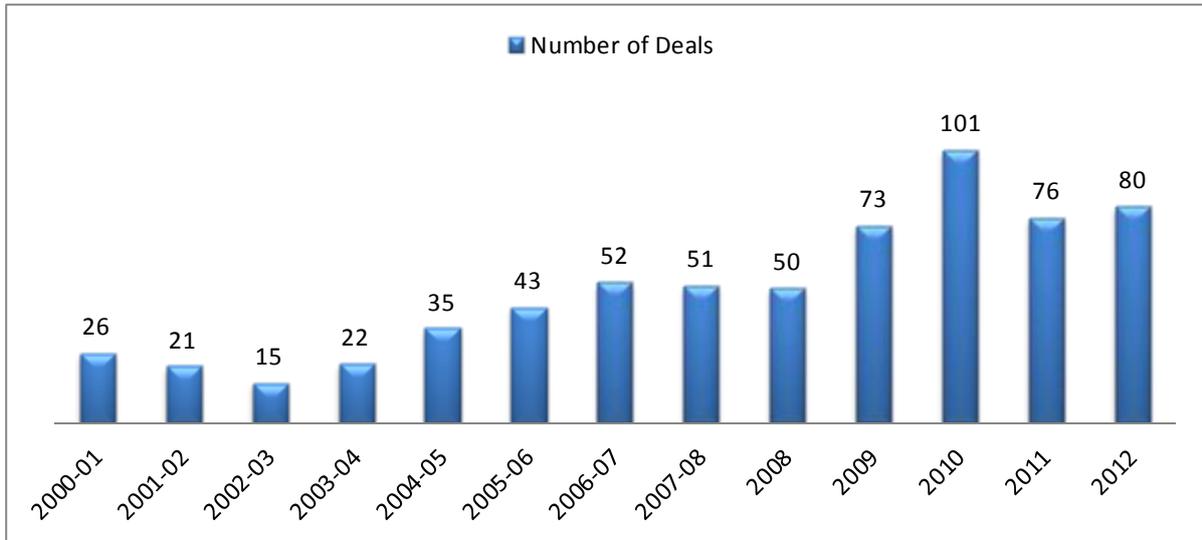


Figure 2. Number of investments made by angel groups in Scotland, 2000-2012 (source: LINC Scotland)



Figure 3. Amounts invested by angel groups in Scotland, 2000-2012 (source: LINC Scotland)

skewed to a small number of groups, with just two groups making 69% of the investments in the period 2009-12. Almost every other group made less than 10 new investments in the period (i.e. excluding follow-on investments). The amount invested by members of the angel groups has risen from £6.3m in 2002-3 to £22.5m in 2012 after peaking in 2011 (Figure 3). Total aggregate investment (i.e. including co-investors) has increased even more sharply, from £6.8m in 2002-03 to £30.9m in 2012, having peaked at £34.5m the previous year (Figure 4), reflecting both the growth of the SCIF and the increasing tendency for angel groups co-invest with one another. This represents a significant part of the risk capital market in Scotland (Harrison et al 2010). According to the most recent Scottish Risk Capital report, angels accounted for over one quarter of investments by value in the £100,000 to £2m range (Table 2), rising to around half if the SCIF investments are also included.

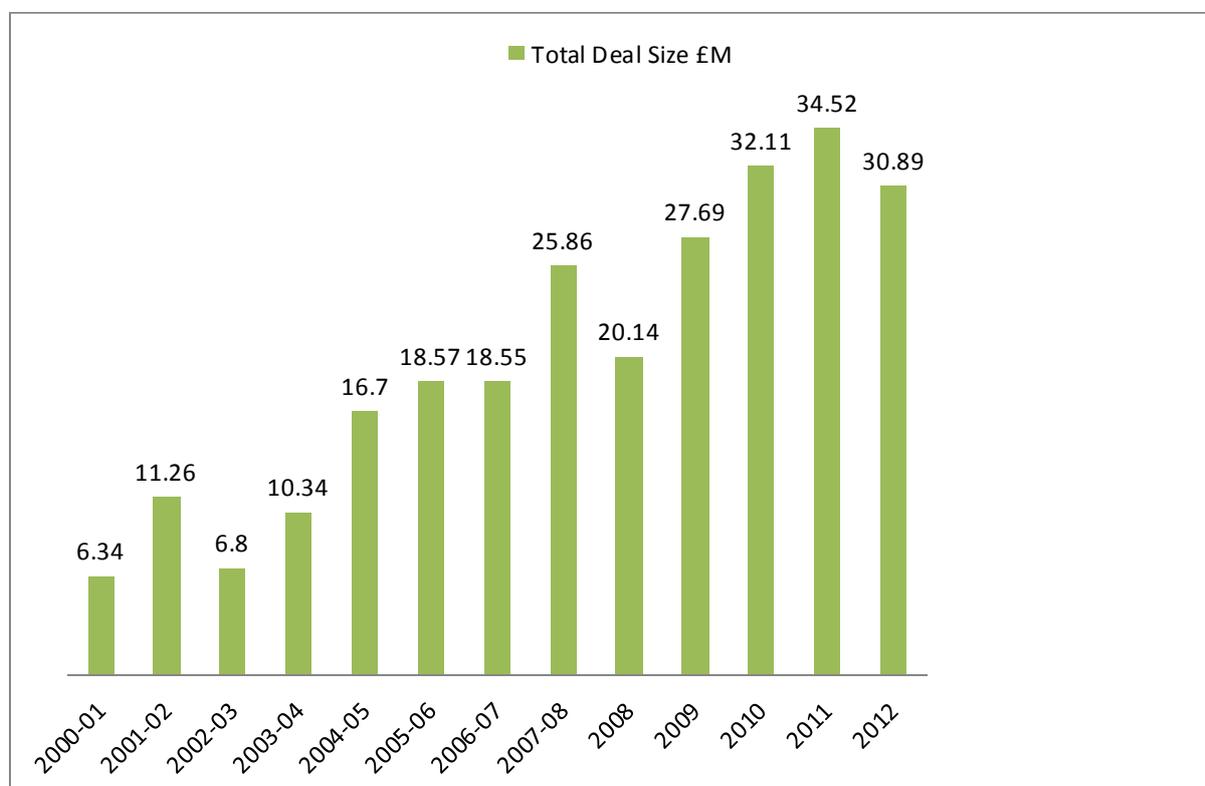


Figure 2 - Total aggregate transaction value of angel group investments in Scotland from 2000 to 2012 (source: LINC Scotland)

Table 2 - Venture capital investment in Scotland, 2009-11 (source: Harris and Mason, 2012)

	Investments £100,000 - £2m						Investments of over £2m					
	2009		2010		2011		2009		2010		2011	
	£m	%	£m	%	£m	%	£m	%	£m	%	£m	%
angels	13.2	27.3	15.6	29.6	12.8	27.5	0.7	1.3	0.1	0.2	1.4	3.3
VCs	11.0	22.7	13.6	25.8	14.4	30.9	41.7	74.6	62.8	86.5	33.8	80.5
Scottish Enterprise/public sector	20.3	41.9	16.8	31.9	14.4	30.9	9.9	17.7	6.4	8.8	2.8	6.7
other	3.9	8.1	6.7	12.7	5.0	10.7	3.6	6.4	3.3	4.5	4.0	9.5

Of course these investments represent only a fraction of the investment opportunities that the groups see. The number of opportunities seen by the groups in the previous 12 months ranged from under 10 (due to circumstances specific to that group) to over 250. However, the majority of groups saw between 40 and 150 investment opportunities (median = 100). No doubt some opportunities will be seen by more than one group. The overall ‘yield rate’ – investments as a proportion of opportunities seen invested - was about 6.5%. This is significantly lower than the equivalent data reported by Sohl (2012) for US angel groups. Assuming that the difference is real, rather due to data or definitional differences, then there are several possible explanations for this difference. It may reflect differences in year – the latest US figure is for 2009 whereas the Scottish data are for 2012 and there are considerable year-on-year variations in the yield rates of US groups. Alternatively, it may reflect the poorer quality of opportunities that Scottish groups see, their more exacting screening and selection standards, or the superior investment capabilities of US groups (in terms of numbers of members and dollars available for investment).

Angel groups typically invest anywhere from £25,000 to £500,000 per round, with a few outliers at each end. However, as the vast majority (85%) of deals had co-investors – almost invariably the SCIF – so deal sizes were larger. Nevertheless, more than 90% of deals in 2009-10 were below £1m (the maximum allowable transaction under SCIF regulations). However, the majority of this investment is follow-on funding. This peaked at over 80% at the start of the financial crisis but has fallen back in 2011 and 2012 (Figure 5). Over 60% of the companies raising finance in 2009-10 were at the early stage, and around 20% were at the seed stage. The majority were in technology sectors. (Mason and Harrison, 2011).

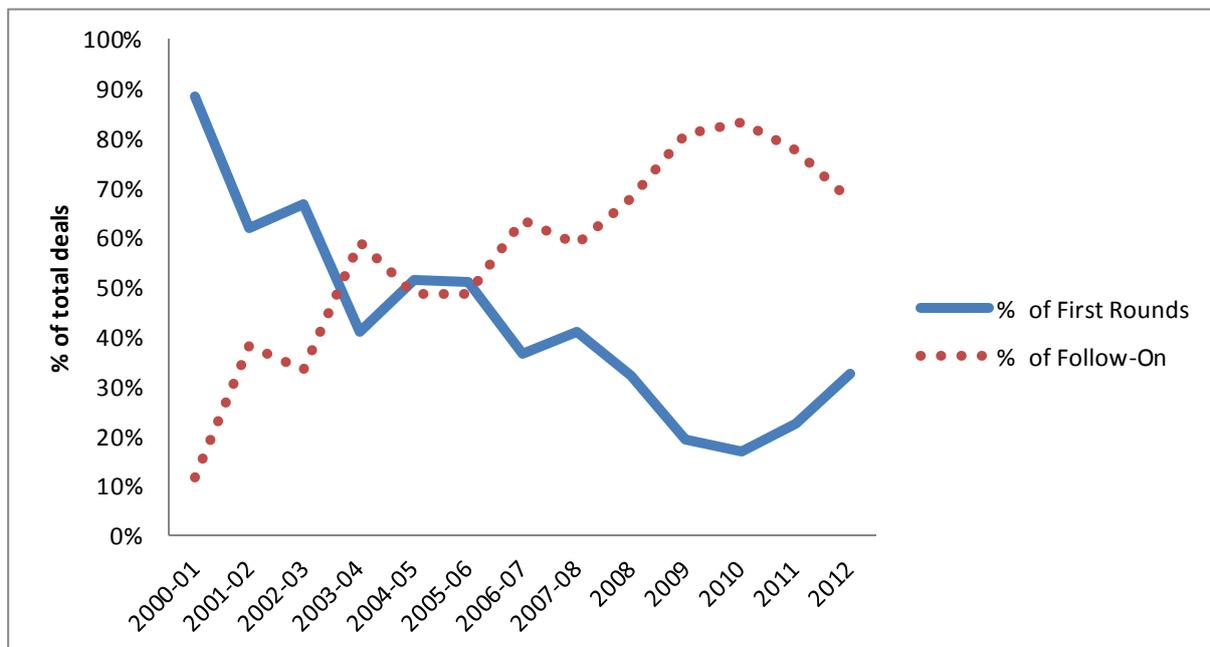


Figure 3 – Follow On Vs. First Round Investments (source: LINC Scotland)

However, it is important to recognise the diversity of the investment preferences amongst Scottish angel groups. This is particularly apparent in terms of sector, where two categories of groups can be identified. Six (of the 18) are specifically oriented to technology sectors, with some having a very specific investment focus (e.g. biopharmaceuticals, energy, life science) and two others have a ‘preference’ for technology. The remainder will invest in

‘everything’ or ‘everything except X’. There is less diversity in terms of the stage of development, with 15 groups looking to invest in early stage or start-up businesses. Two groups are even more focused on proof of concept and seed stages. There is also diversity in the size of investment. Three groups stated this was ‘unlimited’, two groups would invest up to £500,000, and three would go up to £1m. However, the majority of groups are looking to invest under £250,000 per deal, not including any coinvestment. Finally, the majority (12) of groups are looking to invest in Scotland, although in a few cases this was ‘not exclusive’. Four groups reported that they would invest worldwide, confirming that while angel investing is a local phenomenon it is not exclusively so (Harrison et al, 2010b)

Three aspects of the investment activity of angel groups stand out. First, and reflecting one of the comments by Sohl (2012), follow-on investments have quickly dominated the investment activity of angel groups. This may be a ‘natural’ process, reflecting a combination of the financial strength of angel groups to make follow-on investments and the lack of alternative investors to provide follow-on funding (Harrison et al 2010a). However, some groups have turned down the opportunity to bring institutional investors into deals, because of fears of both being diluted and also losing control of the investment, particularly the ability to influence, manage and control the exit. The need to invest in ordinary shares so that investors qualify for tax relief under the Enterprise Investment Scheme is a further discouragement to seek follow-on funding from institutional investors. As discussed earlier, these investors will invest using preference shares and other more complex instruments which gives them greater power over investors with ordinary shares.

Second, there have been surprisingly few exits (Figure 6). The groups have collectively made 37 exits which represents just 4% of their investments. The majority of groups - 12 of the 17

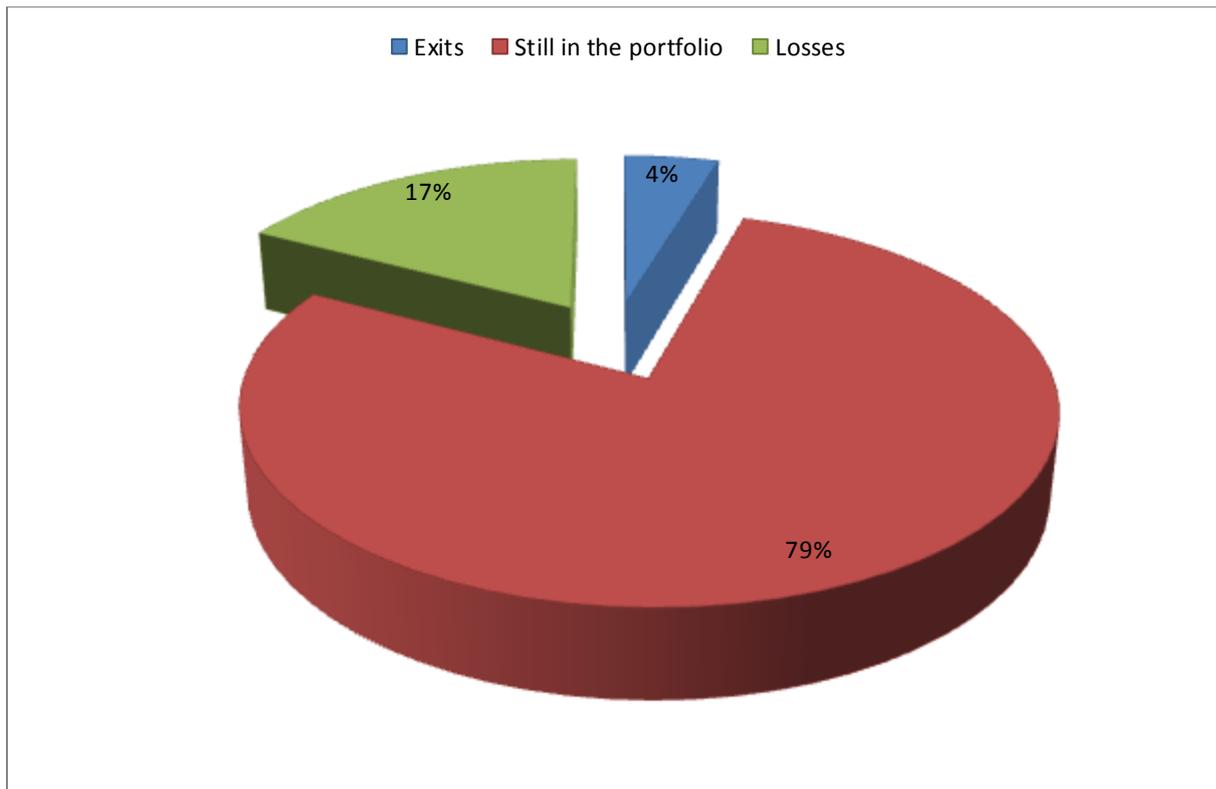


Figure 6. Investment outcomes (source: interview survey)

that provided data - have not made any exits. To some extent this reflects the young age of many of the groups. Indeed, four of the five groups that have achieved exits were formed at least eight years ago, with the three longest established groups accounting for 92% of total exits. Nevertheless, it is striking that the vast majority of groups that were founded between five and eight years ago have not made any exits. This contrasts with earlier studies of exits by UK business angels which reported median holding periods to exit of four years (Mason and Harrison, 2002b) and six years (Wiltbank, 2010). This difference reflects the much longer time that it is now taking globally to exit. It could therefore be argued that we no longer know what represents the 'norm' and accordingly we risk interpreting these data with unrealistic expectations.

However, some commentators argue that the lack of exits also reflects the common view amongst angel investors that it is inappropriate to discuss exits with entrepreneurs prior to investing or even to actively pursue an exit after the investment is made (Gray, 2011). The exit was traditionally never considered or discussed before investing. The prevailing view in the angel investment community has been that “if you make good investments the exit will take care of itself”. It is claimed that this approach has resulted in investments in companies that are not of interest to potential acquirers and so have not been acquired. The outcome is that large quantities of angel money – and public money that followed as co-investments – is locked up in portfolios. Whether this remains the common approach of angel groups will be the subject of a future paper.

The lack of exits has three knock-on effects. First, it contributes to the high proportion of follow-on investments noted earlier. Second, it limits the amount of capital gains that can be recycled into new investments, a primary target of national government policy to increase angel investment levels. Investors also get discouraged having to invest more money into existing businesses and not seeing returns from their previous investments. Anecdotal evidence suggests that in some cases this has prompted angels to cease investing. Third, there comes a point when the lack of exits has a negative influence on the ability of groups to recruit new angels, or even for new groups to get started.

Third, and equally surprising, is the low number of failed investments (see Figure 6). These account for 17% of total investments. The three oldest groups account for 82% of all losses. Previous studies have reported that the median failed investment emerges after two or three years (Mason and Harrison 2002b; Wiltbank, 2010). In view of the recessionary conditions that have prevailed since 2008 it would be surprising if general business failure rates have

been lower in recent years, so this might suggest that angel groups are managing their unsuccessful investments badly. This is largely confirmed in our survey, with two-thirds of the groups reporting that they had no formal strategy for dealing with the 'living dead' in their portfolios. This creates the risk that these investments absorb time and further funding. However, the groups that do have a strategy for these types of investments tend not to adopt a 'fast failures' strategy that is advocated as best practice (Mason and Harrison, 2012). On the other hand, the ability of investors to pursue a fast fail strategy is limited by several factors, notably their minority shareholding position and, perhaps, by the attitude of the co-investment fund. It is unknown whether the SCIF would favour selling investments in 'living dead' businesses back to the management for a nominal figure

ANGEL GROUP INVESTMENT PROCESSES

The investment process of angel groups is rather different to that of individual angels. Previous research has established that individual angels undertake an initial screening process to establish whether the proposal is a good fit with their investment criteria and would appear to have merit. This is typically a fast process, taking anything from one to twenty minutes (Mason and Rogers, 1997; Harrison et al, 1997), and upwards of 90% of proposals get rejected at this stage (Feeney et al, 1999). Those proposals that get through the initial screening are then investigated in detail.

The investment process of angel groups is rather more extended and involves more stages. Two distinct approaches are apparent amongst the Scottish groups, although there are differences of detail in each approach. In both cases the gatekeeper is the initial point of contact for the business. The gatekeeper then undertakes the initial screening role. At its most basic this may simply be to filter businesses against the group's key investment criteria. In

other cases it is more proactive with gatekeeper assessing the business plan and in some cases contacting the entrepreneur to gather information about the company. In some groups the gatekeeper may be assisted by one of the members, perhaps to bring in sector expertise.

The differences in approach occur at the next stage. In some groups the businesses that get through the filtering and initial screening processes are evaluated in detail by a small group of the angels. This may include a presentation by the entrepreneur to this inner core. They will make a collective decision whether or not to invest in the business themselves. If this inner core decide unanimously to invest then the opportunity is opened up to the rest of the group for each member to decide individually whether they also want to invest. This approach is typified by Archangels (Gregson et al, 2013). In the alternative approach those businesses that get past the screening stage are presented to the group members. Typically the company will make a presentation. Some groups will coach the entrepreneurs prior to the presentation. Each individual member then makes their own decision whether or not they are interested in investing. If there is sufficient interest then a sub-group is established to do the due diligence and, if appropriate, negotiate the terms and conditions of the investment. The deal will then be brought back to the members to make individual decisions whether or not to invest.

The key difference between these two approaches is therefore who drives the process after the initial screening stage. In the first approach it is driven by an active core group of angels, with the outer core only being invited to invest, on a take-it or leave-it basis, in those deals that the core group have decided to invest in. In the second approach the members drive the process, with the gatekeeper undertaking due diligence on those businesses that the membership are interested in.

Compared with individual angels (Mason and Harrison, 1996b), raising finance from angel groups is more costly for the entrepreneur. None of the Scottish groups require entrepreneurs to 'pay to pitch'; however, four groups charge fees associated with the due diligence process and the majority of groups charge deal/completion fees when the investment is made (typically 3% of the amount raised) (10 groups) and also levy ongoing non-executive director monitoring fees (11 groups).

This investment process has a number of implications for entrepreneurs seeking finance from angel groups. First, there are more people involved in the process and hence more people have to be persuaded of the merits of the investment opportunity. Second, gatekeepers have the power to reject investment opportunities but it is the members who make the decision to invest. The entrepreneur has therefore to get past the gatekeeper in order to reach potential investors. Third, in contrast to traditional business angel networks where the pitch to an audience of potential investors is at the start of the process and is used by the investors as the initial screening process, with angel groups the pitching stage occurs later in the process after the business has passed the initial screen. This, in turn, has implications for the content and style of the pitch. Fourth, raising finance from angel groups incurs fees whereas this would not typically be the case with individual angels. However, business angel networks also charge fees. Finally, given the various stages and different people involved, the length of time to secure an investment from an angel group will generally be longer than in the case of individual angels.

THE GATEKEEPER

The previous discussion has highlighted the critical role of the group gatekeeper in the investment process, managing both the day-to-day operations of the group and, more

significantly, controlling access to investors. The emergence of this new actor is one of the most significant outcomes of the growth of angel groups, with considerable implications both for scholars who continue to focus on how individual angels make their investment decisions and also for entrepreneurs. Gatekeepers are of two types: member gatekeepers and manager gatekeepers (Paul and Whittam, 2010). Gatekeepers have typically emerged from within the group that initially started the angel group. However, the bigger groups, such as Braveheart and Archangels, have appointed external managers as they became larger. Some groups have gone further, hiving off a separate administrator function from the gatekeeper's role. Indeed, in 11 of the 18 groups (61%) the role of gatekeeper is shared. In contrast, building an angel group around a gatekeeper has not proved to be a successful approach. In half of the groups (9) that were interviewed, members act as managers (more than half of whom receive remuneration), five groups (28%) have hired an external manager and in the remaining four groups the gatekeeper role is shared between a member and someone that has been hired. The implication is that the gatekeeper function changes as the group's activities increase and portfolio management becomes a more time consuming and critical function.

The gatekeeper undertakes a variety of functions (Table 3). Two-thirds of gatekeepers undertake external-facing roles, notably the promotion of the group to attract new investors and entrepreneurs. Around half also report that they undertake internal roles, mostly interacting and communicating with the members. However, their main functions are associated with managing the investment process. Gatekeepers review the business plans and executive summaries that they receive from entrepreneurs seeking finance, decide whether it meets the investment criteria of the group, may seek additional information and even meet the entrepreneur and ultimately make the decision whether the opportunity is passed on to the group members, whether an inner core or the entire group, to be considered for investment.

The gatekeeper may also be responsible for preparing one or more supporting papers on the business for the group. The gatekeeper will also follow up with members to gauge their interest in the opportunity. In the second model, discussed in the previous section, if the group is interested in the business then the gatekeeper will also be involved in the due diligence process and even in the negotiation. It is of note that fewer than half of the gatekeepers are involved in the process after the investment is made. Specifically, few gatekeepers see the preparation of investee companies for an exit being as being part of their role.

Table 3. Gatekeeper Roles

General function	Proportion of gatekeepers citing this role	Detailed function	Proportion of citations of this role on the total number of citations
1. External	66.7	Marketing Promotion Recruitment	5.5 6.3 2.4
2. Internal	52.4	Interaction with members Organisation of the process Internal communication Administrative	0.8 1.6 7.9 7.9
3. Investment Process	100.0	Sourcing Screening Due diligence Negotiation Post-investment Exiting Others	7.1 21.3 11.0 7.1 7.9 3.1 8.7
4. Organisational	19.0	Creation of group Development of group	0.8 0.8
		Σ	100.00

Source: compiled from interviews

The norm is for a member of the group to take on the role of non-executive director in the investee company. It is only in the larger groups, which have more support staff, that the gatekeeper is involved in portfolio management. The majority (17 out of 21, or 81%) undertake this function on a part-time basis (less 30 hours a week).

Table 4 – Skills required for gatekeeper role

	%
Communication Skills	57.1
Accessing Management	52.4
Networking	9.5
Leadership	4.8
Passion	9.5
Patience	14.3
Curiosity	14.3
Negotiation	9.5
Broader Business Knowledge	33.3
Specific Business Knowledge	23.8
Experience	33.3
SME Experience	14.3

Source: compiled from interviews

The backgrounds of the gatekeepers are remarkably varied. There is considerable variety in academic expertise, albeit with a bias to accounting, finance and law. Just under half reported work experience in banking, accountancy or corporate finance. Eleven (52%) had entrepreneurial experience although 15 (71%) have personal experience of making angel investments, reflecting the presence of a number of member angels as gatekeepers. The vast majority thought they were prepared for the role (95%), even though those in the longer established groups were actually pioneers, defining and shaping the role. Collectively, respondents identified a wide variety of skills that were necessary for the role (Table 4). Those most frequently mentioned were communication skills, people-management skills, and financial skills. Both broader business-related experience and specific business know-how

were also seen by a significant minority of angels as being necessary. The majority of gatekeepers (59%) believed that they had these skills when they assumed this role. The remainder indicated that the role was a constant learning experience.

The main areas where, with the benefit of hindsight, angels recognised their knowledge to be deficient were in terms of the operation of angel syndicates and deal structures. This is perhaps not surprising in view of the differences between the role of the gatekeeper and that of an individual angel. Key areas of learning were syndication, deal terms and people – managing them, communicating with them and accessing them.

CONCLUSION

Angel investing is changing from an invisible and largely individual process to one in which angels are joining together in organised and managed groups to invest. This is evident in the USA and Canada, Western Europe and Australia and New Zealand, although the pace of change has varied between countries. Yet despite the growing significance of the angel market as a key source of finance for entrepreneurial companies at the start of the so-called funding escalator little scholarly attention has been devoted to this development, despite the possibility that it renders much of the existing research base redundant. Nor has there been much consideration of the practical consequences of this change either for entrepreneurs and investors nor the policy implications. This paper is the first attempt to provide an in-depth examination of the growth of angel groups and the implications for the financing of entrepreneurial ventures.

The paper draws on evidence from Scotland where, for a variety of reasons, the emergence of angel groups has proceeded further than anywhere else outside of the USA. Indeed,

Scotland's population of angel groups is larger than that of the majority of US states. There are currently around 20 angel groups in Scotland compared with just two prior to 2000. They account for more than one-quarter of all investment activity by value in the £100,000 to £2m range, and more than half if the pull through of investment from the Scottish Co-Investment Fund is also considered. However, activity is skewed to a minority of larger and longer-established groups.

The existing debate about the implications of the growth of angel groups mainly focuses on the benefits, notably their greater visibility and greater professionalism compared with individual angels which, it is argued, reduces the time and cost for the entrepreneur of raising finance. In addition it is thought to have expanded the supply of informal venture capital by attracting passive investors who lack the capabilities to invest on their own. However, others have raised the concern that the essence of angel investing is at risk of being lost as the process becomes more organised. Some have also expressed the concern that the angel market could evolve in the same way as venture capital funds, shifting to making larger and later stage investments and losing its ability to add value.

Our evidence is finely balanced. On the supply side the process has reduced the number of investment decision-makers in the market as individual angels have joined angel groups. It has probably also reduced the number of investments of £50,000 and below which are too small for groups to make. However, crowdfunding may fill this gap. Groups have focused on making larger investments and follow-on investments, with the latter trend in particular constraining the number of new investments. Nevertheless, the creation of new syndicates continues to mobilise new capital into the market. On the other hand, the greater investment capability of angel groups has filled the funding gap created by the decline of venture capital

funds specialising in seed, start-up and early stage financing. From a process point of view angel groups extend the investment process, adding more stages and increasing the decision-time, and the gatekeeper now controls access to the angels. Moreover, market deficiencies remain. The emergence of angel groups, with government support, has helped resolve the 'traditional' equity gap (originally under £250,000 but other definitions have put this figure closer to £1m). However it has opened up a 'second' equity gap (Murray, 1994; Sohl, 2012) above £1m-£2m for growth capital, beyond the capability of virtually all angel groups, even with syndication. This is a challenge for angel-backed companies requiring growth capital to fulfil their potential and may result in their premature sale to overseas companies to the possible detriment of both investors and the regional economy.

Moreover, Scotland's angel market may be out of equilibrium. First, the availability of ERDF funding may have resulted in too many angel groups being created for the available investment opportunities. Second, it may have resulted in too many manager-led groups and limited involvement of individual members in contrast to the USA where there appears to be greater member involvement. Third, some of the angel groups may not be financially sustainable, certainly without the public sector support they receive. The groups most at risk are those that have expensive manager-gatekeeper functions and a process that is not sufficiently ruthless at the initial screening stage, combined with the lack sufficient volume of investment activity to generate fee income. However, this situation has arisen because LINC has followed a strategy of increasing investment channels to provide increased choice for businesses seeking finance. Moreover, if there is an inevitability that established groups focus on follow-on investments as they mature then there is an ongoing need to create new groups to make new investments. But new groups take time to reach critical mass, and some may

never become fully viable. The alternative outcome might have been fewer, larger groups which would also have been seen as detrimental for economic development.

A further concern is that some groups appear to be evolving, not to become venture capital funds, as Sohl (2007; 2012) feared, but fund managers. This is most clearly seen in the case of Braveheart, now listed on AIM, which describes itself as follows:

Braveheart has around £120m of funds under management and provides equity, loan and mezzanine funding to Small and Medium-sized Enterprises (SMEs). It also provides SMEs with advisory services, particularly in the areas of corporate finance and investment readiness. Funding is provided by way of various regional/national funds and by investment syndicates which the Group establishes and facilitates. Braveheart also serves the investment appetites of high net worth individuals (HNWs), family offices, institutional investors and public sector organisations spanning the UK and Europe.

At least one other group appears to be moving in a similar direction.

Finally, what has been the economic impact of Scotland's much admired business angel market? The support that the angel market has received from the public sector both through ERDF funding and indirectly via the Enterprise Investment Scheme means that this question cannot be ignored, although it could be argued to be premature. Moreover, there is a risk in answering the question that it is based on inappropriate yardsticks. Arguably, we lack sufficient evidence to make a judgement on what represents "success". Taking the 'glass half empty' viewpoint, a strong case can be made that the impact has been disappointing. Investors have achieved relatively few exits and most of these have been small, with the consequence that little wealth has been created for recycling in new ventures, and

management learning in a growth company context has been truncated. The other side of this coin is that it has not led to the creation of ‘companies of scale’, a key focus of Scottish Enterprise policy over the past decade (Brown and Mason, 2012). The riposte to these criticisms is twofold. First, acquisitions data shows that the market is dominated by small exits, typically £25m to £50m, which give a good return to investors but are small enough that the cashed-out entrepreneurs need to become serial entrepreneurs. Second, it is not the role of angels to build ‘companies of scale’ (although they have been responsible for a handful in the past, e.g. Optos). Moreover, these companies are likely to require significant amounts of finance and therefore carry a significant dilution risk for angels and also appropriate management.

A glass ‘half full’ perspective would argue that Scotland has stumbled upon an effective model of angel investing that overcomes the limitations of its angel market imposed by its historic low level of entrepreneurial activity (Paul et al 2003). This model makes efficient use of its limited number of active angels to serve as nodes to cluster less knowledgeable money of high income individuals typically in the professions and who are looking for tax efficient investments. In the absence of such groups it is quite possible that this money will have been invested with the traditional fund managers who will not have channelled it either to entrepreneurial businesses or in Scotland.

So, what are the wider implications beyond Scotland for countries looking to stimulate their own angel markets? First, choices need to be made, notably between support for BANs and support for angel groups. Both models result in entrepreneurs receiving funding from angel investors. To outsiders, the models may seem quite similar but, to angels and entrepreneurs, the two models are quite different. From a public policy perspective, the evidence on the

relative effectiveness of these models is not clear-cut. Second, context matters. LINC Scotland's access to ERDF was critical in terms of the number and diversity of angel groups that have been created, and the dominance of manager-led models. The co-investment fund, which has been successfully replicated elsewhere (New Zealand, Canada), has also been critical. Third, there are different models to that developed in Scotland. For example, Halo in Northern Ireland (<http://www.nisp.co.uk/halo/about/>) has developed a model in which they act as the first selection gate for angel groups, inviting them to large pitching events, while other groups that are not members of Halo will form an outer 'ring' to 'bulk up' the investments led by the groups. Fourth, policy-makers cannot simply intervene in one part of the market. Supporting the angel market has largely addressed the conventional equity gap but with more early stage companies being funded, combined with the decline in venture capital funds, this can create an unsatisfied demand for growth funding in amounts in excess of £1m, the so-called "Series A crunch". Finally, it is uncertain how crowdfunding will affect the angel market.

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