



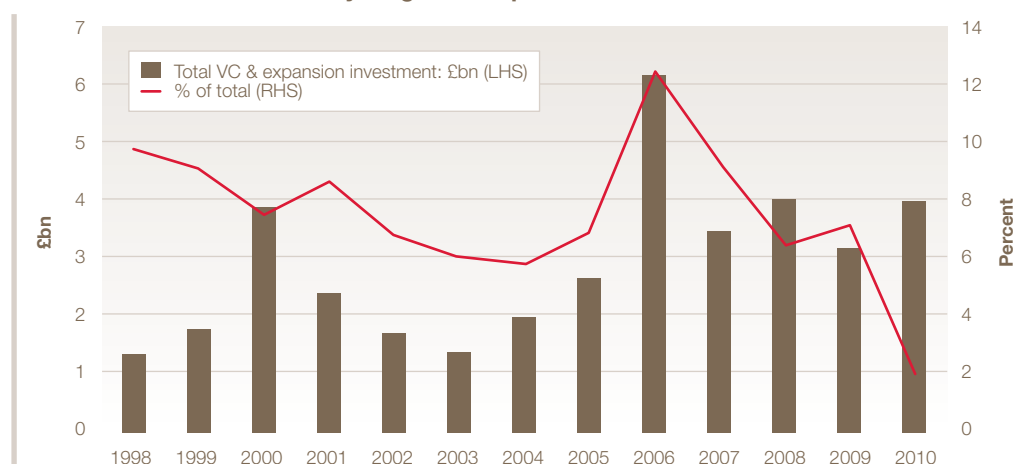
The role of experience in UK venture capital returns



1. Introduction

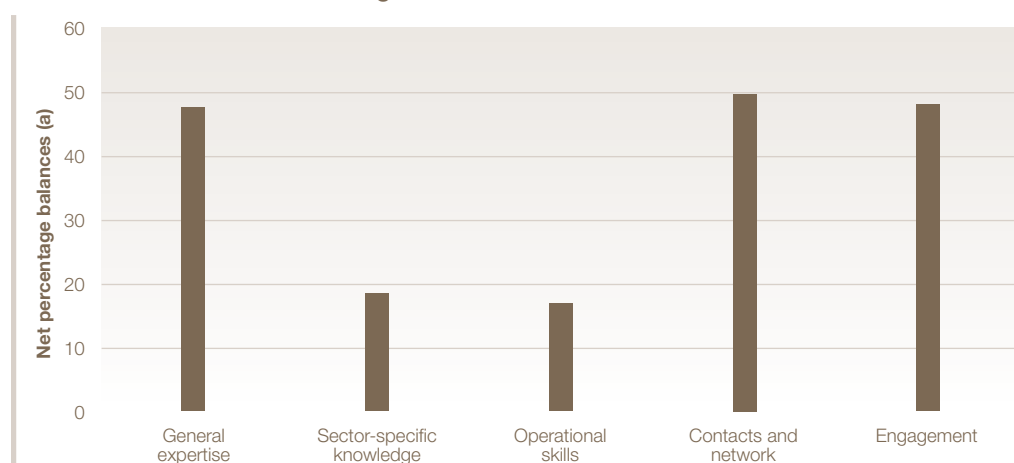
Venture capital (VC) is, by its very nature, a long-term and illiquid asset class. Fund managers invest in new or upcoming companies and help them to develop and grow with a view to selling their stake in the business at a later date in order to realise a return. Yet while ‘venture capital’ typically conjures up images of seed or start-up funding, where venture capitalists (VCs) genuinely back new businesses, venture capital fund managers also pursue ‘later stage’ investments where companies are more established in terms of revenues and perhaps profits.¹ That partly reflects VCs backing companies throughout their evolution in successive funding rounds; as a company evolves over time, it will no longer be a start-up (Chart 1).

Chart 1: BVCA members’ early stage and expansion investments



Source: BVCA

Chart 2: Benefits of GPs’ backing



Source: Ellis (2010)

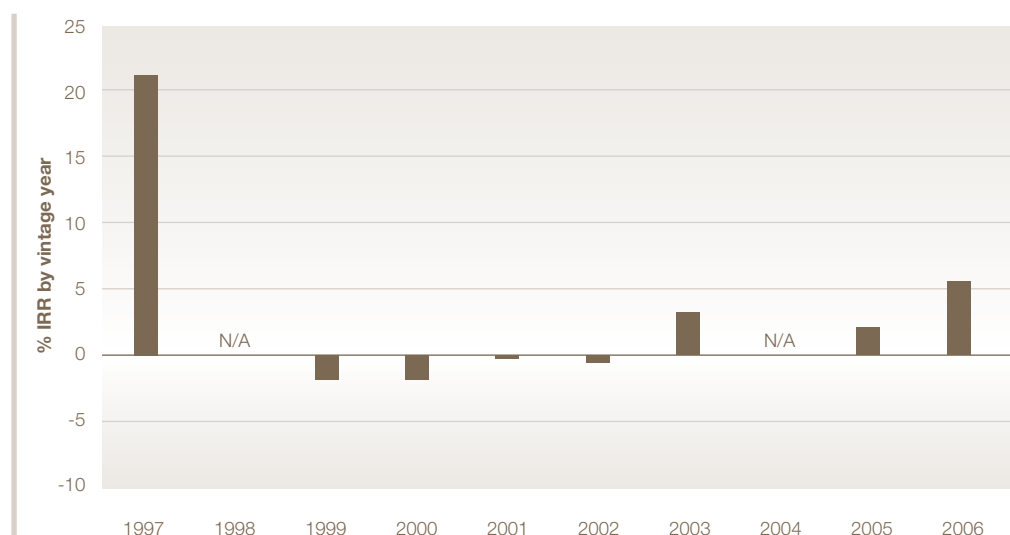
(a) Positive responses less negative ones; ‘significant’ responses given twice the weight of ‘slight’ ones.

1 Some smaller buyout houses also pursue these types of ‘expansion’ investments.

In both cases VCs aim to provide investee companies with more than just money. Experienced fund managers can help businesses develop by providing advice, contacts and other support. Indeed, recent research found that business managers at small companies greatly valued the various benefits that fund managers – also known as General Partners (GPs) can bring to bear (Chart 2). At the same time, the typical incentive structures for VCs give them a strong reason to actively engage with and support the individual companies they invest in (Ellis, 2011).

If VCs' degree of experience does help to build better businesses then we should arguably be able to see some impact from it in the distribution of VC returns. While VC returns as a whole have been disappointing in recent years (Chart 3), some individual funds and investments have been able to generate strong returns. It could be that these investments benefited from greater experience on the part of VCs, or indeed the entrepreneurs that they back. As such, uncovering the role that experience can play is an important part of understanding VC returns.

Chart 3: Since-inception venture fund returns (a)



(a) Net of fees and carried interest. Source: BVCA.

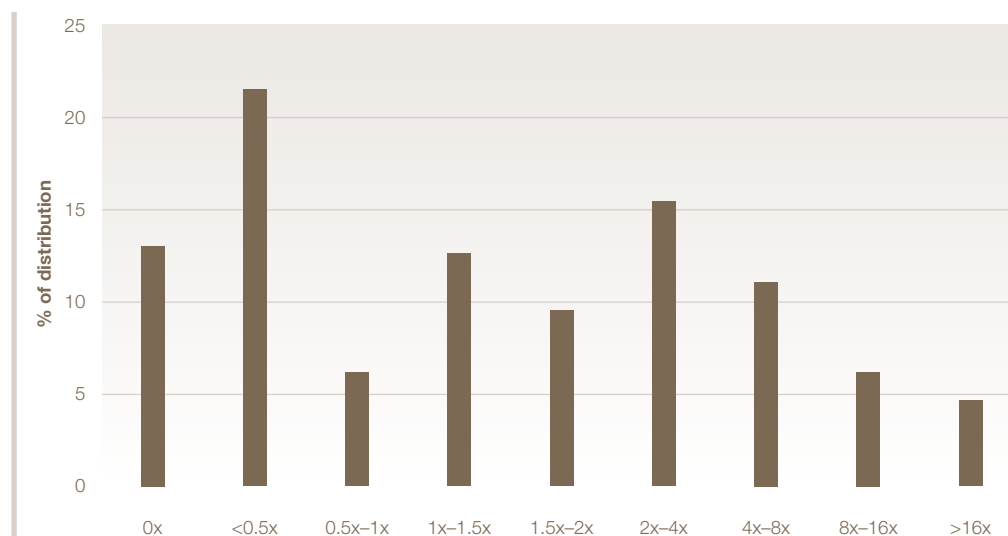
Previous research has explored this issue for US investments, looking both at specialisation and skill (Gompers *et al*, 2009, and Gompers *et al*, 2006). These studies found that specialisation within VC houses was strongly correlated with success, and that entrepreneurs with a track record of success were also more likely to succeed. But, thus far, relatively little work has been done to investigate the role of experience within the UK or European VC market. This article addresses this gap, looking at how experience is correlated with returns across a sample of just over 250 VC investments.²

² The sample includes some investments classified as 'growth capital', but these were investments by VC-focused houses that were of a similar size to their 'VC' deals. The overall sample size is still small; the BVCA plans further work in this area, using a far larger data set.

2. Gathering the data

In order to examine the relationship between experience and returns, the BVCA approached its prominent VC members during 2011. Several of those members kindly agreed to supply detailed data for individual investments on a confidential basis. Using these data, we could explore how the characteristics of different investments relate to the final multiples on the deals – the ratio of money paid out to finance supplied. The sorts of investment characteristics included: the size of the initial (and total) investment; the sector in which the investment was made; the location of the investment (headquarters of the investee firm);³ the date the investment was made, and when it was exited; and the gross multiple and/or internal rate of return (IRR) of the investment. Because we are interested in the role of different characteristics at the level of individual investments, it was necessary to focus on gross measures of return. Allocating fund management fees or carried interest (which is also typically paid out at the fund level) among individual investments would have required a number of assumptions. We also focused on multiples due to the large number of investee companies that saw follow-on investments from VCs in successive rounds of funding. However, we have only included each investee company once in our data, as seen from the perspective of the earliest investor(s).

Chart 4: Distribution of multiples on VC investments



The distribution of return multiples in our final data is shown in Chart 4. Just over 40% of the investments in our sample lost money, ie had a multiple of less than 1x.⁴ However, the bulk of VC investments in our data made money, which may be surprising given the recent performance of VC funds (Chart 3). This reflects four key points: first, the difference between the gross multiples in our data and the net returns in the BVCA *Performance Measurement Survey (PMS)*; second, the fact that our data set contains a number of investments from the 1990s, when VC returns were typically higher than more recent vintages; third, the fact that some of these VC investments were in 'generalist' funds that invest across a broad spectrum of opportunities, rather than pure VC funds,

³ Although our data was from UK VCs, some investments were made outside the United Kingdom, reflecting the UK's role as a hub for VC activity.

⁴ Multiples in VC are expressed as a ratio of distributed returns to investments, i.e. 2x indicates that an investment returned twice as much money as was paid in.

and hence are differently classified in the *PMS*; and finally, the fact that we excluded open or non-exited investments from our data set. This meant that more recent investments were excluded. In recent years the average duration of VC investments has risen due to the need to nurture portfolio companies through the recession, and fragile market sentiment restraining initial public offerings (IPOs) as an exit route for VCs. Overall, it is important to bear in mind that the data set may not be representative of the wider population of current VC investments.

There are three observations in the data set where the gross exit multiple on the investment was truly astronomical (i.e., in excess of 300x). These investments will be very interesting to VCs, as they represent the occasional stellar performers that can generate substantial returns and publicity. However, at the same time they pose something of an analytical challenge: outliers such as these can skew estimation results.

In addition to these deal-level data, we then followed-up by interviewing key individuals from contributing member firms to get a sense of experience levels for the different investments. These conversations were to establish the relative (in)experience of the entrepreneurs and GPs for each of the individual investments. In broad terms, the distinctions for each category were:

- An experienced GP was broadly defined as someone who had been in venture capital for at least three years, and had led on at least two prior investments
- An experienced entrepreneur was broadly defined as someone who had led their own company prior to the VC investment.

These definitions are clearly qualitative and focus on the individuals concerned as opposed to the company or fund. This meant that some VCs were initially classified as 'inexperienced' in our dataset but became more experienced as time progressed, and hence were classified as such for later deals. At the same time there is obviously some subjectivity and uncertainty around the responses that were gathered, not least as some investments occurred back in the 1990s. Overall, around 70% of the investments in our data were thought to have been led by experienced GPs; and roughly 50% of investee companies were led by experienced entrepreneurs.

After the conversations with these senior GPs, and having resolved queries about the underlying data, we had established a database of 261 venture capital deals where we could track entry, exit, gross return, sector, location, and experience of GPs and entrepreneurs on the two metrics outlined above. We could then use these data to examine how experience was correlated with returns.

3. Examining the role of experience

Every VC investment is different. Even for a VC house that specialises in particular sectors or geographies, the very nature of the industry means that there will always be something different or new about each investment. For that reason it was very important to control for as many different characteristics of the individual investments as possible. It could be, for instance, that experienced GPs tend to invest more in the biotech sector. And, if returns in biotech are strong compared with other sectors and we do not control for that, we could mistakenly conclude that GPs' experience is a strong driver of returns. With that in mind, the different investments were grouped into eight broad sectors, shown in Table 1.

Table 1: Sectoral breakdown of investment-level data

Sector	Number of investments	Percentage of total
Communications	46	17.6
E-commerce	10	3.8
Hardware	27	10.3
Health & Care	29	11.1
Leisure & Fitness	10	3.8
Medical Equipment	24	9.2
Software	59	22.6
Other	56	21.5

In order to examine how the characteristics of different investments were related to investment outcomes, the data were interrogated using simple regression analysis.⁵ First results from this analysis are shown in Table 2, which shows how sector, investment size and other characteristics are related to gross multiples. It is hard to discern any relationship between the different characteristics and the realised gross multiples. The coefficients for the individual GP and entrepreneur experience variables were insignificant, as was the combination of both indicators (i.e., an experienced entrepreneur with an experienced GP). Similarly, all sectoral dummies were insignificant, suggesting that sector selection alone did not play an important role in the distribution of investment outcomes.

⁵ In particular, least squares estimation. The results were broadly unchanged using more complex analytical approaches.

Table 2: First analytical results

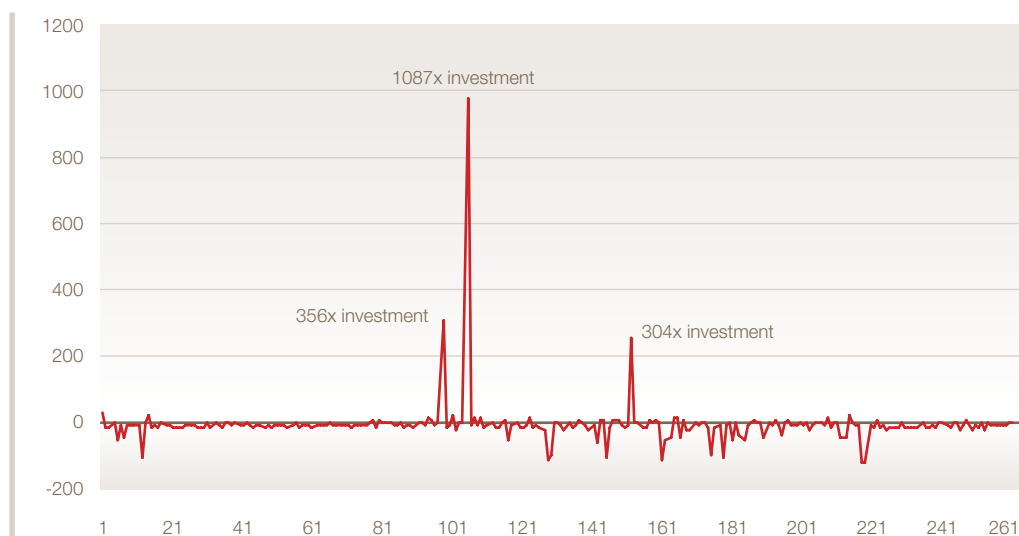
Included observations: 261

Variable	Coefficient	SE	P-value
Constant	10.02	13.95	0.47
Investment size	0.00	0.00	0.45
Sector – communication	-5.63	14.32	0.69
Sector – e-commerce	-8.52	24.69	0.73
Sector – hardware	-7.36	17.02	0.67
Sector – health & care	-7.89	16.57	0.63
Sector – leisure/fitness	-12.98	24.95	0.60
Sector – medical equipment	-10.59	17.89	0.55
Sector – software	-7.11	13.50	0.60
Experienced GP	-2.9	12.99	0.82
Experienced entrepreneur	-6.23	17.10	0.72
Exp. GP & entrepreneur	15.32	20.29	0.45
+ <i>time dummies</i>			
+ <i>region/location dummies</i>			
R-squared	0.10		
Adjusted R-squared	0.05		
SE of regression	71.09		
F-statistic	2.05		

Notes: 'Coefficient' denotes the specific variable in the analysis, and SE denotes standard error. A positive coefficient indicates that the variable shown is positively related to gross investment multiples. P-values show whether these coefficients are significant; a p-value of less than 0.05 indicates that the variable is significantly related to multiples at the 5% significance level. Insignificant time and region dummies were excluded, using a general-to-specific estimation approach.

Overall these results do not tell us much at all about the distribution of VC returns. This is reflected in the poor fit of the regression – it only captures about 10% of the variation in VC returns in our dataset. However, in part these poor results could reflect the 'outlier' returns discussed earlier. The residuals from this estimation – the unexplained part of VC outcomes – are dominated by the three stratospheric deals identified earlier (Chart 5). While these observations are important, and demonstrate the high potential returns that VC deals can offer, they are also very likely to be affecting the analytical results. Such strong investment outcomes do not represent typical VC deals, and their inclusion could be skewing the estimation results. An obvious way of testing this was to re-run the analysis, but excluding these three deals from the sample.

Chart 5: Residuals from initial regression



Excluding these three outliers yielded the estimation results shown in Table 3. The results are similar in some regards: deal size does not have an influence on the eventual outcome, and the impact of sector choice is limited. However, investments in the communication and software sectors are positively related to returns. In addition, there is now some evidence that GP experience is positively related to investment outcomes. The result is not particularly strong – it is only statistically significant at the 10% level – but it does suggest that experienced GPs are more likely to deliver better investment outcomes than their less experienced peers. However, the role of experience among entrepreneurs is still insignificant, as is the combination of experience at both the GP and entrepreneurial level. The lack of a role for entrepreneurs' experience could reflect the fact that our definition of an experienced entrepreneur did not distinguish between an entrepreneur who has made money previously (i.e., a successful serial entrepreneur) and an entrepreneur or manager who has run companies before, but not made money. Unfortunately, data on entrepreneurs' previous companies and financial performance were not typically available. This result could also reflect anecdotal accounts that successful European entrepreneurs are less likely to return to their roots and start up a new business, compared with their American counterparts. Instead, successful European entrepreneurs may be more likely to become investors themselves.

Table 3: Analytical results excluding three outliers

Included observations: 258

Variable	Coefficient	SE	P-value
Constant	0.33	1.07	0.76
Investment size	0.00	0.00	0.99
Sector – communication	2.52	1.10	0.02
Sector – e-commerce	0.70	1.91	0.71
Sector – hardware	1.89	1.32	0.15
Sector – health & care	1.60	1.27	0.21
Sector – leisure/fitness	0.00	1.91	1.00
Sector – medical equipment	1.54	1.35	0.26
Sector – software	2.53	1.03	0.02
Experienced GP	1.90	1.00	0.06
Experienced entrepreneur	0.57	1.31	0.66
Exp. GP & entrepreneur	-1.6	1.55	0.30
+ time dummies			
+ location dummies			
R-squared	0.19		
Adjusted R-squared	0.13		
SE of regression	5.42		
F-statistic	3.35		

Notes: 'Coefficient' denotes the specific variable in the analysis, and SE denotes standard error. A positive coefficient indicates that the variable shown is positively related to gross investment multiples. P-values show whether these coefficients are significant; a p-value of less than 0.05 indicates that the variable is significantly related to multiples at the 5% significance level. Insignificant time and region dummies were excluded, using a general-to-specific estimation approach.

More detail on the three outliers

The three extreme outliers shown in Chart 5 do appear to be skewing the analysis, as the estimation results change when they are excluded (Table 3). However, at the same time these outliers are very interesting because they represent the sorts of strong returns that individual VC deals can potentially deliver. Across a portfolio of VC investments, returns from the fund as a whole will often be driven by one or two strong-performing investments, although multiples of over 300 are relatively rare. A key challenge is to identify these strong performers before they have really emerged, in order to maximise returns. As such it is appropriate to consider these three investments in a little more detail, while at the same time maintaining confidentiality.

Interestingly, while there were some common characteristics between the three outliers, they were far from identical. All three investments were first made in the 1990s when venture returns were generally higher than they have been recently. Two of the investments were relatively low-value in terms of the total funds committed, while the third was considerably larger. Looking at the investment characteristics from a different angle, two of the companies were in the technology and telecoms sectors while the third was more atypical, in an industry that is not known for substantial VC activity. Finally, the duration of the investments ranged from four to eight years.

Overall, it is hard to spot a pattern that links all three investments other than their strong performance. But this is perhaps unsurprising, given the variability of VC returns from investment to investment. If it was easy to consistently identify investments that would generate astronomical returns then everyone would be able to spot them. As a result the cost of these investments would rise, lowering the yield that investors would receive. Instead, VCs have to rely on their own experience, expertise and judgement in gauging which opportunities are likely to offer the best returns.

4. Conclusions

Venture capital is a vibrant and varied asset class. However, given the marked heterogeneity that investors see in terms of realised returns, it is difficult to know which factors can set individual investments and venture capitalists apart from their peers. This article has followed in the footsteps of previous US research looking at the role of experience in VC returns. Although the data sample is relatively small, and the gauge of experience is qualitative, the analysis presented here suggests that experienced GPs can potentially deliver higher VC returns. Experience at the entrepreneur level, by contrast, does not have a significant impact. This suggests that VCs should continue to invest across the spectrum of opportunities that they encounter without discriminating against less experienced or younger entrepreneurs, who can be both innovative and disruptive. Instead, what matters more is that VCs have sufficient experience and expertise to help guide and support these new businesses as they develop, although this clearly does not guarantee that every investment will be a success. At the same time, investors in VC funds may prefer to focus on funds that are led by experienced GPs. This presents a long-term challenge for the industry, as more experienced GPs will need to mentor and guide their younger peers in order to ensure that institutional knowledge and skills are not lost.

References

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