

## WHY DO VENTURE CAPITAL COMPANIES SYNDICATE ?

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## **ABSTRACT**

Financial theory, access to deal flow, selection and monitoring skills are used to explain syndication in venture capital (VC) firms in six European countries. In contrast with US findings, portfolio management motives are more important for syndication than individual deal management motives. Risk sharing, portfolio diversification and access to larger deals are more important than selection and monitoring of deals. This holds for later stage and for early stage investors. Value adding is a stronger motive for syndication for early stage investors than for later stage investors, however. Non-lead investors join syndicates for the selection and value adding skills of the syndicate partners.

## EXECUTIVE SUMMARY

Venture capital (VC) firms provide companies that have high growth potential with finance and business skills to exploit market opportunities. An important strategic decision a VC firm has to make is whether or not it will syndicate a deal, and if so, to what extent. An equity syndicate involves two or more VC firms taking an equity stake in an investment, either in the same investment round or, more broadly defined, at different points in time (Brander, Amit and Antweiler, 2002), for a joint payoff (Wilson, 1968). This paper investigates the motives of VC firms to syndicate out deals in six European countries.

European Venture Capital Association (EVCA) statistics show that almost 30% of the value and of the number of deals invested by European VCs was syndicated in 2001. Despite the importance of syndication activity in the VC sector surprisingly little is known on the motives for syndication. Syndication may either address issues of VC portfolio management, or deal with issues related to a specific investment. From a portfolio management perspective, VC firms may syndicate in order to share the investment risk via portfolio diversification (Bygrave, 1987 and 1988; Lockett and Wright, 2001), to ‘window dress’ the performance of the VC firm (Lerner, 1994) or to assure, increase or reciprocate the deal flow of the VC firm (Lockett and Wright, 2001; Sorenson and Stuart, 2002).

Syndication may also be a means to improve the activities over the VC investment cycle that deal with specific portfolio companies. First, syndication may improve the selection process through improved screening, due diligence and decision making (Sah and Stiglitz, 1986; Lerner, 1994). Relatedly, syndication may lead to optimal deal structures (Admati and Pfleiderer, 1994; Lerner, 1994) and to lower valuations through collusion (Brander et al., 2002). Second, syndicate members may bring their specific knowledge and skills to the portfolio company after the investment and thereby add more value (Brander et al., 2002; Bygrave, 1987). Finally, at exit, more specifically at IPO, syndication leads to more certification and lower underpricing of the portfolio company (Stuart et al., 1999; Chowdry and Nanda, 1996).

This is the first study that looks at the motives for syndication across several European countries. A questionnaire-based methodology is employed because the different theoretical perspectives on syndication were anticipated to be multidimensional. In total, the sample consists

of 317 usable responses (44% response rate) and is representative for the VC industry in each of the different countries.

### **Major findings**

The motives for syndicating a deal in Europe are driven much more by finance considerations than by deal flow considerations or by the wish to improve the deal specific investment process. These findings contrast with those from North America.

The finance motive is the most important motive for syndication for both early stage and later stage VC firms. While the deal flow, selection and value adding motives are equally important for early stage VC firms, there is a clear hierarchy of motives for later stage VC firms. For later stage VC firms, the finance motive is followed in importance by the deal flow motive, which in turn is significantly more important than the value adding motive, while the latter motive is significantly more important than the selection motive. The value adding motive is more important for early stage investors than for later stage investors. This is not surprising, as value adding is in general more important for early stage investors (Sapienza et al., 1996).

The finance motive is less important for larger VC firms, as larger VC firms are less restricted by their fund size in their investment policy. They are able to diversify their portfolio by investing in a larger number of deals, to invest in large deals and to provide follow-on finance when needed. The deal flow motive is, on the other hand, more important for larger early stage VC firms than for smaller early stage VC firms. Larger VC firms need to invest in more deals and therefore need to have access to a larger deal flow, everything else equal. It is rather surprising that the selection and value adding motives are more important for larger early stage VC firms than for smaller early stage VC firms, controlling for the number of investments per investment executive. The selection motive for syndication is less important for specialized early stage VC firms. Finally, the more a VC firm syndicates as a non-lead investor, the more important access is to specific deal management skills from syndicate partners. The selection and value adding motives are significantly more important when a VC firm acts more as a non-lead investor. In that situation, VC firms rely on their syndicate partners for pre-investment selection and for post-investment monitoring and value adding.

## **Implications**

The present study has implications for both researchers and practitioners. First, our results show very similar syndication practices across different European countries. This contrasts with findings in earlier studies on the European VC industry, which found important differences in the way VC firms work in different European countries (Sapienza et al., 1996; Manigart et al., 2002). Despite the difference between the market-driven financial system in the UK on the one hand and the bank-driven financial system in the other Continental European countries on the other hand, and notwithstanding the different degrees of maturity of the VC markets in the different countries of our study, our results are remarkably consistent across countries. The VC industry appears to be evolving towards a uniform pan-European industry, with the same methods of working. It is likely that syndication practices have helped to spread common norms and behaviour (Sorenson and Stuart, 2002).

We would urge European VC managers to formulate explicit strategies with respect to syndication. It seems that European VC managers are well aware of the financial benefits that syndication may yield, but they seem to underestimate the importance of additional benefits, such as getting access to additional information and skills, building strong and trustworthy networks and increasing deal flow. Their North-American colleagues seem to be more aware of these benefits. We are, however, not blind to the fact that more partners in a syndicate means also more complex managerial issues after the investment has been made and more dilution of ownership (Wright and Lockett, 2003). The trade-off between benefits and costs of syndication is clearly perceived differently in Europe and in North America. More research is needed to assess where the optimal trade-off point lies.

Comparing VC syndication practices between Europe, North America and Asia is clearly an important avenue for further research. Comparative research on syndication practices may be especially important as evidence from Venture Economics indicates that over 60 per cent of VC investments in the US in 2000 were syndicated. This figure compares with EVCA data of 13 per cent in the UK and almost 30 per cent across Europe as a whole. One should be careful when comparing these statistics, however, as the VC market in the US is more dominated by earlier stage investments than is the case in Europe. Investigating similarities and potential differences in syndication motives across regions might yield interesting insights.

We call for more studies on syndication, for example disentangling lead and non-lead investment strategies. Syndicates may change between different rounds of investment. Analysis of this aspect of syndication was beyond the scope of this paper, but the dynamics of the rationale for syndication would appear to be an interesting area for further research. Finally, there is more work to be done on the relation between syndication strategies and performance, both on the level of the portfolio companies and on the level of a VC firm.

## 1. INTRODUCTION

Venture capital (VC) firms invest in companies that have high growth potential. They have developed various strategies to deal with this high risk environment, one of which is the syndication of investments (Wright and Robbie, 1998). An equity syndicate involves two or more VC firms taking an equity stake in an investment for a joint payoff (Wilson, 1968), either in the same investment round or, more broadly defined, at different points in time (Brander, Amit and Antweiler, 2002).

Syndication is a common practice in the VC industry, both in North America and in Europe. The statistics of the European Venture Capital Association (EVCA) show that almost 30 per cent of the value invested by European VCs and of the number of deals were syndicated in 2001. Despite the importance of syndication activity in the VC sector, surprisingly little is known about the motives for syndication. VC firms will only invest if they believe the potential return adequately compensates for the investment risk. Why, then, do VC firms give up potential return by not investing the whole amount needed by the portfolio company, but rather seek another VC firm to co-invest and thereby share in the potential gains (or losses)? This question is compounded by the fact that syndicate arrangements are subject to agency conflicts and hence agency costs (Fried and Hisrich, 1995; Wright and Lockett, 2003). What are the perceived benefits that compensate for the costs involved in syndication?

The literature on VC syndication discusses several motives as to why VC firms syndicate their deals. These motives can be classified as either dealing with issues at the level of the management of the overall fund or issues related to the management of a specific investment. From a portfolio management perspective and following traditional finance theory, VC firms may syndicate to obtain a well diversified portfolio hereby reducing the unsystematic risk of the portfolio (Bygrave, 1987 and 1988; Lockett and Wright, 2001). Another rationale for syndication that addresses issues at the level of the portfolio of the fund is 'window dressing' (Lerner, 1994). By syndicating, VC firms are able to limit underperformance with their peers or VC firms try to be associated with successful VC firms so as to increase the chance of raising new funds successfully. Syndication may further be a means to reduce the uncertainty with regard to good

economic opportunities for investing in the future. By syndicating a deal, VC firms expect other partner VC firms to reciprocate the gesture in the future (Lockett and Wright, 2001) thereby securing improved access to more and/or better quality deals (Sorenson and Stuart, 2002; Seppä and Jääskeläinen, 2002). Moreover, the expectation of reciprocity reduces the incentives to behave opportunistically and hence trust between syndicating partners may be enhanced (Zucker, 1986; Wright and Lockett, 2003).

Additionally, syndication may address different activities in the VC investment cycle that deal with specific investments in the portfolio of the VC fund. First, syndication may improve the selection process through improved screening, due diligence and decision making (Lerner, 1994; Brander et al., 2002). Second, by syndicating investors are able to share their specific knowledge and complementary skills and as a result add more value to the portfolio company (Brander et al., 2002; Bygrave, 1987). Third, syndication may be the result of a fixed-fraction equity contract at a second round investment stage that helps to resolve potential agency conflicts between the entrepreneur and inside investors on the one hand and inside investors and new outside investors on the other hand (Admati and Pfleiderer, 1994; Lerner, 1994). Third, syndication may lead to collusion and hence investors, through cooperation, may be better able to increase their negotiating power towards the entrepreneur and as a result get better financing terms (Brander et al., 2002). Finally, at exit, and more specifically at IPO, syndication leads to enhanced certification and lower underpricing of the portfolio company (Stuart et al., 1999; Chowdry and Nanda, 1996).

In this paper, we compare the relative importance of syndication motives. Specifically, we look at two ways in which syndication may improve portfolio management, namely by increasing deal flow and spreading risk (finance motive). We contrast these with two ways in which syndication may improve the VC investment process, namely by improving deal selection and post-investment value addition. We empirically test these ideas by using a questionnaire-based methodology since the motives for syndication are multidimensional. This method may provide different insights into why VC firms syndicate compared to outcome based studies (e.g. Bygrave, 1987, 1988; Lerner, 1994; Brander et al., 2002). The questionnaire methodology did, however, preclude us from testing the window dressing hypothesis (Lerner, 1994) and the collusion hypothesis (Brander et al., 2002) as it is unlikely that respondents will reveal this type

of behaviour in a questionnaire. We acknowledge that there may be other reasons why a VC firm chooses to syndicate out a deal or to join a syndicate, but given limitations inherent in any empirical study these are beyond the scope of this analysis

There is growing attention to the differences between venture capital markets in different countries (Black and Gilson, 1998; Jeng and Wells, 2000). This study furthers our knowledge of VC syndication practices in different European countries. After the UK-based Lockett and Wright (2001) study, this is the second study on VC syndication practices outside North America and the first to encompass multi-country data. Other international studies have shown that VC practices in North America are not necessarily replicated outside that region, due to economic, legal, institutional and cultural differences (Kaplan, Strömberg and Martel, 2003; Manigart et al., 2002; Sapienza, Manigart and Vermeir, 1996). Extending our knowledge on VC practices outside of North America is therefore relevant and timely.

However, it is necessary to be careful when comparing US with non-US practices. EVCA data on syndication activity represent the overall private equity industry of which venture capital *sensu stricto* is a subset. In the present study, we therefore make a distinction between early stage investors and later stage investors in order to make the results comparable with US based studies. We acknowledge the difference between ‘pure’ early stage VC and later stage private equity by analyzing the behaviour of early stage and later stage investors separately. This study therefore extends US studies on syndication to a different type of investor, namely the later stage private equity investor.

The paper is structured as follows. In the next section the theoretical perspectives on syndication and hypotheses are developed. Thereafter, the research setting and the methods used to test the hypotheses are outlined and the results are presented. The final section discusses implications for researchers and practitioners.

## 2. MOTIVES FOR SYNDICATING VENTURE CAPITAL INVESTMENTS

This study looks at two ways in which a VC firm can use syndication as a means to improve the management of its overall portfolio, namely the financial motive and the deal flow motive, and two ways in which syndication can improve the management of individual portfolio companies, namely pre-investment screening and post-investment monitoring and value adding. In the remainder of this section, we will develop hypotheses as to why a particular motive for syndication might be more important for some VC firms than for others. For example large VC firms may have other motives for syndication compared to small VC firms.

### **The finance motive**

The traditional finance perspective shows that by constructing a well-diversified portfolio, risk can be reduced without reducing expected return. The risk of any investment can be subdivided into a firm specific component (unsystematic risk) and a market component (systematic risk). The firm specific component can be eliminated by holding a well diversified portfolio of investments. By spreading investments across a greater number of investments that do not co-vary, syndication has the potential to reduce risk considerably (Markowitz, 1952). This means that the variation in returns is reduced without reducing the expected return of the portfolio. Market risk or systematic risk, however, cannot be eliminated and this risk remains for a well-balanced portfolio.

A fully diversified portfolio is more difficult to obtain for VC firms compared to institutional investors who invest in listed stock. This occurs partly because of the presence of large ex-ante asymmetric information problems in VC investment decisions, which is less of a problem in listed companies, and partly because of the capital constraints due to the relatively small size of a VC firm or fund (Wright and Robbie, 1998; Sahlman, 1990). If the VC firm is not large enough relative to the project size, syndicating the deal may well be the only way to invest in that particular deal without unbalancing a portfolio. Moreover, syndication gives the VC firm the opportunity for investing in a larger number of portfolio companies than it could do without syndication, thereby increasing diversification and reducing the overall risk of the fund. For example, Cumming (2002) has empirically shown that the number of portfolio companies in Canadian VC funds increases when they actively syndicate, all other things being equal, while

Zacharakis (2002) has shown that there is less syndication in riskier US early stage deals than in less risky but larger expansion stage deals. The latter is explained by the smaller size of early stage deals and therefore early stage investors are able to limit the concentration of their portfolio.

A second finance-related motive for syndication is related to the illiquidity of VC investments (Lockett and Wright, 2001). The VC market is less liquid than the stock market. Minimum investment periods make equity illiquid in the short to medium term. As a result, equity cannot be continuously traded, unlike shares traded on the stock market. Due to ex-ante informational asymmetry, the real risk of the investment may only be fully revealed once the investment has been made. If the risk associated with the investment turns out to be higher than anticipated, it may be difficult to adjust the portfolio by divesting because of the illiquid nature of the VC market. Syndication, therefore, provides a means of sharing risk on a deal-by-deal basis that may help to reduce overall portfolio risk. Brander et al. (2002) have shown that the volatility of the performance of Canadian syndicated investments is larger than that of stand-alone investments, implying that syndicated investments are riskier.

It is unlikely, however, that the finance motive is equally important for all VCs. It is anticipated that the importance of ex-ante information asymmetry and illiquidity of the investments are stronger for early stage VC firms than for later stage VC firms. Berger and Udell (1998) argue that start-up firms are more informationally opaque. Due to informational asymmetries, VC firms will ascribe a higher standard deviation to returns of early stage investments. As a result, early stage VC firms will need more investments so as to reduce the unsystematic risk of the portfolio compared to later stage companies. We can expect, therefore, that the finance motive will be more important for early stage venture capital firms compared to later stage venture capital firms. Moreover, it is well known that early stage investments have a longer time horizon than later stage investments (Cumming and MacIntosh, 2001). Early stage investments are thus inherently more illiquid compared to later stage investments. The above argument leads us to derive the following hypothesis.

H1a: The finance motive will be more important for early stage VC firms than for later stage VC firms.

Syndication may be driven by the desire to spread financial risk across different parties (Bygrave, 1987 and 1988). The diversification argument is directly linked to the size of a VC firm. Syndication gives a VC firm the opportunity for investing in a larger number of portfolio companies than it could without syndication (Cumming, 2002), thereby increasing diversification and reducing the overall risk of the firm. All other things being equal, a smaller firm will benefit more from syndication than a larger firm under the finance perspective, as this will decrease the level of concentration in its portfolio (Zacharakis, 2002). Moreover, if a VC firm is not large enough relative to a particular project, syndicating the deal may well be the only way to invest in that opportunity. Hence:

H1b: The finance motive will be more important for small VC firms than for large VC firms.

### **Access to deal flow**

There is a second motive to syndicate from a portfolio management point of view, namely to increase the quantity and quality of deal flow (Sorenson and Stuart, 2002). It is important for VC firms to have access to as many high quality opportunities as possible in order to select the very best ones. Having a strong syndication network increases the status and visibility of a VC firm (Lerner, 1994), increasing its likelihood of being invited into a syndicate network. By syndicating out deals, a VC firm may create an expectation for reciprocation in the future. If so, the VC firm may be invited to join other syndicates as a non-lead in the future, and deal flow is increased. The reciprocation of syndicated deals between VC firms means that deal flow can be maintained even when an individual VC firm may not be the originator of the deal (Bovaird, 1990).

There are again reasons to believe that the deal flow motive will not be equally important for all VC firms. Larger VC firms need to invest in more deals than small VC firms, all other things being equal. It is, therefore, more challenging for them to maintain a good quantity (and quality) of investment opportunities. The deal flow motive is thus likely to be more important for large VC firms than for small VC firms. Especially, large firms will seek to increase the quantity of their deal flow through syndication. Hence:

H2a: The deal flow motive will be more important for large VC firms than for small VC firms.

The likelihood that a VC firm will invest in a new venture declines sharply with geographic and “industry” distance (Sorensen and Stuart, 2002).<sup>1</sup> Opportunities to interact, and thus to exchange information, are more frequent among individuals and firms in the same geographic area or in related industries. This suggests that VC firms are not likely to identify interesting investment opportunities that lie outside their natural investment area. Syndication may be a powerful way to extend the geographical and industrial investment scope of VC firms. Sorensen and Stuart (2002) have shown that the probability that a VC firm invests in a distant company increases if there is a syndicate partner with whom it has previously co-invested, and if that syndicate partner is located near the target company. A dense inter-firm network may be created through frequently syndicating investments. The network may be viewed as a repository of information that facilitates the dissemination of information across geographic and industry boundaries. In this way, a VC firm increases its investment opportunities in areas it would find difficult to access otherwise. The deal flow motive will therefore be more important for VC firms with a broad investment scope, that spans geographical and industry boundaries. The likelihood, however, that they will come across interesting opportunities that lie far outside their normal industry or geographical focus is rather small. Specialized VC firms restrict their investments to a small industry space. This reduces their need to syndicate from a deal flow perspective. Hence:

H2b: The deal flow motive will be less important for specialized VC firms than for non-specialized VC firms.

### **The deal selection motive**

VC firms may syndicate in order to reduce company specific risk both ex-ante and ex-post. Ex-ante decision making relates to the selection of investments whereas ex-post decision making relates to the subsequent management of the investment. Syndicating with the same partners builds trust in their investment appraisal, monitoring and value adding capabilities, thereby reducing the need for the VC firm to actively do so (Sorensen and Stuart, 2002; Wright and Lockett, 2003).

Syndication may be a way to better assess the information provided by potential portfolio companies (Lerner, 1994). The potential for adverse selection may therefore be reduced by

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<sup>1</sup> Industry distance is defined as “the level of dissimilarity between the venture capital firm’s previous investment experiences in the industry of a given target company” (Sorensen and Stuart, 2002).

syndicating at the deal selection stage, as syndication allows VC firms to obtain better information when evaluating risky investment decisions. From an information processing perspective, different decision makers can increase their information processing capacity to reduce uncertainty (Sah and Stiglitz, 1986).

Bygrave (1987 and 1988) showed that syndication is a function of the need to share information. If VC firms syndicate in order to reduce the ex-ante risk, the selection motive will be especially important for projects where an informed second opinion is valuable. This is supported by Lerner (1994) who found evidence that established VC firms syndicate with one another in first round investments, and they syndicate with less established organizations in later rounds. In cases where VC managers cannot decide outright to accept (high quality projects) or reject (low quality projects) an investment proposal, information received from syndicate partners may help to reach a better decision (Brander et al., 2002). Bygrave (1988) showed that uncertainty and willingness to syndicate are positively related. Given that uncertainty and information asymmetry are larger for early stage opportunities than for later stage opportunities, it is likely that the selection motive will be more important for early stage VC firms than for later stage VC firms. Hence:

H3a: The selection motive will be more important for early stage VC firms than for later stage VC firms.

Furthermore, it is expected that the selection motive will be less important for firms that primarily act as lead investors compared to firms that have more deals as non-leads. The lead investor may have its own particular skills for selecting and monitoring a specific investment (Wright and Lockett, 2003). When syndicating out a deal as a lead investor, the VC firm signals to syndicate partners that it backs the deal with its reputation. This is important as the lead firm, in the vast majority of cases, will have the largest (or joint largest) equity stake in the syndicate (Lockett and Wright, 2001). However, the VC firm that invests in a deal as a non-lead investor may largely rely on the reputation and the selection skills of the lead. Hence:

H3b: The more a VC firm acts as non-lead investor, the more important the selection motive will be.

VC firms, specialized in a specific industry sector, will have a deeper understanding of that sector and therefore experience lower informational asymmetries to evaluate opportunities. Given greater in-house knowledge on their target sectors, VC firms that are specialized in a specific sector will have a lower need to rely on syndicate partners for selection purposes. The same is true for VC firms, focussing on a smaller geographical region. Geographic distance between a target company and an investor is still a barrier to effect thorough due diligence and overcome information asymmetries. Reliance on syndicate partners close to the target can help to overcome informational asymmetries related to both industry and geographical distance (Sorensen and Stuart, 2002). The logic of this argument is that VC firms, specialized in a specific industry or geographical area, will have a lower need to syndicate for selection purposes than non-specialized VC firms.

H3c: The selection motive will be less important for specialized VC firms than for non-specialized VC firms.

### **The value adding motive**

Apart from selection skills, specialized resources may be required for the ex-post management (monitoring and value adding) of investments (Sapienza et al., 1996; Bruining and Wright, 2002). This need for specialist expertise in the ex-post management of portfolio companies can be met by the VC's own resource base, by outside industry specialists or by syndicate partners (Brander et al., 2002). Brander et al. (2002) found that Canadian syndicated VC deals have higher rates of return than stand-alone projects, and argue that the need to access specific resources for the ex-post management of investments, rather than for the selection of investments, is a more important driver of syndication.

There are arguments that early stage VC firms will put more emphasis on the value adding motive than later stage VC firms. Consistent with resource dependency theory (Pfeffer and Salancik, 1978), VCs add value when they are able to reduce critical uncertainties for the venture (Sapienza et al., 1996). VC firms increase the intensity of their ex-post governance mechanisms to protect against adverse outcomes when uncertainties increase (Barney et al., 1989). Given the uncertainties in early stage ventures, VCs are able to add greatest value to early stage ventures (Bygrave and Timmons, 1992; Gorman and Sahlman, 1989; Sapienza, 1992). Sapienza et al. (1996) suggest that VC managers spend significantly more time with, and add more value to, their early stage ventures compared to later stage ventures. All other things

being equal, the value adding motive will therefore to be more important for VC firms investing in early stage ventures, as these firms provide more hands-on management and monitoring skills to their portfolio companies than later stage investors. Hence:

H4a: The value adding motive will be more important for early stage VC firms than for later stage VC firms.

Wright and Lockett (2003) argue that lead investors are more actively involved in the management of their investee companies. Given that the reputation and the standing of the lead investor is at stake when syndicating out a deal, a VC firm will only take the lead in a syndicate if it feels reasonably confident that it has the resources and ability to manage the investment. When a VC firm joins a syndicate as a non-lead, however, that firm will normally have a more passive role, relying on the lead investor for managing the relation with the portfolio company (Wright and Lockett, 2003). Consistent with hypothesis 3b, it is expected that the value adding motive is a more important driver to syndicate for non-lead investors compared to lead investors. Hence:

H4b: The more a VC firm acts as non-lead investor, the more important the value adding motive will be.

Consistent with the argument that specialized VC firms will rely less on syndicate partners for screening purposes, we hypothesize that specialized VC firms will also rely less on syndicate partners to manage the deal after the investment. VC managers need specific skills and abilities in order to add value to their portfolio companies and the more industry specific knowledge they have, the better their value adding capabilities will be (Sapienza et al., 1996). Sapienza et al. (1996) have further shown that VC managers spend less time with geographically distant ventures, although their perceived added value does not decrease with distance. We hypothesize that VC firms with a broad sector or geographical scope will rely more on syndicate partners to add value and monitor their investments ex-post than VC firms that invest in a narrow range of opportunities.

H4c: The value adding motive will be less important for specialized VC firms than for non-specialized VC firms.

### 3. RESEARCH SETTING AND METHOD

#### Research Setting and Sample

In order to test foregoing hypotheses, VC syndication practices are studied in six European countries, ranging from Northern Europe (Sweden) to central countries such as France, Germany, the Netherlands, Belgium and the UK. Our sample thus includes countries in different parts of Europe, where the VC industry is long-established and industry practices have matured.<sup>2</sup> In the countries of the present study, syndication is most common in Belgium in terms of amounts invested through syndicates (53.9%) (see table 1). However, the highest proportions of deal numbers syndicated are found in France and Sweden (both 39.9%). In Sweden, the amount syndicated (8.2%) is remarkably lower compared to the number of deals syndicated (39.9%). Syndication practices in the UK and the Netherlands are low both in terms of amount invested as well as the number of deals, with there having been continual decreases in syndication activity throughout the 1990s (Lockett and Wright, 2001). Syndication activity in Germany is in between.

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Insert Table 1 here

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In order to understand why VC firms syndicate, a questionnaire was initially designed and pretested with UK VC managers, advisors and academics (Lockett and Wright, 2001). Most studies to date use outcome based methods (e.g. Bygrave, 1987, 1988; Lerner, 1994; Brander et al., 2002). A specific behaviour of VC firms with respect to syndication is observed, and researchers speculate on the underlying motives that may lead to that behaviour. By using a questionnaire based method we directly ask VC managers the motives for syndicating their deals. We expect, therefore, to get a more profound and subtle insight in some of the reasons for syndication compared to outcome based studies. As the different theoretical perspectives on syndication were anticipated to be multidimensional, it was deemed necessary to ask respondents a number of questions relating to each of the perspectives. Data on VC firm characteristics gathered from the questionnaire - investment size, stage and industry preferences - were further supplemented or cross-checked with data from industry directories (EVCA guide and directories of the national venture capital associations).

The questionnaire was administered by post to the head offices of all 106 VC firms in the UK, identified using the British Venture Capital Association (BVCA) handbook and Centre for Management Buy-out Research (CMBOR) records, in 1998. The questionnaires were then translated into Dutch, French, German and Swedish. In the other countries covered in this study questionnaires were sent out in the autumn of 2001.<sup>3</sup> Questionnaires were sent to 79 Belgian VC firms, 120 French VC firms, 191 German VC firms, 169 Swedish VC firms and 54 Dutch VC firms. These firms were identified as VC firms because they were full members of the EVCA or their national venture capital associations. In order to be as complete as possible, some non-member firms that act as VC firms were added to the sample. In all countries, follow-up was undertaken by sending reminders or by calling the VC firms after 3 to 6 weeks. Responses were sought from individuals at the level of investment executives upwards. An early pilot study in the UK (Lockett and Wright, 2001) showed that the issues examined here were generally driven by organization-wide policies and hence only a single respondent would be able to provide the company wide perspective.

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Insert Table 2 here

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Response rates were good (see Table 2), ranging from a low of 36% in Germany to a high of 59% in the UK. The high response rates suggest high reliability of the results. The total sample consists of 317 usable responses (44% response rate). More than 90% of the respondents had ever been involved in a syndicate. The representativeness of the sample was tested for each country separately using firm specific characteristics (minimum investment preference, maximum investment preference and the number of staff members) available from the national and European venture capital directories. In Belgium, France, Germany and the Netherlands, no significant differences were found between respondent and non-respondents. In Sweden and the UK, the respondents' maximum investment preference is significantly (5% confidence level) larger than that of non-respondents. This indicates that the sample is representative for the VC industry in the six countries of the study.

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<sup>2</sup> It is not the purpose of the paper to investigate potential between-country differences.

<sup>3</sup> We acknowledge that the difference between the data collection periods may have an influence on the results. We expect that the favorable market conditions in 1998 had a negative influence on the perceived benefits of syndication both at the level of risk spreading and risk reduction through better selection and value adding. The influence on deal flow as a motive for syndication is less clear. However, we expect no influence on the order of importance of the different motives.

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Insert Table 3 here

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Table 3 gives a description of the sample, after removing three outliers.<sup>4</sup> A VC firm employs on average 7.7 (median = 5) investment executives and has on average 36.4 (median = 15) investments in its current portfolio. Each investment executive thus manages on average 5.7 (median = 3.5) portfolio companies. The minimum investment preference is on average €2.91 million (median = €0.50 million) while the maximum investment preference is on average €18.81 million (median = €5.00 million). The average age of a VC firm in the sample is 10.4 year (median = 7 year).<sup>5</sup>

### **Dependent variables**

In order to test the importance of the motives of interest in this study, respondents were asked to indicate on 5-point Likert scales how important they find different items in their decision to syndicate deals. A rotated factor analysis revealed that the items load on four factors: a finance motive, a deal flow motive, a selection motive and a value adding motive (see Table 4).<sup>6</sup> The internal reliability of the scales is high for three out of the four factors, with Cronbach's alphas of 0.74 for the finance motive (3 items), 0.82 for the deal flow motive (2 items), 0.81 for the value adding motive (5 items) but only 0.50 for the selection motive (2 items).<sup>7</sup> For the three first factors, the items were summed and the average computed. Given the low Cronbach's alpha for the selection motive, we decided to employ a single item, namely “the need to seek the advice of other VC firms before investing,” as the construct for the selection motive. The results for the selection motive should therefore be interpreted with caution.

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Insert Table 4 here

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### **Methods and independent variables**

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<sup>4</sup> Following outliers were removed: 1 respondent with 3000 portfolio companies and 2 respondents without investment executives.

<sup>5</sup> The between-country differences are not shown in table 3. Belgian and Swedish VC firms are the smallest, while VC firms in the UK and The Netherlands are on average older and larger in terms of investment preferences and number of investment executives. This is consistent with the fact that the VC industry in the UK and the Netherlands is older than in the rest of Europe. French and German VC firms are in between.

<sup>6</sup> Rotation method: Varimax with Kaiser normalisation.

<sup>7</sup> In order to check the consistency of the data across the countries, we recomputed the scales in the different countries separately. The scales are reliable in all countries.

Bivariate and multivariate analyses are used to test the above hypotheses. Given that early stage VC firms are different from later stage VC firms, bivariate non-parametric Mann-Whitney statistics are used to test the difference in importance of the four motives for early stage and later stage investors.<sup>8</sup> We further run multivariate OLS regressions and ordinal regressions (for the ordinal selection motive) with the motives as dependent variables and VC firm characteristics (cfr. *infra*) as independent variables. The multivariate regressions are not only run on the total sample, but also on the subsample of early stage VC firms on the one hand and of later stage VC firms on the other hand.

The subsamples of early stage and later stage VC firms are constructed as follows. Following Mayer, Schoors and Yafek (2004), we computed the “average investment stage” variable, reflecting the average stage in which a VC firm invests. We first collected data on the stages in which each VC firm invests: seed, start-up, expansion and replacement/buy-out investments. Each stage was given a value from 1 for seed investments to 4 for replacement or buyout investments. The average was calculated for each VC firm by adding these numbers and dividing the total by the number of investment stages in which the VC firm invests (Mayer et al., 2004).<sup>9</sup> The sample was then split up between early stage and later stage investors using this average stage variable. The distribution of the “average investment stage” variable is bimodal, with maxima at 2.5 and 3.5 and a low at 2.66. Therefore, we split the sample into a subsample of early stage VC firms with an average investment stage of 2.5 or lower (N=128) and a subsample of later stage VC firms with an average investment stage of three or higher (N=145).<sup>10</sup>

The characteristics of the subsamples of early stage versus later stage investors are presented in Table 3. Early stage investors have fewer investments in their portfolio. While early stage investors have on average 25.4 (median = 12) investments in portfolio, later stage investors have on average 49.0 (median = 20) investments in their portfolio. The median values for the minimum investment preference (€1 million versus €0.25 million) and the maximum investment preference (€6.9 million versus €2.5 million) are of course higher for later stage investors compared to early stage investors. Later stage investors are also less specialized in specific industries compared to early stage investors.<sup>11</sup> Moreover, early stage

<sup>8</sup> Parametrical t-tests yield comparable results.

<sup>9</sup> For example, a VC firm that invests in the start-up and expansion stage will have an average of  $2.5 = (2+3)/2$ .

<sup>10</sup> Two VC firms were left out of the sample because they have an average investment stage of 2.66.

<sup>11</sup> We asked respondents how specialized they consider themselves to be in terms of industry and regional specialization on a 5-point scale, with 1=highly unspecialized and 5=highly specialized.

investors have a higher propensity to syndicate than later stage investors. Finally, early stage investors are on average younger than later stage investors with an average of seven years (median = 4 years) compared to 13.6 years (median = 12 years).

Other VC firm characteristics, used in the multivariate regressions, are VC firm size, industry and geographical investment preference, age, number of investments per investment executive and percentage of investments syndicated as non-lead. Table 5 gives the correlation between all variables. First, we have four proxies of VC firm size, either self-reported or taken from industry directories: number of investment executives, number of portfolio companies, and minimum and maximum investment preference (see Table 3). The correlation between all four size variables is high except between the number of investments in the portfolio and the minimum investment preference (see Table 5). We included, therefore, only one proxy for size in the multivariate analyses namely “the maximum investment preference”. We selected this variable because it has low correlation with the other variables in the regression. In order to measure the specialization of the VC firm with respect to industry and geographical region, respondents were asked to indicate on a 5-point Likert scale how specialized their VC firm’s investment preference is in terms of industry sector and geographical region. The specialization in terms of geographical scope is on average 3.46 on a 5-point Likert scale, while the specialization in terms of industry sector is less so on a 5-point Likert scale. Furthermore, in order to test the remaining hypotheses, we include the average stage variable discussed earlier and the proportion of investments as non-lead. Finally, we include the age of the venture capital firm and the number of investments per investment executive as control variables, as these might influence the motives for syndication (Jääskeläinen et al, 2002).

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Insert Table 5 here

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## 4. RESULTS

### **The importance of the four different motives**

Table 6 shows the importance of the different motives relating to a VC firm's decision to syndicate a deal in the sample as a whole, in the different countries separately and for the early stage and later stage VC firms separately. The latter will be discussed in the following section. It is striking that the motives to syndicate a deal are so consistent across all countries. The results highlight the fact that VC practices are very similar in different European countries. This strengthens the validity of our approach to pool respondents from the different countries into one sample for further analyses.

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Insert Table 6 here

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The traditional finance motive for syndication is significantly more important than the other motives tested in our questionnaire (mean = 3.99).<sup>12</sup> This is the most important motive overall and both for early and later stage VC firms. Table 6 shows that this finding is consistent and significant in each of the six countries of this study. If the size of the deal is large compared to the size of the fund, or if additional rounds of financing are expected, then European VC firms are more likely to syndicate their deals. This is in sharp contrast with early U.S. results where resource-based motives are stressed as the most important drivers for syndication (e.g. Bygrave, 1987; Lerner, 1994) but in line with recent US evidence in Zacharakis (2002).

Our data shows that the deal flow motive is less important than the finance motive for European VC firms (mean = 2.73), but significantly more important than the value adding motive and the selection motive for the total sample. The deal flow motive is significantly more important than the selection motive in France, Germany and the UK, while the difference is not significant but in the same direction in Belgium, Sweden and the Netherlands (Table 6). The deal flow motive is also more important than the value adding motive in the six countries and significantly so in France and the UK.

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<sup>12</sup> Pairwise differences between the motive variables are tested with Wilcoxon Matched Pairs tests, suited for non-normal data.

The deal selection motive is a significantly less important motive to syndicate than the finance motive (mean = 2.36), but not significantly different from the value adding motive (mean = 2.50). The selection motive is only significantly more important than the value adding motive in the UK. Our results provide compelling evidence that European VC firms syndicate for overall portfolio management considerations rather than to improve the management (selection and value adding) of individual investments.

### **The finance motive**

An examination of the results of the multivariate analyses indicates that, and in contrast with hypothesis 1a, the finance motive is not more important for early stage VC firms than for later stage VC firms. The coefficient in the OLS regression for the total sample is not significant (see: Table 7) and the Mann-Whitney test reports no significant difference between the sample of early stage and later stage investors (see: Table 6). The finance motive is the most important motive for syndication (among those tested in this study) for all VC firms, both early stage and later stage: the difference between the finance and all other motives is significant at 0.001 level for the total sample and for both subsamples. Risk reduction through diversification is thus one of the main reasons for syndication. Hypothesis 1a is therefore not supported.

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Insert Table 7 here

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Consistent with hypothesis 1b, the finance motive is more important for small VC firms than for large VC firms in the total sample regression. The regression for the two subsamples is, however, not significant. Our results, therefore, suggest that the finance motive for syndication is important both for small and large early stage investors.

### **The deal flow motive**

Table 6 suggests that the deal flow motive is more important for later stage VC firms than for early stage VC firms. While the deal flow motive is significantly more important than the selection and value adding motives for later stage VC firms, there is no difference between the importance of these motives for early stage VC firms. The multivariate regressions for the deal flow motive in the total sample and in the sample of later stage investors are not significant (see: Table 7). The regressions for the sample of early stage investors is, however, significant. Hypothesis 2a is supported in the sample of early stage investors: the deal flow motive is more

important for larger early stage VC firms. The coefficient for the size proxy is significant and has the expected sign. In order to maintain deal flow, large early stage VC firms syndicate so as to broaden their potential sources of future deal flow. Larger early stage VC firms in particular syndicate in order to maintain or reciprocate deal flow in the future. Hypothesis 2b that hypothesizes that the deal flow motive will be less important for specialized VC firms is not supported.

### **The deal selection motive**

Hypothesis 3a, that early stage VC firms syndicate more than later stage VC firms for deal selection purposes, is supported in the bivariate analysis (see: Table 6) but not in the multivariate analyses (see: Table 7).<sup>13</sup> The evidence is thus mixed. The bivariate analyses further suggest that the value adding motive is marginally more important than the selection motive for later stage VC firms, but not for early stage VC firms. Deal flow, selection and value adding are equally important motives for syndication for the latter. Hypothesis 3b is supported for the total sample of VC firms; VC firms that have a high proportion of non-lead investments syndicate for deal selection reasons. VC firms that act as non-lead investors rely on the selection skills of lead investors. Hypothesis 3b is further supported for the subsamples of early stage investors and of later stage investors. However, for later stage investors, the regression is only marginally significant. The finding that non-lead investors rely on the selection skills of lead investors is thus mainly driven by the behaviour of early stage investors. Hypothesis 3c is supported for early stage VC firms: the deal selection motive is significantly less important for specialized VC firms.

### **The value adding motive**

The bivariate analyses indicate that the value adding motive is significantly more important for early stage VC firms compared to later stage VC firms (see: Table 6). This is also confirmed in the multivariate analysis for the total sample: the coefficient for the average stage variable is significant and negative (see: Table 7). However, the regression model for the total sample is only marginally significant. There is, thus, limited support for hypothesis 4a. The coefficient for the percentage of investments undertaken as a non-lead investor is positive and significant for the total sample. Hypothesis 4b is hence supported; the more a VC firm invests as a non-lead investor, the more important the value adding motive will be. This is supported within the sample of early stage VC firms. However, the coefficient is only marginally significant. The

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<sup>13</sup> The coefficient of the average stage variable has, however, the expected sign and a p-value of 0.129.

same relationship is found for later stage VC firms but both the regression model and the coefficient are only marginally significant. The value adding motive is also more important for larger early stage investors, but less important for larger later stage investors. Again, we should note that both the regression model for later stage and the coefficient for the size proxy are only marginally significant.

## 5. CONCLUSIONS AND DISCUSSION

### **Motives for syndication**

The study highlights a number of key findings. First, among the motives considered here, the motives for syndicating a deal are driven much more by finance considerations, or more broadly by portfolio management considerations, than by the wish to exchange firm specific resources for selecting and managing specific deals. European VC managers mainly consider syndication as a means to improve the management of their overall portfolio. The main purpose of syndication is to increase portfolio diversification, to allow VC firms to invest in deals that otherwise would be too large and to improve access to future deal flow. Syndication as a means to improve pre-investment selection of individual deals and to enhance post-investment monitoring and value adding in specific deals is much less important in Europe.

Our results contrast with those of the majority of studies on syndication performed in North America in that we find much greater support for financial motives and much less support for deal specific motives. Although some studies, e.g. Bygrave and Timmons (1992) and Zacharakis (2002), acknowledge that financial considerations are important drivers of syndication in the American VC industry, the majority of findings suggest the importance of better decision making (selection) or value adding as motives for driving syndication. Lerner (1994) shows that syndication in the US is a way to better assess the information provided by potential portfolio companies. Syndication thus leads to better deal selection. More recently, Brander et al. (2002) show that syndication in Canada leads to higher performance in the portfolio company. They therefore conclude that syndication partners add value beyond those of the lead investors. In the same vein, Jääskeläinen et al. (2002) show that US VC executives are able to efficiently manage a larger number of portfolio companies if they syndicate, thanks to additional resources brought in by syndication partners. Individual deal management (selection and value adding) motives thus may well be more important than portfolio management motives for syndication in North America, in contrast to the strong and consistent findings in this European study.

Is this evidence of different syndication behaviour of European and American VC investors? It might well be that European VC managers underestimate the role that syndication may play in access to information, knowledge, value adding skills and deal flow. Our

preliminary interviews did not reveal this, though. Rather, the VC managers interviewed expressed the view that they were unlikely to invest in a deal if they did not have confidence in their own knowledge/abilities with respect to a particular deal and its sector. Another explanation for the striking differences between European and American VC investors might be that most American studies on syndication have taken the individual deal as unit of analysis, while the present study focuses on the syndication policy of a VC firm. When analysing why a particular deal is syndicated or not, it is likely that the portfolio perspective (finance and deal flow motives) are less prominent than the deal perspectives (selection and value adding motives). The present study shows that overall VC portfolio management strategy is a major driver of syndication, that may have been underestimated in previous studies on syndication behaviour. The differences between the findings in the two regions might further be driven by methodological issues. In the present study, perceptual data are used, while the aforementioned North American studies use outcome data (performance or investment patterns) and infer investment decisions from the outcomes (e.g. Bygrave, 1987, 1988; Lerner, 1994; Brander et al., 2002). It may be that the inferences made by the researchers do not reflect the true underlying motives for syndication. Clearly, more cross-country evidence is needed to fully understand the drivers of syndication in the VC industry worldwide. We return to this point below.

### **VC firm characteristics that influence the motives for syndication**

The finance motive is the most important motive for syndication for both early stage and later stage VC firms. This is an interesting finding given the emphasis in US studies on early stage ventures. While the deal flow, selection and value adding motives are equally important for early stage VC firms, there is a clear hierarchy of motives for later stage VC firms. For later stage VC firms, the finance motive is followed by the deal flow motive, which in turn is significantly more important than the value adding motive, but the latter motive is significantly more important than the selection motive. Value adding is not an important motive for any VC firm. Nevertheless, it is more important for early stage investors than for later stage investors. Access to specific skills from syndicate partners in order to improve the management of an individual investment is thus more important for early stage investors than for later stage investors. This is not surprising, as value adding is in general more important for early stage investors (Sapienza et al., 1996).

The size of a VC firm has an impact on the importance of the different motives for syndication. We find that the finance motive is less important for larger later stage VC firms. Larger VC firms are less restricted by their fund size in their investment policy. They are able to diversify their portfolio by investing in a larger number of deals, to invest in large deals and to provide follow-on finance when needed. This explains why larger later stage VC firms syndicate less for financial reasons. Syndication is, however, a strategy for small VC firms to overcome their liability of smallness. We think that this might also partly explain the difference we found between syndication motives in European and American VC firms. It might be that European VC firms are, on average, smaller than American VC firms, and that their smallness explains why financial motives are more important for them. An unexpected finding is the fact that large early stage VC firms put a higher emphasis on the value adding motive compared to smaller early stage investors, everything else equal. We might expect that larger early stage investors have more in-house knowledge and resources. This calls for further research on the relation between syndication strategies and VC firm size.

The deal flow motive is, on the other hand, more important for larger early stage VC firms than for smaller early stage VC firms. Larger VC firms need to invest in more deals and therefore need to have access to a larger deal flow, everything else equal.<sup>14</sup> Finally, it is rather surprising that the selection and value adding motives are more important for larger early stage VC firms than for smaller early stage VC firms, controlling for the number of investments per investment executive. One might expect that larger VC firms have more resources and knowledge in-house, all other things being equal, and therefore, have a lower need to rely upon selection and value adding skills of outside partners. This intriguing finding calls for more research.

Neither the industry nor the geographical specialization of a VC firm have an influence on the importance of any of the motives to syndicate except for the selection motive. Non-specialized early stage VC firms syndicate more for deal selection purposes than specialized early stage VC firms, but not for value adding purposes. Our lack of more significant findings should be treated with caution, however, as we rely upon a crude measure of VC firm

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<sup>14</sup> The correlations suggest that larger VC firms, with a higher maximum investment preference, also have more companies in their portfolio.

specialization. Research that uses a more refined measure of VC specialization might yield stronger conclusions.

Finally, the more a VC firm syndicates as a non-lead investor, the more important access is to specific deal management skills from syndicate partners will be. The selection and value adding motives are significantly more important when a VC firm acts more as a non-lead investor. In that situation, VC firms rely on their syndicate partners for pre-investment selection and for post-investment monitoring and value adding. Clearly, lead investors and non-lead investors syndicate for different reasons.

### **Implications for practitioners**

The present study has implications for both researchers and practitioners. First, we stress the fact that our results show very similar syndication practices across different European countries. This indicates a high degree of institutionalization of an accepted way of working throughout the European VC industry. This contrasts with findings in earlier studies on the European VC industry, which found important differences in the way VC firms work in different European countries (Sapienza et al., 1996; Manigart et al., 2002). Despite the difference between the market-driven financial system in the UK on the one hand and the more bank-driven financial system (Black and Gilson, 1998) in the other Continental European countries covered in this study on the other, and notwithstanding the different degrees of maturity of the VC markets in the different countries of our study, our results are remarkably consistent across countries. VC practices have clearly spread across Europe without taking national boundaries into consideration. The VC industry appears to be evolving towards a uniform pan-European industry, with comparable methods of working. It is likely that syndication practices have helped to spread common norms and behaviour (Sorenson and Stuart, 2002).

We would urge European VC managers to formulate explicit strategies with respect to syndication. It seems that European VC managers are well aware of the financial benefits that syndication may yield, but they seem to underestimate the importance of additional benefits, such as getting access to additional information and skills, building strong and trustworthy networks and increasing deal flow. Their North-American colleagues seem to be more aware of these benefits. We are, however, not blind to the fact that more partners in a syndicate means also more complex managerial issues after the investment has been made and more dilution of

ownership (Wright and Lockett, 2003). The trade-off between benefits and costs of syndication seems to be perceived differently in Europe and in North America. More research is needed to assess where the optimal trade-off point lies.

### **Avenues for future research**

We call for more research on the differences between lead and non-lead investors. Little is known about how lead and non-lead investors may behave differently (though see Wright and Lockett, 2003). The deal selection process of non-lead investors may be different from that of lead investors. After the deal is done, the monitoring and value adding behaviour is likely to be affected by the lead or non-lead position of an investor. Finally, VC firms that have a strategy to invest predominantly as lead investors may have different portfolio strategies from those that predominantly invest as non-leads. More research is needed in this area.

Further research may also usefully consider the effects of different rounds of investment on the syndication decision. Our research, along with most other research on syndication has not taken the effect of different rounds of investment into account. For example, venture capital firms may syndicate for different reasons in the various rounds of an early stage investment. As the venture becomes more established and larger, the deal selection issue may become less important while value adding and risk diversification may become more important. This may have implications for the type of venture capital firm that it sought at each stage.

Further, there is more work to be done on the relation between syndication strategies and performance, both on the level of the portfolio companies and on the level of a VC firm. As stated, the trade-off between the benefits of syndication and the costs associated with managing more complex situations is not well understood yet. We need to know more on the management of syndicates. All this will undoubtedly lead to a better understanding of the fundamental trade-off each venture capital firm has to make between running the VC firm as either a traditional hands-off financial intermediary on the one hand, where financial risk-return considerations are the most important management criteria, or running it as a hands-on value-added investor.

The differences between the findings in the study and those emanating from US studies highlight issues concerning methodological differences and institutional differences between countries. On the one hand, there is a need for further research that adopts the same approaches

in different contexts; this, however, is somewhat limited by access to information. We call for studies looking at perceptions of North American and Asian VC managers on motives for syndication, but also for European and Asian studies based on “hard” data, such as investment patterns and investment outcomes. The former will allow comparison of the results of the present study across continents, while the latter will allow a better comparison of European syndication practices and outcomes with what is known from North American studies. We further call for studies that take the VC firm as unit of analysis, rather than the individual portfolio company. This difference in perspective may yield richer insights into the true underlying motives for syndicating a particular deal.

On the other hand, there is a need to model and test more specifically the effect of institutional environments on syndication behaviour. Comparative research on syndication practices may be especially important as evidence from Venture Economics indicates that over 60 per cent of VC investments in the US in 2000 were syndicated. This figure compares with EVCA data of 13 per cent in the UK and 30 per cent across Europe as a whole.<sup>15</sup> Similarly, extending the analysis to compare VC syndication practices between Europe, the US and Asia is an interesting avenue for further research. Asian venture capital markets are developing rapidly (Lockett and Wright, 2002) and previous research has shown that there are important differences between US, European and Asian VC industry practices (Black and Gilson, 1998; Jeng and Wells, 2000). For example, the VC market in the US is more dominated by earlier stage investments than is the case in Europe, while late stage investment is more important in Asia. Investigating similarities and potential differences in syndication motives and propensity might yield interesting insights.

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<sup>15</sup> One should be careful, however, when comparing US and European figures. As stated, US figures focus on pure early stage VC, while European figures include both early stage and later stage VC or private equity. As we have shown, early stage and later stage investors have different syndication strategies.

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**Table 1: Syndication practices in different countries in 2001 (Yearbook EVCA 2002)<sup>1</sup>**

	Total investment by VC industry (1)	Amount Syndicated (2)	(2)/(1) %	Number of investments (4)	Number of investments syndicated (3)	(3)/(4) %
Europe	24,331,362	6,979,829	28.7	3,053	10,672	28.7
Belgium	409,554	220,942	53.9	329	79	24.0
France	3,286,795	1,403,012	42.7	1,926	769	39.9
Germany	4,434,890	1,458,850	32.9	2,311	866	37.5
Sweden	2,042,647	168,176	8.2	619	247	39.9
The Netherlands	1,887,241	422,267	22.4	593	142	23.9
UK	6,925,946	1,334,641	19.3	2,054	281	13.7

<sup>1</sup>All amounts in € 1000**Table 2: Response rates**

	Belgium	France	Germany	Sweden	The Netherlands	UK	Total sample
Number of questionnaires	79	120	191	169	54	106	719
Number of responses	42	49	68	66	29	63	317
Response rate	53 %	41 %	36%	40 %	54 %	59 %	44%
Number of respondents that syndicate	39	47	61	60	29	N/A	N/A
% of respondents that ever syndicated	93 %	96 %	97 %	91 %	100 %	N/A	N/A

**Table 3: Venture capital firm characteristics**

	Total Sample				Early stage VC firms				Later stage VC firms			
	N	Mean	Median	S.D.	N	Mean	Median	S.D.	N	Mean	Median	S.D.
<i>Size</i>												
Number of investment executives	303	7.66	5	9.5	125	5.58	4	5.57	141	10.05	6	11.79
Number of investments in current portfolio	310	36.40	15	64.5	127	25.40	12	40.01	145	49.02	20	79.69
Minimum investment preference <sup>a</sup>	281	2914.60	500	10408.75	121	1633.28	250	11353.32	144	4042.74	1000	9986.76
Maximum investment preference <sup>a</sup>	275	18807.66	5000	43916.57	122	7300.38	2500	23646.79	137	29825.60	6947	55774.08
<i>Investment strategy</i>												
Average investment stage <sup>b</sup>	276	2.78	3	0.73	128	2.10	2	0.43	146	3.38	3.50	0.29
Investment specialization in terms of (1 = highly unspecialized ... 5 = highly specialized)												
Industry sectors	308	3.14	3	1.40	128	3.67	4	1.38	142	2.63	2.50	1.24
Geographical regions	306	3.46	4	1.37	126	3.65	4	1.20	141	3.30	4	1.43
<i>Syndication strategy</i>												
% of investments syndicated (1 = 0-20%, ..., 5 = 80%-100%)	279	2.75	3	1.40	115	3.20	3	1.44	131	2.35	2	1.28
% of syndicated deals as non-lead (1 = 0-20%, ..., 5 = 80%-100%)	265	2.26	2	1.33	106	2.43	2	1.38	126	2.05	1.50	1.24
Number of years in operation	312	10.42	7	11.85	128	7.01	4	6.20	145	13.61	12	12.66
# Investments/ investment executive	301	5.69	3.5	7.78	125	5.15	3	5.69	140	5.98	3.54	8.91

<sup>a</sup> in € 1000<sup>b</sup> The average stage variable was computed following Mayer et al. (2003).

**Table 4: Items used to calculate the constructs “motives for syndication”**

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How important are the following factors in your decision to syndicate a deal? (Please rate from 1-5, 1 = very unimportant ... 5 = very important)

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*Finance Motive*

- The large size of the deal in proportion to the size of funds available
- The requirement for additional rounds of financing
- The large size of the deal in proportion to the firm’s average deal size

*Deal Flow Motive*

- The possibility of the future reciprocation of deals (deal flow)
- The reciprocation of past deal flow

*Selection Motive*

- The need to seek the advice of other VC firms before investing

*Value Adding Motive*

- The need to access specific skills in order to manage the investments
  - Difficulty in bringing in industry experts from outside
  - The deal is outside the investment stage(s) in which you usually invest
  - The deal is outside the industries in which you usually invest
  - The deal is located outside of the geographical region(s) in which you usually invest
-

**Table 5: Correlation matrix**

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Finance motive	-												
2. Deal flow motive	0.059	-											
3. Selection motive	-0.031	0.172***	-										
4. Value adding motive	0.014	0.203***	0.370***	-									
5. Log (# investment executives)	0.121**	0.141**	-0.179***	-0.042	-								
6. Log(# investments in current portfolio)	0.011	0.113*	-0.015	0.036	0.601***	-							
7. Log(minimum investment preference)	-0.185***	0.159**	-0.272**	-0.128*	0.501***	0.067	-						
8. Log(maximum investment preference)	-0.201***	0.150**	-0.192***	-0.074	0.653***	0.266***	0.839***	-					
9. Average investment stage	-0.057	0.142**	-0.129**	-0.169**	0.259***	0.226***	0.422***	0.379***	-				
10. Industry sector specialization	0.040	-0.064	-0.052	0.034	-0.014	-0.043	-0.165***	-0.072	-0.393***	-			
11. Geographical region specialization	0.124**	-0.056	0.061	0.020	-0.205***	-0.060	-0.224***	-0.177***	-0.176***	0.078	-		
12. % of investments syndicated as non-lead	0.061	0.026	0.275***	0.143	-0.144**	0.026	-0.160**	-0.163**	-0.110*	0.022	0.052	-	
13. Log(# of years in operation)	-0.047	0.059	-0.075	-0.027	0.352***	0.579***	0.221***	0.153**	0.327***	-0.196***	-0.069	-0.060	-
14. # Investments/ investment executive	0.018	-0.027	0.104*	0.038	-0.230***	0.454***	-0.218***	-0.248***	0.065	-0.134	0.143**	0.168***	0.287***

\*Significant at the 10% level;\*\* Significant at the 5% level;\*\*\* Significant at the 1% level

**Table 6: Motives for syndication**

(1 = very unimportant ... 5 = very important)

Motive		Finance	Deal flow	Selection	Value adding	Wilcoxon signed rank test Z statistics					
						Deal flow-Finance	Selection-Finance	Value adding-Finance	Deal flow-Selection	Deal flow-value adding	Selection-Value adding
Total Sample	Mean	3.99	2.73	2.36	2.50						
	S.D.	0.95	1.11	1.14	1.11	-11.05***	-12.00***	-11.214***	-3.96***	-2.55**	-1.40
	N	274	274	275	250						
Belgium	Mean	4.19	2.67	2.68	3.09						
	S.D.	0.67	1.07	0.98	1.13	-4.61***	-4.38***	-3.88***	-0.05	-1.08	-1.30
	N	33	34	34	31						
France	Mean	3.99	3.00	2.50	2.42						
	S.D.	1.02	0.99	1.13	1.07	-4.44***	-4.76***	-4.62***	-2.143**	-2.45**	-0.24
	N	44	43	44	37						
Germany	Mean	3.85	2.75	2.30	2.53						
	S.D.	0.89	0.89	1.00	1.00	-5.22***	-5.48***	-4.97***	-2.30**	-1.52	-1.07
	N	53	53	54	51						
Sweden	Mean	3.98	2.48	2.74	2.46						
	S.D.	1.08	1.16	1.22	1.05	-4.68***	-4.57***	-5.146***	-1.34	-0.12	-1.58
	N	58	56	57	54						
The Netherlands	Mean	3.94	2.72	2.34	2.53						
	S.D.	1.04	1.31	1.34	1.17	-3.17***	-3.23***	-2.93***	-1.46	-0.92	-0.12
	N	29	29	29	27						
UK	Mean	4.06	2.78	1.77	2.22						
	S.D.	0.92	1.23	0.96	1.16	-5.21***	-6.35***	-5.56***	-4.59***	-2.29**	-2.85***
	N	57	59	57	50						
Early stage VC firms <sup>a</sup>	Mean	4.07	2.57**	2.48**	2.73**						
	S.D.	0.91	1.05	1.14	1.10	-7.58***	-7.54***	-6.48***	-0.69	-0.71	-1.22
	N	112	110	110	100						
Later stage VC firms <sup>a</sup>	Mean	3.96	2.91**	2.18**	2.39**						
	S.D.	0.96	1.15	1.15	1.12	-7.13***	-8.53***	-8.22***	-5.30***	-3.35***	-1.74*
	N	127	130	130	118						

\*Significant at the 10% level;\*\* Significant at the 5% level;\*\*\* Significant at the 1% level

<sup>a</sup> Significance tests on the differences between the means of the early stage VC firms & later stage VC firms (Mann-Whitney tests)

**Table 7: Regression with motives as dependent variable**

Dependent variable	Finance			Deal flow			Selection <sup>a</sup>			Value adding		
	Total Sample	Early Stage	Later Stage	Total Sample	Early Stage	Later Stage	Total Sample	Early Stage	Later Stage	Total Sample	Early Stage	Later Stage
Average investment stage	0.140	-	-	0.101	-	-	-0.332	-	-	-0.202**	-	-
Log(maximum investment preference)	-0.206***	-0.086	-0.292***	0.072	0.298***	-0.137	-0.023	0.247*	-0.162	0.047	0.373***	-0.203*
Industry specialization	0.117	0.224**	-0.030	-0.043	-0.090	-0.065	-0.171	-0.389**	-0.055	0.001	-0.169	0.090
Geographical region specialization	0.079	0.104	0.031	-0.041	-0.010	-0.059	-0.018	0.035	0.006	-0.017	0.073	-0.055
% of investments syndicated as non-lead	0.058	0.049	0.038	0.123	0.139	0.102	0.389***	0.397***	0.368**	0.146**	0.184*	0.195*
Log(# of years in operation)	-0.063	-0.109	-0.044	0.039	0.007	0.099	-0.103	0.004	-0.031	-0.041	0.023	-0.003
# Investments/ investment executive	-0.022	0.130	-0.078	-0.065	-0.111	-0.054	-0.011	-0.003	0.007	0.055	-0.103	0.067
Significance	0.044	0.281	0.112	0.191	0.042	0.693	0.001	0.017	0.070	0.057	0.021	0.092
Adjusted R <sup>2</sup>	0.036	0.016	0.042	0.015	0.074	0.037	0.114	0.146	0.100	0.035	0.100	0.050

\*Significant at the 10% level; \*\* Significant at the 5% level; \*\*\* Significant at the 1% level

<sup>a</sup> Since the selection variable is measured with a single item we use ordinal regression. Pseudo R<sup>2</sup> are reported instead of adjusted R<sup>2</sup>.