Collaboration by venture capital firms: Issues with cross-border syndication in Europe and US

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October 2018

Key words: Venture capital, syndication

Abstract

Topic

Investee companies backed by a syndicate of both domestic and cross border venture capital (VC) firms outperform those backed by domestic or overseas VCs alone (Devigne et al, 2013) and so international collaboration of VCs is to be encouraged. However this research reveals that whilst European VCs appear willing to syndicate with US VCs, some US VCs have historically been reluctant to syndicate with European VCs. The study investigates the reasons for this reluctance and proposes initiatives to encourage greater syndication by US VCs with European VCs.

Applicability to conference theme

Syndication of VCs with each other when investing in high-growth companies necessarily involves collaboration. The better the collaboration between VCs in terms of sharing value add initiatives, best practices and contacts with investee companies, the better the outcome for the investee companies in terms of growth and success and ultimately the performance of VC funds. As European companies seek to grow and scale internationally, often by expanding into the US, collaboration with US VCs through syndication can provide the networks and channels to aid this growth. With the historic poor returns of European venture funds and the UK (and continental European) marketplaces being challenged by Brexit, US VCs need reassurance of the merits of investing in UK / European companies. Investing through a collaborative syndicate could help to provide such assurance and maximise the chances of success for both investee companies and their investors.

Aim

This study reviews syndication amongst UK/European and US VCs in order to ascertain their rationales for syndication, such as risk sharing, additional finance and/or value add from the different expertise of syndicate members. The study considers if there are issues with the alignment of interests of syndicate members internationally across borders, for example with timing of exits and with the collaborative culture of US VCs compared to the more proprietary, and more risk averse, culture of some UK and continental European VCs. The challenges to international syndication, particularly by US VCs investing in UK / European

companies are reviewed and proposals to meet these challenges are discussed.

Methodology

Using a unique dataset established through thematic analysis of transcribed interviews with 64 separate VC firms from Europe and US conducted in previous research (Arundale, 2015), the factors relating to syndication by the VCs were extracted and a comparison made between syndication by European VCs and syndication by US VCs. Few studies have employed qualitative interview techniques in this way to investigate VC firm investment practices, including syndication activity. Interviews were also held with 40 related stakeholders from Europe and US, including limited partner investors in VC funds, entrepreneurs, advisors to the industry and corporate venturing investment executives (Arundale, 2016). The comments of these interviewees relating to the syndication activities of European and US VC firms were reviewed and compared with those of the VC interviewees.

Contribution

The research contributes to the literature by contrasting the propensity of European VCs to syndicate with US VCs and vice versa. There was no evidence of less syndication activity in Europe compared to the US in the VC firms sampled, in contrast to Schwienbacher (2005) who found that syndication is used more often in the US. There was evidence that US VCs syndicate with other VCs that they know, even if the other VCs are competitors, in order to aid better alignment of interests and less conflict between syndicate members. The motivation of US and European VCs for syndicating is not for predominantly monetary reasons, though this may be welcomed, but more to share risks and pool expertise on an investment. This finding is in contrast to Manigart et al (2002) who found that syndication in Europe is driven more by finance considerations than by the desire to share resources or deal flow.

The study finds that the US VC style is more collaborative than the European more proprietary style. US VCs can be reluctant to syndicate with European VCs because of their different risk propensity and their approach to such matters as investment terms. Viewed from an agency theory perspective this suggest that US VCs are better at reducing information asymmetries on deals through better collaboration with other VCs and pooling of expertise and knowledge about a deal than are European VCs. The pooling of expertise and collaboration on deals, which was more evident with US VCs than with European VCs, can lead to better outcomes with due diligence at the investment stage and to improved value add from the different syndicate members, contributing to better investment outcomes and therefore improved fund performance. The more proprietary approach of European VCs and conflicts between syndicate members in terms of when to exit from investments is not as conducive to optimal investment and may well contribute to the poorer performance of European VC funds as compared to US VC funds.

Implications for policy and practice

US VCs need to be made more aware of progress made by the UK/European VC industry in adopting more of the US style of investment practices and of the improving returns of European VC. A joint Government and private sector backed fund of funds could be formed to encourage co-investment together by UK/European and US VC funds. To the extent that they are not currently in place UK / European VCs need to build close networks with likeminded US VCs where they can trust each other and work collaboratively together.

1. **Introduction**

It is generally acknowledged that a lack of patient capital to finance the continued growth of entrepreneurial companies is a major economic weakness in UK / Europe; there is less concern currently about the adequacy of finance to start up companies (HM Treasury, 2017; Duruflé et al, 2018). This lack of later stage capital to scale-up companies is due, at least in part, to the relatively small size of VC funds in Europe compared to their US counterparts (Lerner et al, 2011; Arundale, 2015) with European VCs being less able to provide follow-on financing for expansion and growth. High-growth companies in Europe have therefore become dependent on finance from US VCs and other overseas investors for later stage, scale-up purposes. Indeed, Hellman et al (2016) show that the percentage of finance provided by US investors in UK VC deals increases from 18% at the seed stage to 50% at the Series E stage.

UK / European VC funds have historically performed worse than US VC funds (Lerner et al, 2011; Marston et al, 2013; Arundale, 2015, 2016 and 2017a). Various possible explanations have been given for the poorer performance of European VC funds in terms of the structural and operational characteristics of the VC firms and the wider environments in which the firms operate (Arundale, 2017b). Traditional institutional investors such as pension funds have shied away from investing in the European venture capital asset class partly because of its historic poor performance, again contributing to the lack of finance for European ventures, with European VC funds dependent on support from government agencies, principally the European Investment Fund.

Whilst US VCs invest in UK companies, particularly at the later stages (Hellman et al, 2016), Hege et al. (2009) report that US VC firms perform worse when they invest in Europe and Europeans perform better when they invest in US. Similarly, Lerner et al (2011) report that UK VC funds performed well when investing in US but US VC funds' performance was worse when investing in Europe. It could be that it is the characteristics of the companies that are invested in, and their environments, which is leading to this disparity in performance. Another possible explanation may be due to the extent to which US VCs syndicate with UK / European VCs on UK / European deals (and vice versa) or invest on their own; this appears to have received little empirical study though it has been shown that cross-border collaboration of VCs on deals outperform those deals backed by domestic or overseas VCs alone (Devigne et al, 2013).

VCs do generally syndicate with other VCs in their investments as opposed to investing in ventures on their own (Hochberg et al., 2007; Nanda and Rhodes-Kropf, 2017). Syndication in a VC deal can occur for a number of reasons: to diversify the risk of a single VC investor so that risk is shared across one or more investors, to improve screening and initial assessment of deals and to increase value-adding activity through the different skill sets and networks of the individual VC firms (Sapienza et al., 1996; Wright and Lockett, 2003; Bruining et al., 2005). In addition to syndicating with other VCs, VCs might also co-invest with corporate investors for strategic benefit (Hellmann, 2002; Riyanto and Schwienbacher, 2006). Syndication in these ways can help to improve investment performance through the additional human capital engaged on deals in terms of the sector knowledge, expertise and contacts of syndicate members.

This study reviews syndication amongst UK/European and US VCs in order to ascertain their rationales for syndication, such as risk sharing, additional finance and/or value add from the different expertise of syndicate members. The study considers if there are issues with the alignment of interests of syndicate members internationally across borders, for example with timing of exits and with the collaborative culture of US VCs compared to the more proprietary, and more risk averse, culture of some UK and continental European VCs. As noted above, investee companies backed by a syndicate of both domestic and cross border venture capital (VC) firms outperform those backed by domestic or overseas VCs alone (Devigne et al, 2013) and so international collaboration of VCs is to be encouraged. However this research reveals that whilst European VCs appear willing to syndicate with US VCs, some US VCs have historically been reluctant to syndicate with European VCs. The challenges to international syndication, particularly by US VCs investing in UK / European companies, are reviewed and proposals to meet these challenges in order to encourage greater syndication by US VCs with European VCs are discussed.

The better the collaboration between VCs in terms of sharing value add initiatives, best practices and contacts with investee companies the better the outcome for the investee companies in terms of growth and success and ultimately the performance of VC funds. As European companies seek to grow and scale internationally, often by expanding into the US, collaboration with US VCs through syndication can provide the networks and channels to aid this growth. With the historic poor returns of European venture and the UK (and continental European) marketplaces being challenged by Brexit, US VCs need continued reassurance of the merits of investing in UK / European companies. Investing through collaborative syndicates could help to provide such assurance and maximise the chances of success for both investee companies and their investors.

2. Literature review

Much of the existing literature on syndication is concerned with the rationales and motives for syndication. In an early study, Bygrave (1987) showed that sharing of information and knowledge is more important than the spreading of financial risk as a reason for networking (syndicating). Syndication can be used to reduce the impact of information asymmetries on an investment (Engel, 2004). It may also help to reduce VC firm specific risks by enabling firms to invest in more deals than they could by investing alone. It can provide a second or third opinion on potential deals which should also reduce risk as more information is shared about deals from the various syndicate players (Gompers and Lerner, 2001). This helps to avoid bad investments and hence should improve VC fund returns. It can of course provide much greater financial resources to bring to bear on investments than could be obtained from a single investor (Manigart et al., 2006). Schwienbacher (2008) cites the reasons for syndication as risk diversification, to improve screening of deals, to involve a corporate investor, to increase value-adding activity post investment, to help secure distribution channels and / or important customers which would help, for example, to speed up the introduction of a new technology as a market standard, and to obtain “certification and reputation effects” through syndication with more experienced VCs. Similarly Hege et al. (2009, p.16) refer to the leading motives for VC syndication as “improved screening of deals by securing a second opinion in the due diligence process, complementarities in the monitoring and advising of companies and the sharing of information and pooling of contacts in the exit phase”. Leleux (2007) comments that syndication assists two key areas that impact on performance: sourcing high quality deals and nurturing investments. Checkley et al. (2014) found that performance of VC firms in UK is positively related to connectedness with other VCs and greater connectedness is a precedent to improved performance (measured by number of IPOs). The performance advantage is due to the network connectedness with access to skills, information and social ties as opposed to the financial resources of the syndicate members. Checkley et al. also found that VCs prefer to syndicate with well-connected VCs and with VCs having offices in the same region of the UK.

International aspects of syndication have also been studied. Schwienbacher (2005) found that syndication is used more often in the US than in Europe and the average size of syndicates is larger in US than Europe. In an earlier study, Bottazzi et al. (2004) did note that in their sample of some 150 European funds almost half of the deals were syndicated with more than 75% of firms taking part in a syndicated deal, so syndication is nevertheless quite common in Europe. Schwienbacher (2005) found that the time for European VCs to find a trade sale buyer was a mean of 7.2 months compared to 5.1 months in USA, which they state is consistent with the view that the greater degree of syndication in the US provides a larger pool of contacts when looking for a potential buyer and therefore quicker exits.

Finance considerations were found by Manigart et al. (2002) to be more of a driver for syndication in Europe than the sharing of resources, or indeed improving deal flow, which appear to be more a motive for syndication in the US. Less availability of capital due to smaller fund sizes and the desire to share the risk on deals are strong drivers for syndication in Europe; amounts invested in early stage companies are significantly larger in US than UK (Clarysse et al. 2009). In a later paper, Manigart et al. (2006) found that, whilst “the finance motive is the most important motive for syndication” (p. 143), finance was more important for smaller fund size VC firms that for larger firms. European VCs viewed syndication as a means to increase the diversification of their portfolio, to allow them to invest in larger deals and to improve access to future deals. Manigart et al. (2006) found that syndicating for monitoring and adding value purposes were less important factors for European VCs. Their study also found that syndication practices across Europe were very similar.

Whilst it might be expected that international syndication is increasing as the VC market becomes more global, Marston et al. (2013), in their report for Nesta, found that VC funds in US, and also UK and Europe, were actually becoming less international in their outlook. In the period 1990 to 2007 almost a third of US funds had invested outside their home region but this had reduced to a quarter for the period 2008 to 2012. Marston et al. were particularly interested in US VCs investing in UK. They found that whilst the US VC interviewees in their study were “generally favourable” about the UK as an investment location, various barriers to investing in the UK were mentioned. These were summarised as: distance (the need to be close to a founding team within two hours of travel time), negative past experience of investing in UK (in terms of the historic lower performance of UK VC funds), fund agreement restrictions (UK LPs specifying that investments be made domestically), lack of familiarity with overseas tax arrangements, and the UK being expensive in terms of locations for doing business (especially for London based companies).

In terms of factors impacting on collaboration between European and US VCs, in their recent VC survey the European Investment Fund (2018) comments that European VC funds are too small and the European VC market “seems to lack risk appetite” and is “not dynamic enough” (p. 60). As a result, some pension funds and other institutional investors have not been willing to invest in European VC. In their survey they found that although 56% of VC managers had found it “relatively easy” to locate co-investors over the past year (i.e. in 2017) around half of the VCs in UK and Ireland had found it difficult to access co-investors. The British Business Bank (2018) also refers to the "continuing unattractive returns of UK VC" with most of US VC funds coming from institutions, such as pension funds, unlike UK and Europe as a whole which are much more dependent on government sources of funds such as the European Investment Fund and the British Business Bank. Invest Europe funds raised data for 2017 shows that government agencies contributed €1.9bn in 2017 (24%) cf. €1.3bn (20%) in 2016; pension funds were €261m (3%) in 2017 cf. €294m (4%) in 2016 with a declining trend for pension fund investment over the past 4 years. Allocating unclassified amounts of €1.2bn gives a share of 29% for government agencies in 2017, almost a third of funds raised for VC investment in that year.

Nanda and Rhodes-Kropf (2018) discuss coordination frictions in VC syndicates, the frictions that can arise between investors with different incentives, objectives and cash flow rights who nevertheless need to collaborate to help make a syndicated venture a success. A number of frictions may occur including the following: later entrants to a syndicate not having the same degree of information on an investment as the current investors ("insiders versus outsiders"), differing views as to whether to follow-on an investment with further rounds of finance or to abandon the investment, differing fund sizes with larger VCs more able to allocate funding for subsequent rounds, differences in the stage and state of the VCs' limited partnership cycles, re-financing risk due to state of the "boom and bust" cycle, differences in the effort that members of a syndicate put into the monitoring of the investments, and less active members of a syndicate benefiting from the work of others, all or any of which can lead to conflict in the syndicate team. Frictions can be mitigated by choosing syndicate partners with similar characteristics whose incentives for doing the syndication are more likely to be better aligned. Nanda and Rhodes-Kropf (2018) did not consider coordination frictions between international VC syndicates; possible frictions between European and US VC investors are considered in this study.

One of the frictions that can arise in a syndicate concerns the decision as to when to exit from an investment. European VCs tend to exit their investments earlier than US VCs (Arundale, 2017b). European VCs achieve less than optimal realisations for their investments and this results in less profitable exits and lower returns for European VC funds. US VCs are prepared to wait for a better exit in order to achieve optimal gains from their investments. The tendency to exit earlier may be due to pressure from limited partner investors to show returns on the funds or it may be in connection with the need to demonstrate realised returns when fundraising for subsequent funds. The tendency of European VCs to exit earlier is in contrast to earlier quantitative studies that showed that the duration of the exit stage is longer in Europe. For example, Schwienbacher (2008) refers to the less liquid exit markets in Europe which they conjecture causes European VCs to wait for longer until they find exits.

Devigne et al (2016) found that VCs investing in their own countries tend to continue to support poorer performing companies, for example by providing further finance (escalation of commitment), whilst those VCs investing across border outside of their own countries are more likely to terminate poor investments. This applies even when the latter invest through a local branch and can be explained by the lower social environmental and emotional involvement that they have with these international investments.

In terms of theoretical constructs for syndication, resource based theory, social network theory and prisoner's dilemma theory are perhaps the most relevant. Bygrave (1987) used a resource exchange model (Pfeffer and Salancik, 1978) to study syndicating by VC firms. Bygrave comments that resource exchange theory has three structural variables which determine how organisations interact with each other: concentration, munificence and interconnectedness. Concentration of VC firms can be in terms of regional segmentation and industry sector segmentation. Munificence are the resources that VC firms work with in terms of money, deal flow and people to manage their investments. Interconnectedness are the linkages which VC firms use to reduce uncertainty. For example, a VC is more likely to invest in a proposal that is referred to them by another VC and potential syndicate member than in one that comes to them without such an introduction (Baty, 1981). The level of uncertainty experienced by VC firms determines the frequency of networking among VC firms in syndicates (Bygrave, 1987). There are overlaps between resource based theory and social network theory in the context of VC networks. There is also some overlap with organisation theory and the personal networks that are established between VCs, based on mutual trust, which aid information sharing (Florida and Kenney, 1988). Prisoner's dilemma theory is also relevant to the members of syndicates in VC investments. Cooperation between parties is easier if the parties are similar to each other and have the same goals (Cable and Shane, 1997). If the balance of power between the parties is equal the more likely they are to cooperate (Pruitt and Kimmel, 1977).

Syndication can also be used to reduce the impact of information asymmetries and reduce risk as more information is shared about deals by the different syndicate members (Gompers and Lerner, 2001; Engel, 2004). As discussed above and by Arundale (2017b) VCs may collaborate in several areas of the deal process including deal sourcing and clubbing together to invest in seed deals, at the due diligence stage sharing information and knowledge about the technical and market aspects of a deal, and at the value add stage where the different expertise of the different VCs in a syndicate can be pooled together for the benefit of portfolio companies. Organisational theory in terms of information sharing within networks is also relevant to the syndication process (Florida and Kenney, 1988), with collaboration of VCs based on mutual trust with other VCs that they know well.

The above studies do not specifically consider issues arising in syndicates comprising UK / European and US VCs which is the purpose of the current study.

3. Research methodology

Operating within the context of the critical realist philosophical framework (Bhaskar, 2011) the study used a mixed methods approach (Creswell, 2014) with qualitative, semi-structured interviews using thematic analysis to identify emergent themes (Boyatzis,1998) and quantitative review of secondary data (VC syndication activity data, where available).

Using a unique dataset established through thematic analysis of transcribed interviews with 64 separate VC firms from Europe and US conducted in previous research (Arundale, 2015), the factors relating to syndication by the VCs were extracted and a comparison made between syndication by European VCs and syndication by US VCs. Embracing engaged scholarship (Van de Ven, 2007) with the researcher's practical experience in the VC industry (gained during a working career with PwC), the approach taken in setting up the dataset was to carry out interviews of around one hour's duration with senior investment executives from 64 separate VC firms (24 from UK, 15 from continental Europe and 25 from US). The interviews covered the entire investment process from origination through execution (including syndication) and monitoring to exiting deals. The interviews took place between September 2012 and September 2014.

Interviews with 40 related stakeholders were also held during this time period (15 from UK, 4 from continental Europe and 21 from the US). These stakeholders included limited partner investors in venture capital funds, entrepreneurs, advisors to the industry, corporate venturing investment executives and others who are deeply involved in the industry (Arundale, 2016). The comments of these interviewees relating to the syndication activity of European and US VC firms were reviewed and compared with those of the VC interviewees.

There are relatively few studies that have employed qualitative interview techniques to investigate VC firm investment practices, including syndication activity. The majority of the existing studies use quantitative techniques on large data sets applying regression analysis of variables and/or survey techniques involving questionnaires sent to a large number of participants for completion. Muzyka et al. (1996) refer to the VC community's negative attitude towards such surveys. Whilst not specific to venture capital, Meyer (2011) has criticised research in the area of entrepreneurship as becoming too method centred and focused on the manipulation of databases which results in researchers being distanced from actual entrepreneurs. This study engages with the real world of actual VCs and not merely databases of their activities and hence there is a focus on interviews with VCs and other stakeholders. Sanders, Lewis and Thornhill (2009) quoting Easterby-Smith et al (2008) and Jankowicz (2005) state that an interview will be the most advantageous approach to obtaining data when (1) there are a large number of questions to be answered, (2) where the questions are either complex or open-ended, (3) where the order and logic of questioning may need to be varied. Where (2) and (3) are present a semi-structured interview will be the most appropriate. These three factors are all present in the current study and a semi-structured interview process was therefore adopted.

The VCs and other stakeholders interviewed in the research formed a purposive sample drawn from membership of professional VC associations and from the author's and others contacts in the industry. The sample size of VC firms (64 separate firms) and other stakeholders (40 individuals) utilises the concept of saturation and also allows for the assessment of variation between the distinct VC and other stakeholder groups in terms of geographical location and focus. Sanders, Lewis and Thornhill (2012) suggest that where the focus of a research question is wide ranging between 25 and 30 interviews should be undertaken. As shown in Table 1, the VC firms were sourced from a cross-section of stage and sector specialisms.

Table 1: Size of fund, sector and stage stratification of VC firms in sample

No. of firms	US	UK	Cont Europe
Size of fund[1]			
Small (<$84m)	3 (12%)	9 (38%)	8 (53%)
Medium ($84m - $365m)	12 (48%)	13 (54%)	6 (40%)
Large (>$365m)	10 (40%)	2 (8%)	1 (7%)
Sector			
IT	10 (40%)	8 (33½ %)	2 (13%)
Lifesciences	3 (12%)	2 (8%)	1 (7%)
Mixed	11 (44%)	8 (33½ %)	10 (67%)
Focused	1 (4%)	6 (25%)	2 (13%)
Stage			
Seed / early	11 (44%)	11 (46%)	9 (60%)
Venture (incl early)	12 (48%)	13 (54%)	6 (40%)
Growth	2 (8%)	-	-

US VC funds with an average size of $282m were considerably larger than UK and continental European funds, which had average sizes of $168m and $128m, respectively. The larger size of US funds and the more plentiful supply of money overall in the VC sector in the US contributes to the overall better performance of US VC funds. There is generally more finance available to fund young, high-growth businesses in the US and to permit them to continue to grow and scale.

There was no particular difference between US, UK and continental European firms in terms of their focus on the IT and life sciences sectors in the sample studied. Firms invested across the broad spectrum of IT and life sciences, sometimes specializing in one or both of these sectors and sometimes having a narrow focus on specific areas, such as digital media.

The qualitative interview data on syndicated investment practices above was supplemented with secondary data on syndication activity in Europe and US from various third-party private equity and venture capital data providers that became available later in the study.

4. Findings

There was very little difference in syndication activity between UK, continental European and US VCs (Table 2). All of the US VCs commenting on syndication activity in the interviews, all but two of the UK VCs and all of the continental European VCs syndicated with other VCs on their investments, usually locally but sometimes internationally. There was no evidence of less syndication activity in Europe compared to the US in the VC firms sampled, in contrast to Schwienbacher (2005) who found that syndication is used more often in the US. It could be that syndication activity has become more common in Europe in recent years: "*The U.S. has always felt a bit more clubby, you know, so I find a deal and I'd rather share it with my mates than keep it to myself and London I think is beginning to go that way too with some of the internet/digital media things but it never used to be like that. It used to be: I've got a good deal and I'm going to keep it! Now I might choose a syndicate partner.*" (UK VC 18) According to the European Investment Fund (2018) the majority of VC

[1] Size ranges as per Lerner et al. (2011).

managers in Europe (56%) found co-investors to syndicate "relatively easily" in 2017 whilst two fifths of the fund managers reported difficulties in finding co-investors (p. 13).

Table 2: Syndication activity

Theme category	Themes
Syndication (US 21, UK 24, E 15)	• 100% US VCs, 100% E VCs and 96% UK VCs actively syndicated • 24% US VCs, 22% UK VCs and 27% E VCs syndicated for monetary reasons • 10% US VCs, 22% UK VCs and no E VCs syndicated for value add reasons • 19% US VCs, 35% UK VCs and 47% E VCs syndicated internationally

4.1 Rationale for syndication

It has been claimed that there is greater tendency to syndicate for monetary reasons in Europe compared to the US, as reported by Manigart et al. (2002). This may be due to the relative scarcity of funding in Europe for scaling up ventures. In the US, syndication may be for non-monetary reasons: *"We syndicate not because we need to (we have the ability to write the whole cheque if we wanted to) but because we want to."* (US VC 41) However, in the sample interviewed the propensity to syndicate more for monetary reasons in Europe was not so apparent. 22% of UK VCs, 27% of continental European VCs and 24% of US VCs said that they syndicated for money reasons. However, other stakeholders confirmed the need for additional financial resources as a reason for syndicating in Europe (UK Corporate VC 1, European CVC 3).

There is more finance available to fund innovative ventures in the US, with Europe consistently suffering from a shortfall of venture finance (Aeronoudt, 1999 and 2017). Other stakeholder interviewees commented that Europe "suffers" due to its smaller funds as this results in difficulties in supporting follow-on rounds and in scaling (Coutu, 2014). Lack of funding was seen to be more of an issue at the later stage investment rounds than at seed and early stages by the other stakeholders: *"There's a massive inefficiency in the UK because you haven't got scale of funds; you're forever having to look to raise another round of funds and then another round of funds and at each break point for the next fundraising, there are valuation disputes, there are allocation disputes, it's just hugely inefficient, a huge drain on management time."* (UK Limited Partner 2). A European VC related interviewee (VCR 3) commented that: *"In Europe you just don't find large enough VCs that could really bring you all the way up",* that is to scale.

Some US VCs also appreciate the additional finance and reduction in risk that syndication provides: *"We want someone whom we think is rational, who we have a personal relationship with, who also has a deep pocket as part of our syndicate and so doing things on your own doesn't make any sense because you don't know what bad things will happen."* (US VC 36). US, UK and continental European VCs referred to the "deep pockets" that syndicate members can provide in case "bad things" happen (US VC 36, UK VC 13, European VC 58).

Often, though, US VCs are syndicating to pool expertise, even though they can fund the whole deal themselves (US VCR 7).

22% of UK VCs and 10% of US VCs commenting on syndication said that they syndicated for the value add gained from syndicated partners, though some may feel that they add more value than the other members of the syndicate (UK VC 26). Syndication provides access to “smart” money through introductions and connections and resource networks that the syndicate member VCs have. Overall however, it de-risks an investment, especially if the investment is early stage (UK VC 18, US VC 56): “*Sharing risk in early stages is the sensible thing to do.”* (UK VC 18). “*Typically, the reason that we do it (i.e. syndicate), is that we’re trying to put ourselves in a position where we’re able to support the company moving forward both in terms of raising more funds in the future, giving them access to more smart money and introductions and connections and resource networks that VCs have and also it helps us to de-risk investment to an extent, right?”* (US VC 56)

VCs may also share due diligence between syndicate members, for example they might split doing due diligence interviews with a company’s customers or share the technical due diligence (UK VC 3, UK VC 72, Finnish VC 60): “*I will introduce them (data centre prospect) to our network of investors and specialist advisers, guys who’ve been in the data centre business before, guys who’ve invested in data centres, exited data centres and I’ll get them, basically, to rally round them to see if this thing’s got legs”*. (UK VC 72) If coming in to a deal later than other syndicate members VCs might review the due diligence already carried out by syndicate members but would *“refresh it”* themselves (UK VC 18). VCs might also benefit from the deal flow for subsequent investments coming from syndicate members (US VC 10).

4.2 Club seed deals

There was evidence of US VCs clubbing together with relatively small investments in very early, seed stage investments in order to “test the water” and not to miss out on potential outlier investments, more so than by UK and continental European VCs. 48% of the VCs interviewed were investing at the seed and / or early stages (44% of US VCs, UK 46%, E 60%). Some of the firms, particularly those based in Silicon Valley, invest at the seed stage in order to test the market. For example, one Silicon Valley based US VC makes seed investments from $50k to $1m to “test the water” particularly in the consumer sector: *“Let’s take a little of it and see if something pops. We’re not going to spend any time on it, we’re not going to go on the board, etc.”* (US VC 39). Another Silicon Valley VC (US VC 41) has a $20m seed fund which it uses to make *“experimental investments with far out things”* which are not yet ready for full VC investment. This VC slims down the investment decision making process so that just one partner can decide on an investment of up to $250k in just one meeting with a company. Another VC in Silicon Valley, which operates out of both the Valley and South-East UK, has a sole focus on seed investments (US VC 35), sometimes investing when there is no business plan. *“I think that where you’re seeing huge syndicates is at the seed level and that’s where there are a lot of club deals happening.”* (US Silicon Valley VC 43).

A US LP (LP5) commented on this “betting” on small seed investments: “*If you have a $200 million fund it’s very easy to make a series of small bets of seed stage, $250,000. That doesn’t hurt you very much and you get a lot of options on putting a lot of money to work behind the actual ones that work.”* Whilst this “testing of the market” was more common to the US

Silicon Valley VCs there was one continental European VC who commented that they also invest at the seed stage in order to get a *"foot in door"* (E VC 49): "*If you don't invest in a company, then you lose total contact with them. If you have a small investment, it forces you to do reporting to check regularly and time flies very fast. So it is a very good discipline."* In the competitive environment of Silicon Valley VCs do not wish to miss out on potential outlier investments, hence the clubbing together at the seed level as observed by UK VCs 19 and 45: *"Nobody wants to miss out on a name; at the super competitive level you have to be in all the right deals."* (UK VC 19). "*It's an entrepreneur they've backed before who's said "you know, listen, if you're not in at that stage you won't get in""*. (UK VC 45 commenting on Silicon Valley VCs all getting into the same seed stage investments in syndicates). Having invested, non-performing companies in the syndicate are weeded out: "*We'll all invest in a dozen search engine companies and then we'll kill the ones that aren't performing and we'll all carry on syndicating in the ones that do perform".* (UK LP 2) This clubbing together of US VCs (and from UK and continental Europe to a lesser extent) in seed stage investments has not been addressed in previous research, such as Lerner et al. (2011) and Marston et al. (2013).

A greater propensity to exercise the option to invest at the very early seed stage in order to "test the water" by US VCs, particularly those based in Silicon Valley, reflects the greater propensity for risk exhibited by these firms. If such investments succeed they might give rise to outlier performance, a contributor towards the overall better fund performance of US VCs. In deciding whether to invest at this very early stage the VCs are engaging real options theory whose drivers are uncertainty and competitive pressures. If several investors are considering investment the competitive pressures may cause the investor to invest sooner than uncertainty would normally allow as is the case with these Silicon Valley VCs.

4.3 Alignment of syndicate interests

Alignment of syndicate interests was discussed by almost half (47%) of the VCs commenting on syndication. VCs mentioned that it is important for the interests of syndicate members to be aligned in order for the syndication to work effectively, for example with exit strategies: "*The biggest problem is getting everyone aligned to act before it's too late."* (UK VC 20). This is particularly important with international syndicates where one member might have a high risk, high reward strategy (the US West Coast model) and one has a low risk, commensurately lower reward model (the continental European model) (UK VC 30). Syndicates work well if the investors are properly aligned in terms of having similar fund sizes, similar investment horizons and similar operating philosophies: *"We've been in companies where somebody wants to sell because they're in a ten-year-old fund and I'm in a two-year-old fund, and you have conflicts and stuff."* (US VC8); "*If you have investors that are already invested for 12-years they tend to have a different perspective than an investor who maybe comes in much later"*. (German VC 14) Syndicates may fall apart if individual firms are not able to follow through on investments (US Silicon Valley VC 43).

US VCs tend to syndicate with people they like, respect and trust (US VCs 10, 15, 37, 39, 40, 41, 56, 73): *"We tend to invest with the same half dozen friends consistently over time."* (US VC 37). The efficacy of working with co-investors, depends on the composition of the board: *"We know what each other is like and we know what makes each other nervous or not nervous or whatever. He's pushy, he's arrogant, he's a loud mouth, he makes bad choices,* *he can't deliver the things he says he's going to deliver and he's just a bad board member"*. (US VC 40)

US Silicon Valley VCs 39 and 41 commented that its competitors were like-minded and so make the best syndicate partners: *"So your biggest competitors are often your best partners because you get people on a board situation that are like-minded and have, you know, the similar interests in mind for the company. You may be competing on a new deal in the morning and be on a board with the same partner later in the afternoon."* (US VC 39) The concentration of VC firms in Silicon Valley facilitates the syndication of investments by those VC firms (Zhang, 2007).

Because of issues with alignment of interests some VCs may prefer not to syndicate as with UK VCs 6 and 16. UK VC 6 tends not to syndicate any more as: *"We concluded a lot of the syndicate stuff is very complicated. Behaviourally, there's a lot of volatility. We've had lots of bad experiences (with syndication)"*. UK VC 16 has a fairly broad sectoral approach and does not syndicate except on technology deals, particularly medtech (diagnostics and pharmaceutical services) where *"things can take a long time"*. Issues can arise with syndicate members investing through funds of different vintages with different time horizons to exiting investments, different mind-sets and cultures with some syndicate members not being as commercial or risk orientated as others (UK VCs 6, 20; Irish VC 5). There may be potential conflicts on pricing and terms of a deal (UK VC 13). They may also be disagreements between what should be done with poorer performing investee companies, for example whether to provide more finance and / or whether to replace elements of the management team (UK VC 6, US VC 15).

Some syndicate VCs may wish to exit from a poorly informing investment; their co-investors may wish to hold on to it: "*I said to my co-investor, "Hey, it seems to me like we should probably just sell whatever we've got and be done with this". And his answer was, "This is my first investment in a new fund, I can't do that, maybe you have that relationship with your LPs and that's great but I don't, I can't have a loss this early on.""* (US Silicon Valley VC 40). Ultimately this can result in a loss for all syndicate members as with US VC 40 where they did provide another $2m into the business and the business subsequently failed. Syndicate members may also have different expectations as regards the pricing of exits which can lead to friction between syndicate members, as illustrated by UK VC 19: "*Yes it's the maximum amount of disharmony to be honest. So we had an investment in a company and I had one investor who would have sold it at any price. I had another investor who wanted a ridiculous price and we were somewhere in the middle and that was dreadful."* VCs may carry out quite substantial due diligence on a syndicate partner before they bring them in to the syndicate (Dutch VC 74, German VC 61) and if alignment of interests cannot be achieved then the deal does not proceed.

Eight other stakeholders, who commented on syndication, also referred to the importance of alignment of interests in a VC syndicate, particularly in connection with agreeing on the exit strategy for an investment: *"Some funds try to force an exit quicker than we would like."* (US CVC). As noted above VCs syndicate with other VCs that they respect, like and trust: *"When you are working with these same venture capital companies, on a regular basis, you know* *you have to kind of play nice if you want to get invited to other deals."* (US CVC).

4.4 International collaboration

The area where there was a notable difference between the syndication activities of European and US VCs was in the area of international syndication. 35% of UK VCs and 47% of continental European VCs commenting on syndication said that they actively syndicate with US VCs (Table 1). Just 19% of US VCs said that they invest with UK / European VCs. This is despite efforts made by the Department for International Trade (DIT) in the UK which has the remit of encouraging investment into UK high-growth companies through its Venture Capital Unit: *"I'm relying on the fact that Europe or UK, to be specific, does want syndication, because it's the fundamental of what we're doing in terms of, in the Venture Capital Unit. We're trying to create sort of more syndication partners so actually bigger and better deals come in".* (UK Advisor 3). "*It's not easy* (to get US VCs to want to invest in UK companies). *The investors are not interested in hearing again that, you know, Richard Branson's a great entrepreneur and we've got lots of diverse universities. They want to see, "Show me the entrepreneur and the product". There may be a special relationship* (between US and UK) *but there there ain't no special relationship when it comes to venture capital. Venture capital is interested in returns and that's it, not doing any special favours".* (US Advisor 7)

UK / European VCs syndicate with US VCs for a variety of reasons. Finance to fund scaling up of a home based company is the primary need but VCs may also invest in US companies alongside US VCs if they have the requisite sector expertise or have some existing connection with a US company, as with UK VC 52 who knows the sector very well and, for example with regard to one particular investment, knew the CEO from his involvement with the board of a previous investee company: "*We would not have done them if it weren't for these sorts of very special considerations for each of them. Because it is sort of a bit of a challenge to manage investments so far away".* Because of the issues with syndication noted above VCs will only syndicate internationally if the "fit" with their syndicate partners is good.

Three US VCs specifically said that they have not invested with European VCs because of a difference in investment approach and style: *"American CEOs think that European VCs just want to drip-feed them. American CEOs think that European VCs under-capitalise companies. American CEOs think they're playing long ball and that European VCs are playing the short game. There's a cultural mismatch that's very strong."* (US VC 36). US VCs may want to move things on faster, have more ambition and more sense of urgency: "*In Europe going fast is not the key element; it's more, you know, spending less".* (Swiss VC 49) UK / European VCs may prefer to syndicate with VCs that have roughly the same objectives, timeline towards exit, decision making styles and fund sizes (Irish VC 5). US VCs with their larger fund sizes may not be compatible with the smaller UK and continental European funds: "*We find it difficult to have an investor that manages 3 billion and an investor that manages 50 million because at one point in time you have completely different perspectives of how much money you should and want to put to work".* (German VC 14) US VCs may be quite critical in terms of who they are investing with; European VCs are just *"happy to take the* *money"* and are less critical (German VC 61). European VC are not as collaborative with each other: "*It doesn't have that collaborative, respectful competition that you have in the US. It's much more entrenched coming up the battle lines which seem to be drawn a lot more. A lot of suspicion. The US people are much more humble, much more open to talk. Everyone will take a meeting in the US. And kind of very open, very amenable".* (UK CVC 1)

US VCs, particularly West Coast VCs, have "entrepreneurially friendly" terms in their offer letters or term sheets which are focused on the upside potential of an investment as opposed to the more "investor friendly" terms in some European term sheets which are focused on downside protection. "Entrepreneurial friendly" terms mean that the valuations offered by the VCs are higher and more attractive to entrepreneurs, often due to the competition involved in doing deals which is particularly evident in Silicon Valley, and onerous terms are not included in the offer letter or term sheet. In contrast "investor friendly" terms may include full ratchets, multiple liquidation preferences and cumulative dividend streams. This can be a source of aggravation to US VCs : *"So the Americans just view the term sheets from the Europeans as a faithless piece of garbage which was designed to try and block other people out of the deal and then they'd never honour it; Europeans should never be trusted with term sheets. The US term sheet is treated as sort of final offer and a European term sheet which is treated as a starting point that you negotiate away from. We've had more aggressive and unpleasant negotiations with European VCs than any other* (including UK)." (US East Coast VC 25) "*No American CEO wants a European VC. I worked for a European VC because they do things exactly as you describe. What are our dividends that we're going to get? Questions that American VCs just vomit all over."* (US Silicon Valley VC 36). This approach of European VCs makes them less attractive partners to US VCs when syndicating deals.

More US VCs said that they had "entrepreneurially friendly" terms in their term sheets than UK and continental European VCs (US 57%, UK 23%, E 14%). 42% of US VCs commenting on investment terms cited the use of entrepreneurially friendly terms as a key difference between US and European VCs. US VC 41 commented on European VCs looking for every reason to say "no" to an investment: "*Europeans are saying how do I not lose and Americans look at the question how do I win?"* European VCs may not necessarily agree that downside protection is a purely European focus: "*I think the downside thing is a misnomer. Companies nearly go bust everywhere. I sit in a partners' meeting in California; the way that they talk about deals and the downside and everything is very much the same."* (UK VC 19).

Other stakeholders agreed with the concept of the difference between entrepreneurially friendly and investor friendly terms. Six commented on the difference between US and Europe, with the US being seen to be entrepreneurially friendly and Europe being seen to be investor friendly (2 VC related, 1 advisor, 3 CVCs). The reason that European VCs are more cautious in their investment approach is because of their historic poor investment performance: *"The history and the track record of the industry in Europe is things go wrong most of the time and when it goes right it doesn't go very far. It's actually quite rational to think maybe I should be a bit careful here."* (UK advisor 2). The use of more investor friendly terms is entirely rational and problems with scaling makes it reasonable for UK VCs to want to protect the downside: *"There is such a track record of failure of European and*

Israeli companies trying to break into the US. It's much harder than people think and it costs a lot more money. Then it becomes entirely rational to want to protect a little bit more of the downside when the upside does require another jump." (UK CVC 1)

US VCs who do syndicate with UK / European VCs (just 5 VCs in the study) may choose those overseas VCs with US connections where they might feel more comfortable investing, with partners they know and can trust (UK VC 21, US VC 56). If they are investing in a European deal, and have no local office themselves, they may have "*at least one VC that's local"* (US VC 55). A European VC can provide much needed expertise to help with the expansion of a US company into Europe (UK VC 29).

A UK VC (VC 17), which also has operations in Silicon Valley, said that they see no difference in the behaviour of syndicates that include US VCs compared to those that do not. For example they see no evidence that US VCs want to exit earlier or later or indeed to *"pull the plug"* on an investment earlier. Similarly another UK VC (VC 21) whose parent company is headquartered in Silicon Valley sees US VCs investing in its investments as fully aligned in terms of investment holding periods. However, this was not necessarily a view shared by other stakeholders with European VCs trying to predict when investee companies might be sold and incorporating this into investment agreements: "*You can certainly set up a strategy and a business plan and a budget for that but I think a company's acquired when someone wants to buy it, not when you want to sell it so that's the one subtle difference I see (between US and European VCs)."* (US CVC 5)

Six other stakeholders interviewed (1 LP, 1 VC related, 2 advisors, 2 CVCs) referred to the difference in risk approach and /or style between US and European VCs and the impact on their willingness to syndicate: *"I had this recently with a couple of French VCs, all feared the US VCs. They didn't want US VCs to get involved because their appetite for risk is much higher and they're much more willing to throw a lot more at a problem or at an opportunity."* (US Advisor 6). Hege et al. (2009) reported that US firms perform worse when they invest in Europe and Europeans perform better when they invest in US. This may be due to this difference in approach: "*Europeans with US syndicates will get a lift and the US with European syndicates will get a drag."* (UK LP 3). VCs also tend to be very "cliquey" in Europe according to a UK advisor in terms of the firms with which they syndicate and a proprietary approach to investing. This view was shared by a US VC related interviewee: "*When I got to the UK in the early days there was a combination of two things: one is a sort of more "I want this deal to myself" you know what I mean? And number two was it's a small universe of VCs and so it's not as natural to find a partner where it's hard to go from a situation where you are really banging heads and competing hard on a deal and in the next breath saying "well why don't we work on it together" right, I mean in the US there are enough firms where cooperation can just exist more naturally."* (US VC related 7).

Seven UK / European VCs in the study commented that they had not or do not syndicate with US VCs, specifying that they only syndicate with other UK VCs with whom they have a positive relationship (UK VC 16), because in their view *"US VCs have plenty of opportunities at home, especially Silicon Valley VCs"* (French VC 70, Irish VC 50), or it is difficult to get US VCs, particularly those from Silicon Valley, to syndicate on UK deals due to the difficultly in monitoring investments due to the distance involved from the US *"unless the management team moves to the Valley"* (UK VC 26).

4.5 Supporting data

The extent of European VCs investing in US companies in syndication with US VCs and of US VCs investing in European companies in syndication with European VCs is in need of further clarification beyond the limited confines of this qualitative study of 64 separate VC firms from UK, continental Europe and US. Lerner et al (2011) found that a "much larger share of European VC funds invest in the US than the other way around" (p. 17). Lerner et al show that less than 20% of US funds raised between 1990 and 2005 had made an investment in a European company whilst around 40% of European funds had invested in the US. This has improved slightly with funds raised between 2006 and 2009 but overall Lerner et al suggest that "Europe does not offer an attractive proposition to US VC funds" (p. 14). US VCs do not need to look to Europe for their investment opportunities as they *"have tons of opportunities over there"* (UK VC 27). However, due to the extreme competition to do deals in the US, especially in Silicon Valley, valuations have risen and US VCs may be showing more interest in European companies due to the lower valuations in Europe.

The increasing interest in UK companies by US institutional investors, for private equity as a whole including VC deals, is revealed in a recent report by the data provider Beauhurst (2018), who track the UK's non-listed high-growth companies and their investors. Their report reveals that "2017 saw the highest level of foreign investment into the UK's ambitious, high-growth firms" (p.1), with some £6bn invested in 396 deals involving at least one foreign investor. Their report for Penningtons Manches (2018) reveals that of the £8.27bn of total investment in UK companies in 2017, £2.15bn (25%) involved US investors and £1.7bn (20%) involved investors based in Europe. US West Coast investors were involved in 74 deals with UK companies, totalling £1.08bn representing some 4.8% of all UK investments by number in 2017. Beauhurst data is based on investments made when an investee company issues new shares and does not include investments where existing shares are bought from other shareholders as with private equity buyouts (BVCA data includes both these types of investment). The lower valuations of UK companies, referred to above, are in the top 5 reasons given by US investors in Beauhurst's survey for making a UK investment, along with technology talent, investable hard science, strong intellectual property and a common language. It was the larger deals, presumably at the later investment stages, where foreign investment was most concentrated; 71% of deals worth more than £50m each involved at least one foreign investment, compared to only 7% of deals below £500k. Beauhurst comment that American investors are the least likely to back seed-stage companies, whilst those from Asia are the most likely, though no explanation is given for this observation. Hellman et al.'s (2016) similarly report that the percentage of finance provided by US investors in UK VC deals is as much as 50% at the later (Series E) stage but just 18% at the seed stage.

Data provided specifically to the author from Beauhurst in 2018 (Table 3) shows that there were 21 deals into UK companies in 2017 that involved only US investors; there were an additional 25 deals that involved US and continental European investors together and 85 deals that involved US and UK investors together. There were considerably more deals involving EU investors on their own into UK companies than there were US investors on their own. UK deals involving only US investors peaked in 2015 at 41 deals as did those involving US and continental European firms (26 deals). Those involving US and UK investors peaked in 2017.

Table 3: UK deals involving US and EU investors (sourced from Beauhurst at author's request)

	2011	2012	2013	2014	2015	2016	2017
Total UK deals	490	747	1,021	1,420	1,567	1,528	1,707
US only	13	17	15	23	41	31	21
US and UK	30	50	45	48	61	64	85
US and EU	8	10	9	14	26	21	25
All involving US	51	77	69	85	128	116	131
EU only	36	46	57	68	79	89	108

However these deals represent only a relatively small proportion of all UK deals; taking US only, US and UK and US and EU deals together this represents some 131 deals in total in 2017, i.e. just under 8% of all 1,707 deals in that year. The table shows that US investors appear more willing to syndicate with UK investors on deals than do deals on their own or with EU investors. This relatively small involvement by US investors in UK deals in terms of the number of deals is in contrast to the much larger proportion of US investors' involvement in terms of the overall value of deals in the UK which was noted above (25%). Hence whilst US investors only invest in a relatively small proportion of UK deals, when they do invest they invest in large amounts, and at the later stages.

Preliminary, overview data from PitchBook, shared with the author in 2018, indicates that there have been around 3,400 companies headquartered in Europe in which US VCs have invested in the 5 years from 2013 to 2018 to date, and around 1,850 companies that have had co-investments by European and US VCs. The peak of this activity was in 2015 in terms of number of co-invested deals and in 2016 in terms of amount invested. Further details from PitchBook were not freely available. InvestEurope data (Invest Europe, 2018) shows that there were a total of 18,214 companies invested in over the 5 years to the end of 2017, indicating therefore (with the PitchBook data) that around 18% of these companies had investment from US VCs and just around 10% had investment from European and US VCs co-investing together. PitchBook data accessed by the BVCA shows that US VCs were involved in around 19% of all deals in the UK, which involved a UK or US VC, over the period 2013 to 2017. However, 41% of UK deals by US VCs were by US VCs acting without a UK VC involved.

The Invest Europe data shows that there was €894m of investment by non-European headquartered VCs into European headquartered companies in 2017 and €892m of European VC investment into companies headquartered outside Europe in 2017 (i.e. both representing some 14% of total VC investments of €6.4bn in that year). Earlier BVCA data for the UK shows that UK VCs invested in some 53 companies in the US out of a total of 925 companies invested in 2016 or £3.3bn in amount out of £21.4bn invested (16%); in contrast UK VCs invested some £10.0bn (46%) into 128 companies in continental Europe (BVCA, 2017a).

Invest Europe's data does not include any insights into syndications between US and EU VCs. The only observation between US and European venture that they gather in their database is in relation to the origin of funds raised. Their data on US investors into European VC funds reveals that only 3.5% of the total funds raised for European venture in 2017 originated from North America compared to 26% for European private equity funds as a whole. Whilst North America does not invest much in European VC funds compared with their investment into the larger private equity funds in Europe this is perhaps not surprising in view of the historic poor returns of European venture and, in general, VC funds tend to raise their capital domestically.

Similarly to Invest Europe, data from the European Investment Fund does not include details on syndication activity by US VCs with European VCs. The EIF commented to the author that *"The activity of EIF in support of US VCs is unfortunately too sparse to allow observing significant overlap between their investments and EIF-supported European VC firms. Therefore, at this stage, we are not able to provide further evidence which supports, nor opposes, the phenomenon you qualitatively observed. It would certainly be interesting for us to gather additional insights on this phenomenon. Should you come across relevant research and data, do not hesitate to share it with us".*

The above data, whilst limited, appears to indicate that syndication by US VCs with UK / European VCs on European / UK deals, is a relatively low proportion of total deals by number, though growing, which backs up the qualitative findings. Despite the reluctance of some US VCs to syndicate with European VCs in this study a recent report from KPMG does however note that "many US investors are choosing to syndicate with European VC partners" (KPMG, 2017, p.73). The foreign exchange rate post Brexit, the lower valuations of European companies and the increasing competition for deals in the US has encouraged some US VCs to seek investment in European companies. Syndication with European VCs enables a closer geographical connection with their investments. A corporate finance advisor from the other stakeholders interviewed in the study sees much more involvement of US VCs now in European syndicates (UK Adviser 2). However, this is still a fraction of US VCs and "*US investors are still by and large happy to invest within 30 miles of their office."* (UK Adviser 2).

5. Discussion

From the qualitative study there was no evidence of less syndication activity in Europe compared to the US in the VC firms sampled, in contrast to Schwienbacher (2005) who found that syndication is used more often in the US. There was evidence that US VCs syndicate with other VCs that they know, for example in technology "hotspots" such as Silicon Valley, even if the other VCs are competitors, in order to aid better alignment of interests and less conflict between syndicate members. There is a smaller pool of VCs in UK and continental Europe in the technology "hotspots" for syndication purposes. VCs' motivation for syndicating is not for predominantly monetary reasons, though this may be welcomed, but more to share risks and pool expertise on an investment. The US VC style is more collaborative than the European more proprietary style. US VCs can be reluctant to syndicate with European VCs because of their different risk propensity and their approach to such matters as investment terms. There was evidence of US VCs clubbing together with relatively small investments in very early, seed stage investments so as not to miss out on potential outlier investments, more so than by UK and continental European VCs.

Viewed from an agency theory perspective it seems that US VCs are better at reducing information asymmetries on deals through better collaboration with other VCs and pooling of expertise and knowledge about a deal than are European VCs. The pooling of expertise and collaboration which was more evident with US VCs than with European VCs can lead to better outcomes with due diligence at the investment stage and to improved value add from the different syndicate members, contributing to better investment outcomes and therefore improved fund performance. The more proprietary approach of European VCs and conflicts between syndicate members in terms of when to exit from investments is not as conducive to optimal investment and may well contribute to the poorer performance of European VC funds as compared to US VC funds. This builds on earlier studies (Arundale, 2015 and 2016) which link the structural, operational and wider environmental differences between UK and continental European VC firms and US VC firms to the historic gap in performance between European and US VC funds.

The lack of collaboration between US VCs and UK / European VCs particularly on UK / European investments revealed by the qualitative study was supported by the limited secondary data available on US / European syndication. It appears that relatively few UK investments in 2017 (around 8% by number) were supported by US VCs, either alone or with UK / European syndicate partners, although other studies do appear to show a greater involvement (Hellman et al, 2016). From data in this current study, for the 5 years to 2017 around 18% of European companies had investment from US VCs, though only around 10% had investment from European and US VCs co-investing together. It is intended to attempt to locate and obtain more detailed data on US / European syndicated deals from private data providers in the absence of such data from either Invest Europe or the European Investment Fund.

5.1 Implications for policy

US VCs need to be made more aware of progress made by the UK/European VC industry in adopting more of the US style of investment practices (Arundale, 2015) and of the improving returns of European VC (Arundale, 2017b; BVCA, 2017b). This could potentially be achieved through PR initiatives by the European VC associations and other interested parties such as the Department for International Trade in the UK which has had a programme to encourage US VCs to invest in UK companies for some time. Similarly, entrepreneurs should be encouraged to see the benefits of having syndicates of investors, including US VCs, in their companies which would help to alleviate some of the issues with the current lack of patient capital in the UK to scale up their operations. Lessons can be learned and best practices shared from cases where there has been syndication between US VCs and European VCs with, for example, later stage investments.

Another policy implication might be to form a joint Government and private sector backed fund of funds to encourage co-investment together by UK/European and US VC funds. Working together in this way might encourage the sharing of best investment practices by European and US VCs and possibly the reconciliation of attitudes towards risk and other cultural differences of European and US VCs.

5.2 Implications for practice

To the extent that they are not currently in place UK / European VCs need to build close networks with likeminded US VCs where they can trust each other and work collaboratively together. European VCs can learn best investment practices from US VCs to help improve fund performance. International organisations can help here, such as the Tech Tour (www.techtour.com) which facilitates the meeting together of international VCs in discovering investment opportunities in specific European countries. Alignment of interests of international syndicate partners, including in such areas as exit routes and the timing thereof, could be maximised through better communication and collaboration. The pros and cons and the practicalities of syndication need to be clearly set out in training material for newer VCs.

6. Acknowledgements

I am grateful to all of the interviewees for giving up their time to talk to me and to the many people who provided introductions to potential interviewees for this and the wider study which formed part of my work towards a doctoral degree at the Adam Smith Business School, University of Glasgow. I am particularly grateful to Professor Colin Mason for his advice, support and encouragement in connection with my PhD research and for his observations on this paper. I also appreciate the feedback received from the reviewers for the ISBE 2018 Conference. Thanks are also due to the BVCA for facilitating access to some of the VC firms and data used in this research.

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