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DO BUSINESS ANGELS ALTER THE RISK-RETURN EQUATION IN EARLY STAGE INVESTMENTS?

BUSINESS ANGELS AS SEEN BY VENTURE CAPITALISTS
IN THE GERMAN SPEAKING COUNTRIES

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Abstract

Venture Capitalists in the German-speaking countries do not value the contribution of Business Angels in co-invested deals. Business Angels do not reduce the risk perceived by Venture Capitalists in early stage deals even if the Business Angels have what Venture Capitalists regard as an ideal profile. Venture Capitals also refute that deals with Business Angels typically generate higher internal rates of return than deals without Business Angels.

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Keywords: Venture Capital, Business Angels, Austria, Germany, Switzerland.

Executive Summary

Every entrepreneur starting and growing a business faces a main challenge: to get financing. There are several sources of financing like the famous four F's: founders, friends, family, and fools. A different source is the so-called Business Angels (BA). These are typically wealthy individuals who invest their own money in fledgling companies. BAs also provide support through advice, contacts, or hands-on work, based on their experience and knowledge as (current or former) successful entrepreneurs or business managers. Especially this latter contribution explains why these individuals are called "Angels".

A young company might also attract the interest of a professional investor – the Venture Capitalist (VC), who collects money from others and finances with this money privately held companies generally in the form of equity. The objective is to return the money with a high return. To ensure this the VC will also provide active hands on involvement in the development of the company. In comparison to the BA, who invests only his own money, VCs invest mostly other partners' money and so are accountable for their investment to other people.

While the BA has been hailed as an important source of financing for ventures that are still too small to raise the interest of a VC, in many companies there is co-financing between BAs and VCs. In this study, we focus on this type of investments and more specifically want to understand whether the BA-VC cooperation is valuable from the perspective of the VC. This question is of interest for both the founders of new ventures and BAs. It can help a founder to optimize the different stages of financing of the company and shows to the BAs which of their contributions are perceived as valuable and which ones are not.

We show that based on the typical profile of BAs one can expect - which is confirmed in the literature - that BAs can add value through their involvement, simply by reducing the time input which VCs need to make, for example in monitoring and consulting on the investment. Accordingly, the availability of BAs as co-investors, equipped with the commercial, often sector-specific or entrepreneurial, know-how to undertake some elements of the time-consuming and expensive post-investment relationship activity, can reduce the need for VCs themselves to add this value to an investment and therefore the BA can reduce the high costs in monitoring investments.

With all their knowledge and expertise it seems reasonable to assume that co-investment with BAs should reduce the VC's perceived risk of a deal and or co-investments with BAs should generate higher returns than deals without a BA.

On the other hand many of the possible benefits for VC's of co-investing with BAs can be offset by additional complications such as differences in management style, the increased complexity of decision-making having two types of investors involved (and the diversity of objectives which underlies this), and differences in personality and interests which could enhance, rather than mitigate, potential conflicts of interest and goal alignment.

In the paper we attempt to clarify which of the competing explanations for the added value of BAs to a co-investment from the perspective of VCs is the most stringent. Specifically we test the three following hypotheses: 1) Co-investment with BAs does not reduce the VC's perceived risk of a deal compared to deals without a BA. 2) VC's goals and BA's goals are becoming increasingly aligned; and 3) Co-investments with BAs do not generate higher returns than deals without a BA.

The hypotheses are tested based on a sample of VCs from German-speaking countries. This helps to better understand the situation in Germany, Austria and Switzerland and the findings may have implications for other regions.

Based on the answers of representative sample of 59 VCs on the role and importance of BAs as co-investors we conclude that:

1. VCs do not perceive the presence of a BA to be a source of risk reduction. Hence, either VCs value neither the BAs' ability to monitor investments, nor their often reported high level of relevant experience and networks.
2. The VCs' goals and BAs' goals are getting more aligned in the German speaking countries.
3. According to the VCs, the level of returns from investments with BAs is not higher than from those without.

Given that VCs see neither a reduction in risk nor an increase of returns through the presence of BAs, the value of BAs to VCs is put seriously in doubt. The involvement of BAs is perceived by VCs to be irrelevant to their assessment of an early stage deal. This is important news to founders who need to understand the BA-VC relationship when planning the financing of their venture and to BAs directly.

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I. Introduction

Interest in the role of the informal investor in the venture capital market has increased steadily since the identification of the Business Angel (BA) as a source of capital in the financing of business start-ups. In particular, BAs and other informal investors reduce the so-called 'equity gap' – the range in which most institutional investors will not fund. This is one of the conclusions of various studies conducted in the USA (see Freear et al., 2002 for an overview), in Australia (Hindle and Wenban, 1999, the UK Mason and Harrison, 1999, Singapore (Hindle and Lee, 2002, and in the Nordic region (e.g. Landström, 1995, Lumme et al. (1998), Reitan and Sørheim (2000).

Several researchers have sought to identify the typical attitudes, behaviors and characteristics (ABCs) of a BA in an attempt better to understand the informal risk capital market (see for example, Brettel, 2003; Freear et al., 2000; Kollmann, 2004; Stedler and Peters, 2003, and Wetzel (1983)). Findings from this research generally suggest that BAs are high net worth individuals with significant management experience who put their money, knowledge and time at the service of a young business venture.

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A particularly interesting field of the venture capital market is co-investments between BAs and Venture Capitalists (VCs). In contrast to BAs, VCs are intermediaries between investors and entrepreneurs. The presence of a BA in a joint investment is potentially beneficial to a VC: Although the interests of BAs might not be perfectly aligned with those of VCs, their experience and time involvement should decrease the risk involved in an early stage investment, or increase returns for otherwise similar risks. The reduction in risk could be based on the BA's informed and active monitoring and support of the early stage investment; and it appears that the amount of time spent by the typical BA on deals could add value by reducing the time necessary to be spent by the VC. In addition, the experience and networks that BAs can bring to the early stage venture could also potentially lead to an increase in returns.

This suggests that a co-investment with a BA should be beneficial for a VC. Stanco and Akah (2005) show that indeed only 12% of the VCs the surveyed in the US do not co-invest with BAs and Harrison and Mason (2000) also see the VCs benefit based on some evidence from the USA and the UK. Moreover, for BAs, co-investments are desirable: Mason and Harrison (2002) show in a study on returns of venture capital deals in the UK that co-investments with VCs yield significantly higher returns than BA/BA co-investments or deals in which BAs are alone.

On the other hand, in an effort better to understand the investment practices employed by successful BAs in Germany, Amis et al. (2003) interviewed several so called "Winning Angels" in a non-representative study which gave a slightly different picture. The BAs involved in the Amis study seemed to consider that, overall, VCs do *not* perceive them as decreasing the risk involved in a deal, firstly because the VCs consider themselves to be the qualified and professional investment experts, and secondly because the surveyed BAs considered their interests to be in conflict with those of VCs, albeit to a diminishing extent (Amis, 2003). Finally, the BAs acknowledged that co-investments with them might not produce higher returns for the VCs for otherwise similar risks.¹ Harrison and Mason (2000) – in addition to the evidence cited above – also found evidence pointing in this direction. Although most of the VCs they surveyed indicated that, all other things being equal, the presence of a BA would make them more likely to make follow-on investments, they saw distinct disadvantages in co-investing with BAs and a few had even adopted a policy of not co-investing with BAs at all.

This disparity in perceptions of the value in VC-BA co-investment on a deal calls for further research into the dynamics of the VC-BA relationship, specifically from the perspective of the VCs. Aside from Harrison and Mason (2000), we are not aware of any published research in which the rationale for VCs to co-invest with BAs is the central focus, although other researchers have highlighted some of the complementarities between investing by venture capitalists (VCs) and BAs (see for example Chemmanur and Chen, 2003; Gifford, 1997; Gill et al., 2000, and Lau, 1999). This contrasts starkly with the extent of research into other investment criteria and practices applied by VCs in Europe (Manigart et al., 1997; Mason and Stark, 2004; Muzyka et al., 1996 and Sweeting, 1991).

In addition, the evidence to support the added BA-value in a co-investment (e.g. Harrison and Mason, 2000) is based on data from the USA and UK while the critique in the context of the Amis et al. (2003) study is based on evidence from Germany. Thus, while the question of BA-VC co-investments as such is completely general, the different views might be caused partly by regional differences. Aside from Brettel (2003), Kollmann (2004) and Stedler and Peters (2003),

¹ Note that Gottschalg et al. (2004) report that venture capital returns in general seem to be low for the risk being taken.

the informal investment market in the German-speaking countries has not been the object of scientific studies. Indeed, appropriate data on Austria and Switzerland is almost entirely absent.

In this paper, we attempt to reduce these deficits, by studying the BA-VC relationship from the VCs' perspective, based on empirical data from a survey of 59 VCs who operate in the German-speaking countries.

This research could be beneficial as entrepreneurship constitutes a vital competitive edge in world markets and BAs are the primary source of equity financing for start-up and early stage entrepreneurial ventures. In particular, founders of new ventures need to understand the VC-BA relationship to arrange the financing of their venture in an optimal way.

In addition, the investments of self-made, high-net-worth individuals are one of the least understood economic resources in general and particularly in the German-speaking countries where ambiguous comments have appeared in the media,² concerning the value of interaction between BAs and VCs. In summary, we strive to test the commonly held assumption that BAs add value to VC-BA co-investments beyond a level that VCs could reach in other types of deals (i.e. without BAs).

This paper proceeds as follows. Section I provides a brief description of the venture capital industry and its relevant participants. Section II develops three specific hypotheses about the VC-BA investment relationship that we seek to test. Section III describes the characteristics of our dataset of 59 VCs; it also discusses the possible incidence of sample bias and other potential limitations. Section IV presents our empirical findings and discusses our results in comparison to the predictions of prevailing theories. Finally, Section V provides a summary and some concluding remarks.

II. Venture Capital and Business Angels

A. Venture Capital

Definitions of venture capital usually focus on four characteristics (Brander et al., 2002). Three of these are emphasized by the following definition from Schilit (1991): “venture capital can be thought of as [1] financing for privately held companies, [2] generally in the form of equity and/or long term convertible debt ... The venture capitalist, like the banker, serves [3] as an intermediary - or conduit - between the investors ...and the entrepreneurs”. The fourth characteristic is highlighted in the definition given by Kunze (1990): “The combination of equity participation plus [4] active involvement in the development of the company is what distinguishes venture capital from all other investment vehicles”. In this paper we will use the term “Venture Capital” as defined by the European Private Equity and Venture Capital Association (EVCA), i.e. early stage financing (seed, start-up and other early stage) and expansion financing. The financing stages are explained below in Subsection C.

² “Business Angel” – Interview with J. Hemer (*Süddeutsche Zeitung* – April 17, 1999), “Der Rambo im Nadelstreif” – Interview with H.O. Henkel (*Der Standard* – October 12, 2000), “Platow-Brief-Business Angels schreckt das Neue Markt-Tief wenig “ (*Platow Brief* – April 19, 2001), “Business Angels bersten schier vor Tatendrang “ (*Financial Times Deutschland* – January 10, 2002).

B. Business Angels

The intermediation aspect of venture capital and the size of the deals is what distinguish VCs from BAs. BAs are typically wealthy individuals who invest their own money in fledgling companies [Brander et al. (2002)]. By comparison, VCs invest other partners' money and so are more accountable for their investment (Leshchinskii, (2002). BAs, who are typically (current or former) successful entrepreneurs or business managers, also provide support through advice, contacts, or hands-on work (Amis et al., (2001).

C. Financing Stages

Venture capital finance is a dynamic activity in that there are many stages in the financing process. The differentiation between stages is somewhat arbitrary, but following the categorization by the EVCA (2004) and Brander et al. (2002), we distinguish the six following stages:

- The earliest stage is referred to as *seed* investment and is provided to research, assess and develop an initial concept before a business has reached the start-up phase. Investments are often based on a single individual with an idea and relevant expertise, and the BA or VC may assist in forming a company.
- The next chronological stage is *start-up* financing. This is provided to companies for product development and initial marketing. Companies may be in the process of being set up or may have been in business for a short time, but have not sold their product commercially.
- *Other early-stage* financing is provided to companies that have completed the product development stage and require further funds to initiate commercial manufacturing and sales. They will not yet be generating a profit.
- The fourth stage is referred to as *expansion* financing and is provided for the growth and expansion of an operating company, which may or may not be breaking even or trading profitably. Capital may be used to finance increased production capacity, market or product development, and/or to provide additional working capital. This stage also includes bridge financing (made available to a company in the period of transition from being privately owned to being publicly quoted) and rescue/turnaround financing (made available to an existing business which has experienced trading difficulties, with a view to re-establishing prosperity).
- The fifth, *later* stage encompasses secondary purchase/replacement capital finance (the purchase of existing shares in a company from another private equity investment organization or from another shareholder or shareholders) and refinancing bank debt (financing to reduce a company's level of gearing).
- Finally, there is a stage of financing focused on a *special-purpose* for a mature, privately held company, including leveraged buyouts (financing provided to enable the acquisition of an existing product line or business) or the venture purchase of quoted shares (purchase of quoted shares with the purpose of delisting the company).

Within each stage there may be more than one round of investments. The amount of time associated with each stage is variable, but a horizon of about a year each is typical for the first four stages. Later stage financing more commonly stretches out over two or more years, and special-purpose investments are usually one-time investments that might be made anytime after the first four stages are complete (Brander et al., 2002). See Gompers and Lerner (1999b) for further discussion on the various stages of VC investing.

III. Assessing the VC–BA Relationship

A. Potential Value of BAs

Brander et al. (2002) found in their analysis on returns to Canadian venture-capital investments, that syndicated investments (VC-VC) have significantly higher returns (in both the statistical and the economic sense) than standalone investments. They concluded that this was because different VCs can add different value to ventures as a result of their different skills and information: some might be helpful in organizing production, others might line up customers, other might contribute human-resource management, etc.

Several reasons have been given for why the conclusions found by Brander et al. (2002) in syndications should also apply to BA-VC co-investments.

Gifford (1997) and Harrison and Mason (2000) suggest that BAs can add value through their performance of non-executive director functions, simply by reducing the time input which VCs need to make, for example in monitoring and consulting on the investment. Accordingly, the availability of BAs as co-investors, equipped with the commercial, often sector-specific or entrepreneurial, know-how to undertake some elements of the time-consuming and expensive post-investment relationship activity, can reduce the need for VCs themselves to add value to an investment (Harrison and Mason, 2000, and Lau, 1999).

In addition, in the relationship between a VC and invested company, informational asymmetries, conflicts of interest and goal alignment that can give rise to moral may be effectively resolved through monitoring by an inside investor such as a BA. As an investor the BA not only provides capital but typically also works closely with the firm, monitors it frequently, observes the private information about the project's profitability, becomes involved in making the subsequent investment decisions, and is generally well informed about the firm's prospects (Admati and Pfleiderer, 1994). Clearly, VCs can also protect themselves *ex-ante* from information asymmetries and moral hazards (Van Osnabrugge, 2000) by injecting capital in stages, by awarding incentive compensation to the entrepreneur, by using stringent contractual provisions, by specializing in particular industry sectors (Mason and Stark, 2004) and by syndication as a means to draw on other VCs', perhaps more specialized, monitoring capabilities (Lockett and Wright, 1999).

However, the VCs incur high costs in monitoring investments; and, as Gompers (1995) has observed: "If venture capitalists need to 'kick the tires' of the plant, read reports, and take time away from other activities, these costs can be substantial." Thus, relying on help provided by BAs in joint investments could be the better alternative for VCs.

B. Commitment of BAs

There is considerable evidence in Germany, in particular, that BAs might be willing to serve this monitoring role. Brettel (2003) found that over 90% of the 48 BAs surveyed stated that they were involved (21%) or actively involved (75%) in the supervisory board, the advisory council and the shareholders' meetings of the invested company and provided informal advisory help. These findings are consistent with Van Osnabrugge (2000), who found that BAs monitor more actively their investments *ex post* than VCs do.³ As Fiet (1995a) notes, one explanation for this level of commitment by BAs might be that they are relatively more comfortable in their abilities to deal effectively with business risk.

The extent of BAs' commitment is also reflected in the considerable amount of time they spend on their investments: an issue that is particularly relevant for ventures in their earliest stages of development (Kelly and Hay, 1996). Brettel (2003) reports an average of 6.2 days a month that BAs spend on their investments; corresponding to an average of 1.34 days a month per investment (see also Stedler and Peters, 2003). This can be contrasted with an estimate for the U.S. that a VC typically allows less than two hours per week per investment (Zider, 1998).

C. BA Qualifications

Furthermore, Brettel (2003) found BAs in Germany to be particularly well qualified for this monitoring role. The vast majority of the interviewed BAs were experienced business people; altogether, over 85% of the BAs interviewed had management experience in small and medium-sized companies with an average of 12.5 years; the majority reported their main area of functional expertise to be in corporate management (80%) and finance (60%), with sales and marketing tailing (at 20%-30% each). In addition, Kelly and Hay (1996) noted that, like VCs, BAs prefer to invest in markets and/or technologies which are familiar to them or in which they have had some direct experience (see also Landström, 1993). Brettel (2002) found that the most significant contributions of BAs are often the use of their personal networks, their marketing, strategy and management experience, their knowledge of the industry and their help with recruiting executive personnel. BAs are also self-confident about their value-added: Stedler and Peters (2003) found that the BAs surveyed in Germany considered that they themselves could deliver the largest know-how contribution to the investment.

D. Alignment of Interests

However, some VCs have mixed views on the value of the contribution made by BAs and the general alignment of interests. As Harrison and Mason (2000) observed, many of the possible benefits of co-investing with BAs can be offset by their differences in approach, the increased complexity of decision-making having two types of investors involved (and the diversity of objectives which underlies this), and differences in personality and interests. In particular, they found that BAs have, in general, different investment criteria from VCs with the result that their involvement can even enhance, rather than mitigate, conflicts of interest and goal alignment. In the USA less sophisticated BAs are often seen as overpaying at the seed stage, making realistic valuations difficult for follow-on investment (Gill et al., 2000). Harrison and Mason (2000) identified a similar perception among VCs in the UK. The study by Brettel (2003) into the German informal venture capital market showed that, although 46% of the 48 BAs surveyed

³ By comparison, van Osnabrugge found VCs to be much more efficient than BAs in the *ex ante* deal origination and initial screening processes. This might also explain, Lockett and Wright's finding (1999) that *ex post* management of investments was a more important motivation than *ex ante* selection for VC syndication.

considered high capital growth to be very important, the main motivation of BAs to act as BAs was to have fun: with 81% considering this very important; and only 2% considering this not important⁴.

Another potential lack of alignment of interests might stem from differences in investment objectives between VCs and BAs. Freear et al. (2002) observe for the UK and the USA that BAs invest for objectives other than financial return, including the fun and excitement of being involved in the ventures in which they invest. Moreover, one of Brettel's conclusions was damning: "the German informal venture capital market – in spite of its earning potential – is still largely in the stage of being a 'hobby market'". This assessment of BA motivations contrasts starkly with the more typical investment criteria of VCs, namely financial returns (Harrison and Mason, 1992; Landström, 1993, and Freear et al. (1995); and is probably born of the fact that BAs invest their own money, while VCs are intermediaries between entrepreneurs and large institutions, such as pension funds, banks and insurance companies. It might even be observed that, in many ways, the motivations of BAs seem more to match those of the entrepreneur than those of the VC with the potential of enhancing, rather than mitigating, conflicts of interest – and moral hazard – due to the informal and personal influence BAs often exact over their investments' founders.

Said so, there is also evidence that these potentially additional monitoring and agency costs are decreasing in recent years, at least in the German-speaking countries (Stedler and Peters, 2003), and Kollmann (2004). In contrast to Brettel's (2003) findings that fun was the main motivation for investing by the 48 BAs surveyed, Stedler and Peters (2003) found that the main motivations of the 232 BAs whom they surveyed were: first, to exploit and profit from their professional experience (82%); and second, the chance of a higher return on investment (77%).

E. Assessing the VC–BA Relationship: Conclusions

In conclusion, our preliminary research using a value-adding perspective on the available empirical evidence suggests that:

1. Co-investments with BAs can reduce the VCs' perceived risk of a deal, compared to a deal where no BA is present.
2. VCs' and BAs' goals are becoming increasingly aligned, and
3. Co-investments with BAs should generate higher returns for projects with similar risk due to the potential value-added by BAs.

While the second statement has recently been somewhat substantiated in the German-speaking countries (Stedler and Peters, 2003), the first and third statement clearly remain open to challenge.

In light of this analysis, our study seeks to corroborate the following, inter-related hypotheses:

H1: Co-investment with BAs does not reduce the VC's perceived risk of a deal compared to deals without a BA.

⁴ This lack of focus on purely economic considerations is also reflected in Brettel's (2003) findings that only 14% of the BAs considered the exit strategy to be a very important factor to take into account in assessing investments: by contrast, this is a much higher priority for VCs (Harrison and Mason (2002), van Osnabrugge (2000)).

H2: VC's goals and BA's goals are becoming increasingly aligned.

H3: Co-investments with BAs do not generate higher returns than deals without a BA.

We limit our study to BAs in the German-speaking countries, although our findings may have implications for other regions.

IV. Empirical Foundations

A. Description of Sample

We analyzed perceptions of 59 VCs on the role and importance of BAs as co-investors. To obtain our sample, we identified our population of interest as 173 VCs investing in seed, start-up, other early-stage and/or expansion stages of venture capital financing in the German-speaking countries: Austria, Germany and Switzerland. The VCs were identified from the membership lists of the Austrian Private Equity and Venture Capital Organization (AVCO), the Bundesverband Deutscher KBG's German Venture Capital Association (BVK) and the Swiss Private Equity and Corporate Finance Association (SECA). We also cross-referred these lists with those VCs registered as investing in these stages and countries with the European Private Equity and Venture Capital Association (EVCA) and with entrepreneur/VC and BA networks (in particular, Europe-Unlimited and Brains-To-Ventures).⁵ This was intended to counteract any bias inherent in drawing a sample from just one source. Also, to exclude defunct firms from the sample, we checked via telephone and/or their webpage that they were still in operation.

We emailed a copy of our questionnaire to the 173 VCs and after two weeks sent further emails to non-responding VCs. We followed up with telephone calls on the non responding VCs and through personal contacts that existed to 47 of the VCs identified. We promised respondents that, in preparing a report on our findings, we would not identify the investment performance or practices of any particular VC by name; we have respected that promise in this paper.

In all cases, only one response was sought from each office. This anticipated the widespread custom in VC partnerships to delegate questionnaires and other information requests to one partner, to reduce the firm's workload, and was intended to increase the participation rate. The effect of this restriction may have led to a slight downward bias in the estimates of the value of co-investing with BAs (for example, in relation to their time-saving advantages referred to above in Section II). However, anecdotal evidence suggests that the management culture of VC firms in the region is such that partners are generally well informed of their colleagues' project portfolios.

The questionnaire consisted of 20 questions and addressed investment attitude, experience and aggregate financial activity and performance. Ideally, to answer our research questions, data on the characteristics and financial performance of individual investments would be studied but it is not available. The questionnaire required approximately 25 minutes to complete and is reproduced in Appendix A.

⁵ These organisations operate like 'dating agencies', providing a communication channel, that enables BAs to review investment opportunities, while preserving their anonymity, and allows entrepreneurs seeking finance to present their investment opportunity to a large number of potential investors (Harrison and Mason, 1996).

We ended up with an overall response rate of 75%. The 129 responses included 59 answered questionnaires. The remaining 70 respondents indicated that they did not fill in the questionnaire for the following reasons:

- 1) Act as fund of funds (32%).
- 2) Too busy (18%).
- 3) Wrong person contacted (14%).
- 4) Firm policy is not to participate in questionnaires (11%).
- 5) Change of investment strategy rendered them irrelevant to the study (7%), and
- 6) Do not co-invest with BAs (7%).
- 7) Other reasons (11%).

The 59 answered questionnaires correspond to an effective participation rate of 34%.

Unique Dataset

Of the 59 effective participants, the average VC first invested with a BA in 1998 and has participated in 3 investments with BAs in the three years to August 2004, compared to 19 investments in early stage deals without BAs. All of the 59 effective participants have invested with BAs at some point during the past three years. This data cannot be benchmarked against any industry standard as no data is currently available on the total number of early stage deals with or without BA participation. Table 1 summarizes the geographical distribution of these investments.

Table 1. Question numbers refer to the questionnaire reproduced in Appendix A

Geographical Distribution of Early Stage VC Investment

	Average first year of with BA investment	Average Investments # Bas in 2001-03 of with	Average Investments # Bas in 2001-03 of w/o
Headquarters			
Austria	1999	2	34
Germany	1998	3	18
Switzerland	1998	5	17
Not defined	2001	1	7
All funds	1998	3	19

Source: Questions 1 and 8.

Table 2 presents the distribution of funds under management, by region, in our sample, as compared to that of the population. The average amount of funds managed is approximately €180 million. This is slightly lower than the €222 million average amount of funds managed by all early stage VCs in the region, as reported to EVCA and the respective national private equity and venture capital organizations. The differences chiefly arise in respect of funds headquartered in Austria and Switzerland, which comprise less than 25% of the population of interest (see Table 3).

Table 2

VC fund size (€ Million)⁶: Comparison of sample and population average in the three countries

Headquarters	Population	Sample
Austria	155	222
Germany	202	202
Switzerland	341	118
Not defined	6	6
Average	222	181

Sources: For the population AVCO, BVK, SECA and EVCA. For the sample, background question.

Table 3 presents the geographical distribution of the headquarters of VCs in our sample, as compared to that of the population surveyed. This distribution is roughly consistent with the distribution reported by EVCA and the respective national private equity and venture capital organizations.

Table 3

Geographical Location of VC Headquarters in sample and population

	Headquarters # of funds in population	Percentage of population	# of funds in sample	Percentage of sample
Austria	8	5	4	7
Germany	130	75	40	68
Switzerland	34	20	14	24
Not defined	1	1	1	2
All funds	173	100	59	100

Sources: AVCO, BVK, SECA and EVCA.

The VCs in our sample, therefore, seem broadly representative of VCs in the German-speaking countries.

B. Potential Bias and Restrictions

Before we present our results, it is worth pointing out potential biases concerning our sample.

Non-Response Bias

First, there is the possibility of non-response bias: the 28% of the population that did not respond to our survey may include a higher proportion of VCs who are critical of, or at least indifferent to, the contribution of BAs. As a result, they may have declined to participate in our survey simply because they dislike, or are indifferent to, the prospect of co-investing with BAs on early stage deals and hence perceive the survey as not relevant to them.

However, there is no indication that our sample is biased in this way. We tested this by identifying for each element in our sample various firm-specific characteristics: funds under

⁶ Two outliers were removed from the population. Only a small part of their business is in early stage deals.

management, number of employees, industry focus and geographical location. We then compared these to the characteristics of the VCs in the population. The results of this test did not highlight any significant differences between the respondents in our sample and the surveyed population.

The personal contacts used to retrieve answers from VCs could also potentially bias the results although there is no obvious difference between them and the population at large and *all* non-responding VCs were approached by telephone.

Stage/Sector Bias

Second, there is the possibility of what we refer to as stage/sector bias: the focus of our study was VCs who invest in early stage deals. Although no data is currently available on the relative number of early stage deals with or without BA involvement, early stage deals are generally perceived to be more likely to involve BAs than other stages of private equity. As a result, VCs who work in early stage deals may value the contribution of BAs more than those who do not. To put it another way, VCs who are critical of, or at least indifferent to, the contribution of BAs, may prefer not to focus on early stage deals, but rather focus on later stage deals or on other areas of private equity not included within the scope of our survey.

This bias cannot be excluded as we do not observe the VCs that avoid early stage deals. However, we found no indication that our sample is biased in this way. All of the 59 effective respondents reported that they have co-invested both with *and* without BAs in the last four years; and, of the remaining 70 respondents, only five mentioned not working with BAs as a reason for their non-participation in the survey.

Scale/Experience Bias

Third, there is the possibility of what we refer to as scale/experience bias: if BA co-investments give rise to larger ventures, then perhaps it is scale rather than co-investment that explains differences in attitudes to BAs, or other measures. Such scale effects might arise if either economies of scale or capital constraints induce an apparent advantage from size (Brander et al., 2002).

In a similar vein, differences might be explained by the relative experience of VCs: it has been observed that being experienced increases the expected profitability of a VC fund (Gottschalg et al. 2004; Gompers and Lerner, 1999a, and Kaplan and Schoar, 2003).

However, when analyzing our results, we have corrected for the size of the fund, for the VCs' years of experience and the number of BA co-investments. All of these variables turned out to be insignificant, and do not affect our main findings concerning BA co-investment.

Cycle Bias

Fourth, there is the possibility of what we refer to as cycle bias: differences in attitudes to BAs and other measures might be largely explained in the context of the prevailing investment market cycle. As Gottschalg et al. (2004) have noted, private equity funds can be exposed to substantial "left tail risk", that is, they deliver significantly higher losses during large market downturns (when there is no exit market and so no cash distribution to investing partners) but are not as sensitive to economic conditions in good times. This study was conducted in the summer/autumn 2004 and may also reflect the economic sentiments of that period.

Self-Reporting Bias

More difficult to correct, is the possibility that self-reported, retrospective data can be subject to conscious or unconscious errors associated with one-sided (VC only) bias; as well as with *post hoc* rationalization and recall bias (Mason and Stark, 2004).

It cannot be excluded that when comparing returns on investments with or without participation of BAs, VCs might be comparing investments with substantially distinct risk profiles.

V. Empirical Results

In the context of our empirical results, we define four control variables based on published and self-reported data by the participants. These are:

- 1) The size of the fund in monetary terms (*size*) (published).
- 2) The experience of the VC in number of years since their first co-investment with a BA (*experience*) (self-reported). This seems to be the relevant variable in what concerns relationships to BAs rather than general experience in private equity although it might coincide in many cases.
- 3) Their level of activity as the sum of projects in the years 2000-2004 (*relations*) (self-reported).
- 4) A dummy variable for the country of origin (Germany, Austria, Switzerland) (published).

Table 4 displays the summary statistics of the first three control variables.

Table 4

Summary Statistics of Control Variables

Variable	Size (Million Euros) (Fund size)	Experience (years) (Time since first co-investment with Bas)	Relations (#) (Number of co-investments with Bas in 2001-2003)
Mean	180.70	6.60	10.07
ST. Dev.	311.01	4.63	2.12

Source: Background question, questions 1 and 8.

A. Hypothesis 1

The empirical test for our first hypothesis, that *co-investment with BAs does not reduce the VC's perceived risk of a deal*, is straightforward: We asked VCs to nominate the top three characteristics that they look for in a BA; and if they would apply lower discount rates in valuing co-investments with BAs who feature those three characteristics than they would in valuing investments without BAs. We also asked the VCs to quantify the maximum

decrease in discount rate, if any, in assessing a deal as a result of this BA involvement and compared this to the discount rates which the VCs reported they applied, as a general rule of thumb, across seed, start-up, other early and expansion financing stages.

The basis for using discount rates as a measure of the VC's perceived risk of a deal reflects the general perception that, because outside investors recognize risk (including the possibility of information asymmetry and moral hazard), they demand a higher rate of return than would be the case if the funds were internally generated (Lerner, 1998). Indeed, this relationship between perceived risk and applied discount rates seems to be born out in our findings. Table V present the average discount rates that VCs reported across the early investment stages.

Table 5

Discount Rates in percent Applied by VCs According to Stage of Investment

Investment Stage	Percentage	Percentage	Percentage
	Avg.	Min.	Max.
Seed (Concept Only)	50	20	100
Start-up (No Sales)	46	20	100
Other Early (No Profit)	37	15	60
Expansion (Growth)	30	10	50

Source: Question 4.

We observe that there is noticeably less of a consensus (and so higher variance) among VCs on the range of discount rates applied to seed and start-up investments than to other early stage and expansion investments.

As to VC perceptions of BAs (see Table VI), we found that the 3 characteristics of BAs most looked for by VCs were: sector experience (nominated by 88% of VCs, for an average of 10 years), good business contacts (81%, average of 50 contacts), such as with potential suppliers, customers and possible trade buyers, and sales experience (nominated by 54%, average of 8 years).

Table 6

Characteristics Most Looked for by VCs in BA Co-Investments

Characteristic	# of VCs who mention	Percentage of VCs who mention it	Average	Measure
Sector experience	52	88	10	Years
Good business contacts	48	81	50	# of contacts
Sales experience	32	54	8	Years
Investment record	21	36	4	Deals
Time availability	10	17	29	Hours/Month
R&D/technical expertize	5	8	7	Years
Understanding of growth technology and VC process	1	2	1	Deal with VC
Cash	1	2	100,000	Euros
Leadership	1	2	N/A	N/A
Business Building	1	2	1	Deal

Source: Question 3.

When we explicitly asked the participating VCs whether they would apply lower discount rates when investing together with an *ideal* BA, i.e. a BA that has the three most important characteristics stated by the VC, the results show that almost half (46%) of the VCs indicated that they would never apply lower discount rates (see Table VII). Only 34% indicated that they would sometimes apply lower discount rates in valuing such co-investments; including 10% who indicated that they would do so often. In an ordered probity regression model, none of our control variables defined at the beginning of this section was statistically significant at the $p = 5\%$ level.

Table 7

Would you Decrease the Discount Rate if BAs meet the top three characteristics (see Table 6)

Answer	# of VCs	Percentage of VCs
Never	27	46
Sometimes	12	20
Often	2	2
Always	0	0
Don't know	18	31
Total	59	100

Source: Question 5.

In addition, only 8.5% of the participating VCs stated that they would increase the BA's equity allocation if the BA featured the top three characteristics looked-for. This evidence broadly supports Harrison and Mason's (2000) findings that VCs apply the same investment criteria to BA co-investments than to VC investments without BAs; and bears out the argument underlying our first hypothesis that VCs do not perceive the opportunity to co-invest with BAs as a way of reducing risk, as measured by the discount rate applied.

On the basis of these findings, we conclude that our first hypothesis, that *co-investment with BAs does not reduce the VC's perceived risk of a deal compared to deals without a BA*, cannot be rejected.

B. Hypothesis 2

The empirical test for our second hypothesis, that *VC's goals and BA's goals are becoming increasingly aligned*, is less straightforward than that for our first hypothesis.

First, we sought to identify VCs' motivations by asking VCs if attitudes between VCs and BAs are worsening.

Second, we divided VC contractual clauses, and their underlying concerns, into two generic groups – which we labeled, “money” and “influence” – to analyze the simultaneous pursuit of these two different objectives in an investment. We refer to the term “influence”, rather than to concepts of “fun” or “excitement”, on the premise that it is through influence that BAs will be able to extract fun and excitement from an investment.⁷

Examples of concerns pursuing “money” objectives included: valuations on financing rounds and the ability of BAs to take part in subsequent financing rounds. Examples of clauses included: dividend rights or multiple liquidation provisions (i.e. whereby the VC receives a cash multiple of his/her investment on any liquidation or exit, regardless of its nature). A complete list of the concerns categorized under “money” is presented in Table VIII.

Examples of concerns pursuing “influence” objectives included: the ability of BAs to influence the hiring/firing of the senior management of the invested company; and to influence the operations or strategy of the business. Examples of clauses included: rights to appoint a board member or special voting rights on changes to management. This is because in the German-speaking countries (as elsewhere) the rights to control or make corporate decisions are provided in board rights and in voting rights (Kaplan and Strömberg 2003), and the board is generally responsible for hiring, evaluating, and firing top management; and advising and ratifying general corporate strategies and decisions.⁸ A complete list of the concerns categorized under “influence” is presented in Table VIII.

Finally, we assessed the relative importance of these goals to BAs by asking VC respondents about the frequency of the related clauses and concerns becoming almost or truly ‘deal-breakers’ with BAs. By ‘deal-breaker’, we mean the issues that resulted in the VC not investing in a deal or in the VC not participating in following rounds. The phrasing of the corresponding

⁷ We also refer to a range of areas of influence, rather than to a narrower concept of control, since, as Kaplan and Strömberg (2003) and Kirilenko (2001) have argued, control is more of a multi-dimensional and continuous concept than a simple dichotomous, “Yes” or “No” variable.

⁸ Certain corporate actions, however, are governed or subject to shareholder votes. These vary across firms, but sometimes include large acquisitions, asset sales, subsequent financings, election of directors, or any other actions stipulated by contract (Kaplan and Strömberg, 2003).

questions (10 and 11) in the questionnaire (see Appendix) also extends to severe compromises that jeopardize the deal. We asked the VCs to assess frequency on a scale of 1 to 4, where 1 signified “extremely rarely” and 4, “extremely frequently”.

Before we present our results, it is worth noting that objectives going to “money” and concerns going to “influence” will to an extent overlap; for example, a BA’s desire for influence may in fact be fuelled by a desire to protect the financial investment.⁹ However, we consider that the frequency of these issues becoming ‘deal-breakers’ provides a powerful signal about the BAs’ expected payoff from the co-investment. As one VC (quoted in Landström et al., 1998) explains, “you put [contractual clauses] down on paper... that’s when you really begin to know each other... the things that they think are important to them tell you a lot about them... it’s a way to figure out what the other person is all about, not just what they say they are all about”.

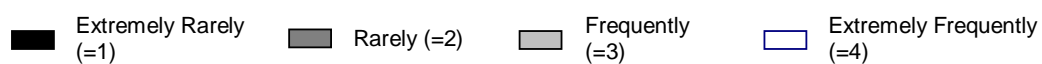
Table VIII presents the results from this question by displaying the average score of each criterion and the numbers of VCs stipulating them in the form of a pie chart. From the results, it appears that “money” objectives are perceived by VCs to be clearly more likely to be ‘deal-breakers’ than “influence” objectives. The most frequent ‘deal-breakers’ arose from the inability of BAs to afford to participate in follow-on co-investment rounds (indicated by 56% of VCs, with over 25% considering this an “extremely frequent” ‘deal-breaker’), multiple liquidation provisions (54%) and the rejection by BAs of valuations for being too low and dilutive (53%). The five deal-breakers with the highest average score are from the “money” category. Their score is, except for the fifth-ranked, significantly higher than the most important “influence” “deal-breaker” (two-tailed Mann-Whitney test at $\alpha = 0.05$).

⁹ See Harrison and Mason (2000). In addition, Chan et al. (1990) defined the value of control by reference to the utility from terminal cash flow. Finally, Kaplan and Strömberg (2003) found that the degree of voting and board control retained by VCs is positively correlated. They also found that cash flow rights (meaning the fraction of a portfolio company’s equity value that different investors and management have a claim to) and control rights largely go together.

Table 8

"Deal-Breakers" mentioned by VCs. Scale from 1 to 4 with 1 = Extremely rarely and 4 = Extremely frequently

Type of 'Deal-Breaker'	Cluster	Mean Score of Answers	Distribution of Answers
Business angels can't afford to take part in follow-on co-investment rounds	Money	2.9	
Business angels reject low valuations/ low % shareholdings for themselves	Money	2.7	
Multiple liquidation provisions	Money	2.6	
Ratchets and other dilution provisions	Money	2.5	
Business angels are more focused on dividing the pie than making it larger	Money	2.3	
Business angels want more influence over hiring/ firing of CEOs/ management	Influence	2.2	
Business angels want more influence over operations/ strategy of the business	Influence	2.2	
Special voting rights on changes to strategy	Influence	2.1	
Special voting rights on changes to management	Influence	2.1	
Rights to appoint a board member	Influence	2.0	
Dividend rights	Money	1.8	



The predominant influence of “money” criteria supports Stedler and Peters’ (2003) findings that BAs are increasingly becoming motivated by economic considerations; and so implies that VC’s goals and BA’s goals are becoming increasingly aligned. Consistent with these findings, only 27% of the VCs surveyed say that attitudes between VCs and BAs are worsening (Question 3 of the survey). Dividend rights are the exception to the predominance of “money” criteria. This seems to reflect the insignificance of dividends in venture capital deals which are primarily growth focused.

On the basis of these findings, we conclude that our second hypothesis, that *VC’s goals and BA’s goals are becoming increasingly aligned*, is supported.

C. Hypothesis 3

As for our first hypothesis, the empirical test for our third hypothesis, that *co-investments with BAs do not generate higher returns than deals without a BA*, is straightforward in principal: we asked VCs their view on whether deals with BAs typically generate higher returns (asked as IRRs) than deals without BAs. This was assessed on a scale of 1 to 4; where 1 signified “strongly disagree” and 4, “strongly agree”.

Before we present our findings, it is worth mentioning that identifying a relationship between high-performing investments and types of co-investor is complicated because of the presence of other factors, in particular that a number of investments will have several co-investors.

Table IX shows the answers to these questions. The mean score was 2.0; and 76% of the VCs surveyed disagreed that deals with BAs typically generate higher IRRs than deals without BAs, with 19% strongly disagreeing. An ordered probity regression again showed that the answers of the VCs could not be explained by the control variables defined above (all p-values above 5%).

Table 9

Do Deals with Bas typically generate higher IRRs?

Answer	Percentage	
	# of VCs	of VCs
1 Strongly disagree	11	19
2 Disagree	34	58
3 Agree	6	10
4 Strongly agree	2	3
No answer	6	10
Total	59	100

Thus, our findings demonstrate that VCs do not perceive that VC-BA investments generate higher IRRs than pure VC investments.

On the basis of these findings, we conclude that our third hypothesis, that *co-investments with BAs do not generate higher returns than deals without a BA*, cannot be rejected.

VI. Summary and Concluding Remarks

In this study we have focused on how VCs perceive BAs in co-investments, in the German-speaking countries. Early stage deals are likely for a VC to involve one or more BAs.

We specifically tried to evaluate whether (from the perspective of the VCs) BAs 1) reduce risk; 2) have aligned interests, and 3) help achieve higher returns.

Our results show that:

1. VCs do not perceive the presence of a BA to be a source of risk reduction. Hence, either VCs value neither the BA's ability to monitor investments nor their reportedly high level of relevant experience and networks; or VCs perceive that other sources of risks, such as conflicts of interests, outweigh any advantages in the BA's involvement on a deal.
2. The principal objectives of a BA in a deal relate to monetary benefits. This is expressed by the observation that BAs' goals relating to money are more likely to be 'deal-breakers' with VCs than their goals relating to "influence". This result contrasts with the widely held belief that BAs primarily invest for non-monetary reasons. Since VCs are also oriented towards monetary benefits, it can reasonably be inferred from this finding that VCs' goals and BAs' goals getting aligned.
3. According to the VCs, the level of returns (IRR) from investments with BAs is not higher than from those without. Given that VCs see no reduction in risk through the presence of BAs, the value of BAs to VCs is put seriously in doubt.

In summary, the involvement of BAs is perceived by VCs to be irrelevant to their assessment of an early stage deal. It may well be that there is additional value to VCs provided by BAs in their capacity to identify and source new investment opportunities (Stanco and Akah, 2005), a service that VCs might be taking for granted when evaluating the overall differential effect of BAs on their investments. However, once a joint investment has been made, the presence of a BA seems to be of no consequence to the VC.

BAs are regarded to be a vital source of equity financing for start-up and early stage entrepreneurial ventures. However, their added value to joint investments with VCs may not be as large as is commonly believed. This information can be valuable not only for BAs but also for entrepreneurs who need to plan the different financing stages of their venture. The results of our study are based on data from, and hence directly apply only to, the German-speaking countries. However, they might also be of relevance to other private equity markets around the world.

Appendix A

Questionnaire

Background Information on Your Fund(s)

Total funds under management _____ € Mio

Investment focus in the German-speaking countries

*(Please tick the appropriate box(es) or just leave blank if you have **no preferences**):*

Sector(s)	Stage(s)
Biotechnology	Seed (Concept only)
Medical Devices	Start-up (No Sales)
Other Healthcare	Other Early (No Profit)
Information Technology	Expansion (Growth)
Media	Later Stage
Telecommunications	
Retail and Consumer Products	
Other (please specify)	Other (please specify)

Current Trends in Early Stage Deal Activity

1. In which year did you first co-invest with a business angel? _____

Business Angels

2. Do you agree with the following statements?

(Please circle along the scale: 1 = Strongly disagree, 4 = Strongly agree)

Valuing Business Angels	1	2	3	4
Deals with angels typically generate higher IRRs than deals without angels				

3. What would you say are the top 3 characteristics you look for in business angels? If these top 3 include experience or time, how many years, deals or hours per month do you look for?

(Please tick top 3 characteristics and insert number)

Characteristics of Business Angels	Top 3		How Many...? (Please insert number)
	(Tick)		
Sector experience			Years
R&D/ technical expertise			Years
Sales/ marketing experience			Years
Investment record			Early Stage Deals
Time availability			Hours/ Month
Good business contacts			N/A
Other (please specify)			

4. As a general rule of thumb, what range of discount rates (if using discounted cash flows) do you typically apply when valuing early-stage deals?
(You may wish to distinguish between high technology and other sectors or, otherwise, please just complete the “Other” columns).

(Please indicate ranges)

Stage	Discount Rate (Please insert range of %s)	
	Hi Tech	Other
Seed (Concept only)		
Start-up (No Sales)		
Other Early (No Profit)		
Expansion (Growth)		

5. If you are co-investing with a business angel who has the top 3 characteristics which you identified above in question 3, would you change any of the following terms of your investment?

(Please circle along the scale: 1 = Never, 4 = Always)

Changes	Never	Sometimes	Often	Always
Decrease the discount rate?	1	2	3	4

Business Devils

6. Have the following issues caused disagreements with business angels which led to (or nearly led to) early stage deals breaking down*?

(Please circle along the scale: 1 = Extremely rarely, 4 = Extremely frequently)

Difficult Issues for Business Angels				
Business angels reject low valuations/ low % shareholdings for themselves	1	2	3	4
Business angels want more influence over hiring/ firing of CEOs/ management	1	2	3	4
Business angels can't afford to take part in follow-on co-investment rounds	1	2	3	4
Business angels want more influence over operations/ strategy of the business	1	2	3	4
Business angels want more control in determining the terms and timing of exit	1	2	3	4
Business angels are more focused on dividing the pie than making it larger	1	2	3	4
Other (please specify)	1	2	3	4

*By "breaking down", we mean you did not invest or did not participate in follow-on rounds because of the angel.

7. Have the following clauses in your investment/shareholder agreement caused disagreements with business angels which led to (or nearly led to) early stage deals breaking-down?

(Please circle along the scale: 1 = Extremely rarely, 4 = Extremely frequently)

Difficult VC Clauses for Business Angels*				
Special voting rights on changes to management	1	2	3	4
Special voting rights on changes to strategy	1	2	3	4
Rights to appoint a board member	1	2	3	4
Dividend rights	1	2	3	4
Ratchets and other dilution provisions	1	2	3	4
Multiple liquidation provisions	1	2	3	4
Other (please specify)	1	2	3	4

*Please see list of definitions in the Annexure at the back of this questionnaire.

Past Performance

8. In the last 3 years, how many early stage deals did you invest in? How many were with business angels as co-investors?

Stage*	Year	Number of Initial Investments (Please insert number)	Number of Initial Investments with Angels (Please insert number)
Seed (Concept only)	2001		
	2002		
	2003		
Start-up (No Sales)	2001		
	2002		
	2003		
Other Early (No Profit)	2001		
	2002		
	2003		
Expansion (Growth)	2001		
	2002		
	2003		

*Please see list of EVCA definitions in the Annexure at the back of this questionnaire.

Annexure

KEY DEFINITIONS

Business Angel

An investor who provides capital and support (through advice, contacts, or hands-on work) to an early-stage company. Business angels are commonly ex-entrepreneurs or business managers themselves.

Source: Amis, David, Stevenson, Howard and Liechtenstein, Heinrich. *Winning Angels: Sieben Bausteine für ein erfolgreiches Risiko-Investment.*

Financing Stages

Seed

Seed: Financing provided to research, assess and develop an initial concept before a business has reached the start-up phase.

Start-Up/Early-Stage

Start-up: Financing provided to companies for product development and initial marketing. Companies may be in the process of being set up or may have been in business for a short time, but have not sold their product commercially.

Other Early-Stage: Financing to companies that have completed the product development stage and require further funds to initiate commercial manufacturing and sales. They will not yet be generating a profit.

Expansion

Expansion: Financing provided for the growth and expansion of an operating company, which may or may not be breaking even or trading profitably. Capital may be used to finance increased production capacity, market or product development, and/or to provide additional working capital.

Bridge Financing: Financing made available to a company in the period of transition from being privately owned to being publicly quoted.

Rescue/Turnaround: Financing made available to an existing business which has experienced trading difficulties, with a view to re-establishing prosperity.

Source: EVCA.

Bases of Valuation Formulae

DCF: Discounted Cash Flows

EBIT: Earnings Before Interest & Tax

Free Cash Flow: Free Cash Flow After Tax & Before Interest

Contractual Clauses

Board rights: e.g. investors have the right to appoint one or more members of the board.

Special voting rights on restricted transactions: e.g. changes in the constitution, capital structure (including certain share transfers and issues), board or business of the investee company; transactions over a certain value; or proposed exits.

Pre-emption rights (i.e. rights of first refusal) on certain share transfers and issues.

Good (or involuntary) and bad (or voluntary) leaver provisions: e.g. if a shareholder wants to exit because of illness or retirement (a 'good leaver'), he can keep his shares or sell to the other shareholders at (market) value; however, if he wants to exit because of a non-'good leaver' reason, then he must sell, at a lower value.

Royalty rights: e.g. investors earn a percentage of the revenues of the business.

Dividend rights: e.g. investors get a preferential, cumulative and/or deferred dividend.

Tag along: e.g. no shareholder can transfer a given percentage of all the shares in the invested company, unless the other shareholders also have the opportunity to sell on the same terms.

Drag along: e.g. a shareholder, who proposes to transfer a given percentage of all the shares in the company, has the right to force the other shareholders to sell on the same terms.

Up and/or down ratchets: mechanisms by which the eventual equity allocations amongst classes of shareholders will go up or down depending on the future performance of the invested company or the rate of return achieved by the private equity investor.

Multiple liquidations: mechanisms by which, on any liquidation or exit event, the private equity investor receives an amount equal to a given multiple of his investment.

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