BRITISH BUSINESS BANK

Analysis of UK VC Financial Returns

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FOREWORD

KEITH MORGAN,
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The British Business Bank is the UK government's business development bank. Established in November 2014, its mission is to make finance markets for smaller businesses work more effectively, enabling those businesses to prosper, grow and build UK economic activity.

For these markets to work efficiently, information needs to be made available that is both transparent and accessible. That's why the British Business Bank undertakes an extensive programme of research and analysis throughout the year, looking at both finance markets overall and, when required, specific asset classes.

A lack of evidence demonstrating a strong track record of an asset class can restrict institutional investors from investing, reducing supply. Information on the historic performance of the UK's Venture Capital (VC) industry, in particular, has not been fully transparent, contributing to a lack of such finance being available to high growth potential businesses.

In our recent Future of Defined Contributions Pensions report, we committed to take specific action to support greater transparency for LP investors. This report draws together data from existing data sources including PitchBook and Preqin, and from our own programmes, to provide as comprehensive a picture as possible of the asset class and its performance.

KEY FINDINGS

UK VC should be an attractive option for both LP investors already investing in US VC, and LPs not currently invested in VC and considering both the US and UK. Our analysis shows:

- that UK VC funds with a 2002-2006 vintage outperformed US VC funds of the same vintage in terms of their DPI and TVPI money multiples
- that, from 2007 onwards, the performance of UK VC funds is comparable to the US, with UK performance only slightly lower than US funds of the same vintage
- that UK VC funds share a similar distribution of returns compared to US funds, apart from a small number of top US funds that outperform significantly.

DRAWING FROM OUR OWN EXPERIENCE

The British Business Bank is the largest UK based LP investing in UK VC, having committed, since 2006, £1.5bn of investment into 67 funds through the Enterprise Capital Fund (ECF) programme and the more recent, British Patient Capital programme, established last year.

British Patient Capital (BPC) invests on a commercial basis into VC funds targeted at UK scale-up companies. While it's too early in the life of BPC to draw definitive conclusions, the outlook for future performance is promising, with early DPI multiples being identical to the wider market for funds of the same vintage. The pooled TVPI multiple for private sector LP investors in VC funds under our ECF programme is higher than the wider UK market, partly due to the 'geared' returns structure we offer.

The overall performance of the funds the British Business Bank has invested in provides further specific evidence of the positive returns that can be generated by UK VC funds.

This report is an important first step in improving VC financial returns data to help build investor confidence in the asset class.

We will continue to work with the wider VC industry to improve data coverage and accuracy still further. In doing so, we aim to help more high-growth innovative businesses in the UK get the finance they need to become the global success stories of tomorrow.

EXECUTIVE SUMMARY

Venture Capitalists provide funding to early-stage companies with the potential for high growth. Venture Capitalists usually invest through a Limited Partnership fund structure, raising funding from Limited Partners (LPs) such as pension funds and insurance companies who are themselves looking for a return on their capital.

For institutional investors to invest in Venture Capital (VC) they require evidence that the asset class can generate sufficient financial returns to offset the higher levels of risk and illiquidity in VC compared to public markets.

There is currently no existing data source that has complete coverage of all UK VC funds, with data sources having relatively low coverage of VC funds and the financial returns information not being fully verified. The British Business Bank has tried to overcome these issues by combining data from several commercial data sources such as PitchBook and Preqin, alongside data from funds the Bank has invested in, to provide a more comprehensive picture of VC financial returns in the UK.

This report is compiled on a 'best endeavours' basis using the most reliable data available. We welcome comments and suggestions for ways in which UK VC financial returns data can be improved.

The report focuses on financial returns using money multiple measures only, as these can be calculated consistently across different data sources:

- Distribution to Paid-In capital (DPI): Realised fund returns as a percentage of the capital contributed. This directly measures the cash received from portfolio company exits.
- Total Value to Paid-In capital (TVPI): Realised and unrealised fund returns as a percentage of the capital contributed. This includes the realised returns and the 'book value' of unrealised investments and is useful for assessing performance during the early part of a fund's life.

The report examines the financial performance of VC in isolation and does not try to compare VC performance against other asset classes or against wider Private Equity (PE).

KEY FINDINGS

1. ESTIMATES OF THE FINANCIAL PERFORMANCE OF UK AND EUROPEAN VC FUNDS VARY SIGNIFICANTLY BETWEEN DATA SOURCES

There are several data sources providing information on the financial returns generated by UK VC funds, including commercial data providers such as PitchBook and Preqin and organisations representing the VC industry such as the British Venture Capital Association (BVCA). However, these sources are not fully consistent and there are large variations in reported returns figures for identical vintage years. For instance, the reported pooled DPI multiple for UK based VC funds in the 2002-2013 vintage year cohort varies from 0.87 to 1.54, and the reported pooled TVPI multiple varies from 1.50 to 2.06. The wide variation in reported returns figures creates uncertainty on the actual level of performance.

In contrast, reported US VC financial return multiples are more robust with different data providers showing substantially less variation in the performance of VC funds with the same vintage years. For instance, both PitchBook and Preqin show pooled DPI multiples of around 1.00 for 2002-2013 vintage funds and pooled TVPI multiples in the range of 1.60 to 1.73 for VC funds in the same vintage year cohort. This is also supported by published Cambridge Associates data which shows yearly trends in reported DPI and TVPI multiples for US based VC funds are within a similar range and follow consistent trends over time.

2. MOST VC FUNDS DO NOT PUBLICLY DISCLOSE THEIR PERFORMANCE DATA

The variability in reported UK and European VC financial returns is partly due to data providers capturing the financial performance data from a relatively low proportion of the total number of VC funds in the market. British Business Bank analysis of Preqin shows this data source captures the TVPI multiples for just 13% of Rest of Europe VC funds with a 2002-2017 vintage year. This means coverage is not representative of the wider population of funds and heavily dependent on the sample composition of funds included. Preqin captures TVPI multiples for 22% of UK VC funds, which is higher than the Rest of Europe coverage.

US Freedom of Information (FOI) legislation requires US public pension funds to disclose the performance of their investments into VC funds. This means data providers tend to have more representative coverage of US VC funds, although coverage has declined over recent years. Preqin captures TVPI multiples for 21% of US funds with a 2002-2017 vintage.

In order to increase fund coverage, the British Business Bank has combined fund level data from several commercial data sources including PitchBook and Preqin with performance data on the VC funds the Bank has invested in. This approach will help to reduce the uncertainty around UK fund performance by increasing the relative coverage of existing datasets.

3. UK VC RETURNS FOR FUNDS ESTABLISHED SINCE 2002 ARE CLOSE TO CURRENT AND HISTORIC US VC FUND PERFORMANCE

It is widely perceived that US VC financial returns are consistently and substantially higher than UK VC financial returns, but analysis of data within this report suggests that this is not the case.

In fact, UK VC funds with a 2002-2007 vintage outperformed US VC funds of the same vintage. UK funds within this vintage year cohort generated a pooled DPI of 1.95 compared to 1.04 for US funds. This is due to strong performance of UK funds within this cohort, but also due to the underperformance of US VC funds, possibly a result of the legacy of the dot-com bubble bursting.

Moreover, the above-mentioned pooled DPI returns for UK VC funds are only slightly lower than the historical performance of US VC funds in the 1980's and 1990's. The average yearly pooled DPI multiple for US funds in the 1980's was 2.22 and for funds established in the 1990's the figure was 2.56. Although US VC funds generated very high financial returns (DPI multiples in excess of 4) in several vintage years during the mid-1990s (e.g. 1993 to 1996), these returns were not sustained over the entire 1980-1999 time period.

From 2007 onwards, the financial performance of UK VC funds is slightly lower than the US. UK pooled TVPI is 1.54 compared to 1.88 for US funds with 2007-2011 vintage. Whilst both UK DPI and TVPI pooled multiples are only 0.3 points lower than US funds, with the same 2007-2011 vintages, the median figures are much closer.

Over the combined 2002-2011 vintage year cohort, performance of UK VC funds is slightly ahead of the US on both pooled DPI and TVPI measures, providing further evidence that UK VC performed relatively well over the whole decade.

The UK has a similar fund distribution of TVPI returns as US funds, but the top performing US funds have substantially higher TVPI multiples than the top UK VC funds. This suggests that UK VC could be an attractive asset class for LPs considering investing in US VC.

4. PERFORMANCE OF FUNDS THE BRITISH BUSINESS BANK HAS INVESTED IN PROVIDES ADDITIONAL EVIDENCE OF THE POSITIVE RETURNS GENERATED BY UK VC FUNDS

The British Business Bank is the largest UK based LP investing in UK VC, giving the Bank access to verified financial returns information from the funds that it has invested in. The numbers presented in this report may differ to the financial returns reported in the British Business Bank and British Patient Capital (BPC) annual reports due to differences in fund coverage and time periods assessed.[1]

The British Business Bank has analysed the performance of the Enterprise Capital Fund (ECF) programme, which was established in 2006 to increase the amount of equity finance available to high growth innovate SMEs affected by the equity gap.[2] For VC funds supported by the ECF programme in the 2006-2016 cohort, the pooled DPI multiple is 0.47 overall (0.50 for other LPs). The ECF pooled DPI multiple is lower than the wider UK VC market DPI of 0.77, which may reflect the earlier stage nature of these funds compared to the wider UK market, meaning realised returns take longer to achieve.

VC funds within the ECF programme have a pooled TVPI multiple of 1.41 (1.78 for other LPs), which shows the 'geared' returns structure for private sector LP investors is working as returns are now higher than the wider UK VC market of 1.63 within the 2006-2016 cohort. This higher level of performance could make the ECF programme an attractive asset class for LP investors when considering UK VC.

BPC is investing on a commercial basis into VC funds targeted at UK scale-up companies. For those VC funds BPC has invested in between 2013-2016, the pooled DPI multiple generated to date is 0.18 and this is identical to the wider UK VC market DPI for funds of the same vintage.

Although, the BPC pooled TVPI multiple of 1.29 is slightly lower than the UK market benchmark of 1.40 for funds of the same vintage, the BPC median fund TVPI performance is 1.21. This is higher than the equivalent UK market figure of 1.18. It is too early in the life of BPC to draw meaningful conclusions concerning future performance as most BPC invested VC funds are too young to be included in the analysis.

BRITISH BUSINESS BANK RESPONSE

The British Business Bank and BPC will seek to make available more aggregate level data on the financial performance of funds it has invested in, in order to build up our own track record, but also demonstrate that the UK VC market could be an attractive asset class for LP investors.

The Bank has already committed to take action to support greater transparency for LP investors. Our recent 'Future of Defined contributions pensions' report[3] stated *'The British Business Bank will continue to take the lead in improving the quality and availability of UK industry-level data on historic returns, increasing the broader transparency of the asset class'.* This report is a first step towards demonstrating our commitment to improving VC financial returns data by using existing available data.

The Bank recognises the importance of accurate data to ensure current and future LPs can make an informed decision for investing in the VC asset class and looks forward to working with the wider VC industry to improve fund coverage and accuracy.

INTRODUCTION

Venture Capital (VC) is a type of Private Equity (PE) finance provided by investors into small early-stage companies with the potential for very high growth. Finance is provided in return for an equity stake in the business and investors generate a financial return (or profit) on their investment when they sell their stake through an Initial Public Offering (IPO), trade sale or secondary sale. VC-backed companies are unlikely to have positive cash flows, or even be generating any sales at the time of investment. It may therefore take many years until a company has developed its technology and market position to allow a VC investor to exit with a positive return. Given the technology and market risks facing early stage companies of this type, a high proportion of investments will not return their capital. For instance, data from one investor showed 65% of its VC investments failed to return their invested capital.[4]

If equity investors select the right deals, they can make very high returns from these investments. For example, Sequoia Capital (a US VC firm) generated approximately 50 times returns on its $60m investment into WhatsApp when it was acquired by Facebook in 2014.[5] The VC model relies on a small number of successful investments to pay for the investments that fail, with 10 times returns being quoted as a starting target.[6] It is widely recognised that the Pareto Principle applies to VC returns with 20% of investments bringing in 80% of returns, and 1% of investments often bringing in more revenue than the rest of a fund's investments combined.[7]

The PE and VC industry has grown and matured substantially to become an established part of many institutional investors' portfolios, with VC now recognised as a standalone asset class. Institutional investors are often looking to invest in long term growth asset classes, and VC funds achieve this with a typical life span of ten years or more. A history of generating good financial returns, both in absolute terms and relative terms compared to other asset classes is important for signalling the value of investing in VC.

There is a lack of robust information on VC financial returns at the individual investment level and at the fund level. This is holding back the wider asset class as without evidence of a strong track record of generating financial returns in line with the level of risk taken, institutional investors are wary of committing or increasing funding allocation to VC. Reliable data demonstrating high VC returns could help unlock greater institutional funding into this asset class. This in turn leads to greater VC fundraising and increased amounts of equity finance available to smaller businesses with high growth potential.

Accurately measuring the returns of VC funds is very difficult because the data is known to be 'subject to biases'.[8] The nature of the VC industry amplifies these problems:

- **No requirement for VC funds to publicly disclose information:** PE is by its nature 'private' with fewer requirements to make information available compared to investments made in public companies. VC investors are not required to disclose information to regulators about specific deals they make or the performance of those deals, so a comprehensive dataset with full industry coverage doesn't exist.
- **Wide dispersion in industry performance:** It is estimated that the top US VC firms make a disproportionate contribution to total industry returns.[9] Therefore, omission of even a small number of these top VC funds can heavily affect the overall returns reported.
- **Long-time illiquid asset:** The typical life cycle of an LP commitment into a VC fund is usually 10 years or more, and there are limited liquidity options for LP's to withdraw their commitments if they change their minds or their circumstances change.[10] The final performance of a fund is not known until the fund has fully exited all of its investments, which can take many years to occur. British Business Bank research[11] shows that the average time from initial investment to IPO is 5.3 years for successful UK VC-backed companies. Fund managers often cannot wait until returns are fully realised to report them, as they are required to report progress to the fund investors (LPs) under the Limited Partnership Agreements (LPAs) and also are likely to be thinking about raising subsequent funds.[12] This creates difficulty because active funds will have unrealised returns (the theoretical value of the equity stakes taken), and any reported return number must estimate the value of these assets.
- **Unrealised investments are difficult to value:** This is especially the case when a substantial proportion of a fund's portfolio is made up of pre-revenue companies with most of their value in intangible assets.[13] Although funds follow and reference the International Private Equity and Venture Capital Board's (IPEV) valuation guidelines, valuing equity stakes in non-listed companies involves an element of judgement.[14] Company valuations can also change rapidly when the company's circumstances change, for instance, when the company receives a major contract or the technology is proven to work. It is difficult to extrapolate 10 years of future cash flows to value a pre-revenue company when there are large amounts of market and technology risk.
- **Existence of a 'J-curve':** PE is a long-term investment which, in the first few years, will normally show a decline in the Net Asset Value (NAV) before showing any significant uplift. This is often the effect of management fees being paid out, as well as the costs of initial capital being deployed into companies. Company failures become apparent more quickly, but company successes take longer to materialise.

There are also complexities around classifying VC funds, when funds make deals across different investment stages including PE deals and issues around specifying the vintage year.[15]

This report aims to shed new light on the financial returns from investing in VC by examining existing VC data sources alongside information on the financial performance from the funds the Bank has invested in. The report does not compare the performance of VC against other asset classes or examine the financial returns from investing in wider PE.

THE STRUCTURE OF THE REPORT IS BROKEN DOWN AS FOLLOWS:

- Section 1 provides an overview of different metrics for measuring VC financial returns including IRR, money multiples (DPI and TVPI) and other metrics used within the VC industry.
- Section 2 describes the different data sources that provide information on financial returns.
- Section 3 compares reported financial returns across different data sources and investigates why these differences exist.
- Section 4 then examines financial returns across time to identify common time periods in which to compare performance. An assessment of US VC returns in the 1980's and 1990's is also made in order to assess the potential long-term performance of this asset class from funds that are fully liquidated.
- Section 5 provides an empirical comparison of the financial returns across the UK and US using a composite dataset that combines fund level data from Preqin, PitchBook and British Business Bank commitments into VC funds.
- Section 6 assesses the performance of VC funds the British Business Bank and BPC has invested in and benchmarks them against the wider VC market for funds of a similar vintage.
- Section 7 sets out conclusions and discusses next steps for improving financial returns data.

Information on the methodology used to create the combined dataset can be found in the report's appendix.

SECTION 1:

VC FUND FINANCIAL RETURN METRICS

There are several ways to measure VC and PE financial returns. It is important to acknowledge that no single measurement represents the best way of measuring the performance of VC investments and deciding which measure to use is often context specific. When reporting the financial returns of their portfolios, fund managers and investors typically use the following types of measure:

- **Internal Rate of Return (IRR)**
- **Modified Internal Rate of Return (MIRR)**
- **Money multiples:**
- Distribution to Paid-In capital (DPI)
- Residual Value to Paid-In capital (RVPI)
- Total Value to Paid-In capital (TVPI)

INTERNAL RATE OF RETURN (IRR)

IRRs are widely used by the PE industry to measure returns because they offer a way of comparing two investments with irregular cash flow timings and sizes. The IRR represents the discount rate at which the Net Present Value (NPV) of an investments future cashflows is equal to zero. The IRR measure incorporates the time value of money, so that £100 of returns generated sooner is valued more than £100 realised in the future.

Whilst this measure is useful, the fundamental issue of using the IRR in isolation is that it rewards quick exits in the early years. There is the potential for fund performance to be artificially improved by fund managers exiting their investments sooner, rather than the fund manager allowing the company to grow to maximise its value.[16] This is because IRR implicitly assumes the intermediary cash flows generated by an investment are reinvested and return the same IRR as the original investment. This is unlikely to be realistic as it implies a fund immediately finds an equally profitable opportunity to reinvest in.

MODIFIED INTERNAL RATE OF RETURN (MIRR)

Assuming a reinvestment rate equal to the fund's cost of capital is a more reasonable assumption than using the same rate as the original investment and it is precisely for this reason that the Modified Internal Rate of Return (MIRR) has been developed.[17] The MIRR uses a similar technique to IRR but assumes that positive cash flows are reinvested at the firm's cost of capital. The initial outlays are financed at the firm's financing cost rate, separate from the rate of return of the project, at which cash flows can be reinvested. It then calculates the rate of return by looking at all project cashflows, and accounts for the time value of money.

As such, the MIRR is designed to more accurately reflect what is done with intermediary cash flows and give a more accurate picture of an investment's profitability. However, re-investment rates are likely to vary for different investors, based on their investment opportunities. MIRRs should only be compared to other MIRRs calculated using the same re-investment rate. Therefore, VC organisations like Invest Europe, which represents the European VC industry, do not recommend using MIRR as a measure for fund managers reporting returns to their LP investors[18] and MIRR does not appear to be widely used by the industry.

MONEY MULTIPLES

Multiples provide a relatively simple measure of an investor's return on their invested capital, providing a cash-on-cash measure of how much investors are receiving back from the capital they have committed. Multiples are useful in that they show the scale of the returns but a key limitation is that the time value for money is completely ignored.[19] A fund returning twice the invested amount will have the same multiple regardless of whether the return took two or ten years to materialise.

Two multiples that are typically reported by funds are Distribution to Paid-In capital (DPI) and Total Value to Paid-In capital, but it is also useful to know the Residual Value to Paid-In Capital (RVPI) which is the difference between the two multiples: TVPI = DPI + RVPI

Distribution to Paid-In capital (DPI): The ratio of cumulative distributions to LPs divided by the amount of capital contributed by the LPs. At the start of a fund's life, this ratio will be zero due to there being no exits to date but will begin to increase as distributions (portfolio company exits) occur. When the DPI is equal to one the fund has broken even, as the money paid in is equal to money distributed. Any number above one indicates that the fund has paid out more than has been paid in, so that LP investors get more than their initial capital back. This measure is therefore useful at the later stages of a funds life as it is an actual measure of fund performance directly measuring cash received from exits.

Residual Value to Paid-In capital (RVPI): The sum of cumulative net asset value of the investment, divided by the capital contributed by the LPs. It calculates the multiple of the investment that would be returned to investors if the unrealised assets were sold at current valuations. Valuation of early stage companies can be very difficult because of the inherent uncertainty surrounding the prospects of the company. However, the concept of 'fair value' is used to value the unrealised assets at each measurement date, with a number of recognised valuation techniques used.[20] The 'Book value' of unrealised investments is useful for assessing performance during the early part of a funds life, but offers no guarantee on future performance as valuations can change over time due to changes in wider economic and market conditions. For instance, a high RVPI may be indicative of an inflated market versus an accurate representation of how much the portfolio can actually be sold for eventually.[21] Globally, there are a number of well-known later stage unicorn businesses that have exited under their last private valuation round (known as a down -round). This will effectively lead to disappointed LP investors as the DPI does not match up to the projected RVPI.[22]

Total Value to Paid-In capital (TVPI): The sum of cumulative distributions to LPs and the net asset value of the investments, divided by the capital contributed by the LPs. It calculates what multiple of the investment would be returned to LP investors if the unrealised assets were sold at current valuations and added to distributions that have already been received. This is useful for assessing performance during the early part of a fund's life, like the RVPI measure. While this can provide a more complete picture on the returns from the fund, it is significantly impacted by the valuation that is placed on the unrealised investments remaining in the fund, although the impact should reduce as the fund matures and investments are realised.

Given this difference, many LPs rely on the TVPI measure earlier in the life of a fund and DPI measure towards the end of a fund's life. Money multiples tend to be a more conservative measure than the IRR measure as a zero-rate of reinvestment is assumed for cash flows.[23]

OTHER FACTORS

There are large variations in performance between the top performing funds and the remaining funds. It is therefore useful to look at both the pooled mean and median fund return figures, alongside the upper and lower quartiles. The VC industry has a focus on benchmarking upper quartile funds but there is no universal method for choosing the reference period or specific reporting metric, which will fluctuate from year to year depending on the composition of funds included.[24]

Pooled Mean: The return for the total group of funds being analysed. This is calculated by aggregating the realised and unrealised values across all funds, which accounts for different fund sizes. This is the best measure for estimating total market returns as it includes the performance of all outlier funds.

Median: The fiftieth percentile. The return of a fund in the middle of the ranking. This represents the return of a 'typical fund'.

Upper quartile: The return of the fund in the top 25th ranking. When all VC funds are considered, upper quartile fund performance is higher than the remaining three quarters of other funds.

Another factor to consider when assessing financial return metrics is the impact of fees. Management fees allow the fund manager to meet their own operating costs, including salaries for the team and regulatory compliance. Carried interest fees relates to the fund manager's performance-related share of realised profits from the fund. Management fees can be substantial. Most financial return metrics are reported net of fees (i.e. fees are deducted).

Finally, it is also important to acknowledge money multiple returns are reported in nominal terms. This is an important consideration given LP's commit capital over a long time period lasting more than 10 years, and the real value of distributed returns will be eroded by inflation.

SECTION 2:

SOURCES OF VC FUND FINANCIAL RETURNS INFORMATION

There are numerous data sources measuring VC financial returns. This section provides a short overview of the main types of data provider and a description of how they collect this information. Section 3 then provides a comparison of the reported financial returns across these different data sources.

There are three main types of data sources providing information on VC market financial returns:

- **VC Associations**
- **Commercial data providers: Named funds**
- **Commercial data providers: Anonymised funds**

VC ASSOCIATIONS:

There are numerous industry associations across the globe representing the interests of the PE and VC Industries, based on their membership which largely comprises of fund managers. These organisations often report the investment activity of their members as well as the financial performance. The British Venture Capital Association (BVCA) represents the interests of the UK VC and PE Industry.[25]

BVCA's membership comprises of over 260 PE and VC fund managers. The BVCA, in conjunction with PwC and Capital Dynamics, undertakes an annual survey of its eligible members asking about the performance of the funds that they manage. To be eligible for inclusion the PE firm must be a full BVCA member, raise money from third-party investors and manage that money from the UK (although it may be invested elsewhere). BVCA members investing from their own balance sheet, quoted vehicles such as VCTs and listed PE are excluded from the fund returns.

The BVCA annually publishes financial returns information through its Performance Measurement Survey.[26] The report examines the performance of PE and VC funds and then benchmarks them against other asset classes. Overall, 86 fund managers (with a total of 629 funds under management) responded to the latest 2017 survey. Fund data is presented anonymously in pre-defined categories relating to vintage year. Whilst this provides useful segmentation of the data, it is not possible to disaggregate the data further.

COMMERCIAL DATA PROVIDERS: NAMED FUNDS (E.G. PREQIN AND PITCHBOOK)

Commercial data providers like Preqin and PitchBook primarily source information on the performance of funds from public filings by pension funds, Freedom Of Information (FOI) requests and voluntary disclosures by fund managers (General Partners-GPs) or LPs.

PREQIN:

- Preqin is a provider of data and intelligence to the alternative assets industry including PE, real estate, hedge funds, infrastructure, private debt and natural resources. It collects a range of information including funds and fundraising, performance, fund managers, institutional investors, deals and fund terms. Preqin has financial returns data for 1,254 US and European VC and Growth Capital funds with a vintage year between 2002 and 2018.

PITCHBOOK:

- PitchBook is a source of information on global trends in PE and is widely used by the VC industry. PitchBook collects a wide range of data including deal-level information, fund performance, fundraising data and data relating to company exits. Pitchbook has financial returns data for 1,439 US and European VC and Growth Capital funds with a vintage year between 2002 and 2018.

These data providers allow customised searches on the performance of individual funds or tightly specified groupings of funds, e.g. over specific vintage years and geography. There are several recognised issues which can affect the reliability of data sources relying on self-disclosure and FOI submissions for their information:[27]

1. A lot of the data relies on voluntary submissions from fund managers themselves. There may be incentives for fund managers to report returns when they are performing well, especially if the fund manager is trying to raise another fund, or to stop reporting if performance subsequently deteriorates.
2. Due to the reliance on disclosure from public pension funds, funds without pension fund investors may not be as well captured. This could potentially cause bias in the data if pension funds invest in funds with different characteristics to other types of institutional investor. European coverage is likely to be lower as this reporting requirement does not apply to European pension funds.
3. These datasets also publish reported IRRs/ multiples without the underlying cash flow data, which often makes it difficult to verify the accuracy of the reported figures.

COMMERCIAL DATA PROVIDERS: ANONYMISED FUNDS (E.G. CAMBRIDGE ASSOCIATES, BURGISS AND EFRONT-PEVARA)

These companies source information in slightly different ways to one another, but mainly through the services they provide to Limited Partners and General Partners. For instance, Cambridge Associates is a global investment firm that manages custom investment portfolios for its clients. Burgiss is a provider of investment decision support tools for private capital, and sources data through private disclosure by LPs. eFront is a software provider of end-to-end solutions for alternative investments.

These data sources have less sampling biases compared to data providers which source their information through web scraping, regulatory and voluntary disclosures, but coverage is limited to funds included in the service provided. For instance, Cambridge Associates provides investment advisory services to endowments and foundations, which may have different investment strategies compared to the wider market.[28] Due to restrictions placed on the subsequent use of the data by the funds and LPs submitting their data, financial returns information can only be accessed in aggregated anonymised form and so is not possible to identify individual funds or examine the data further. In many cases, it is not possible to undertake the analysis of funds based in the UK. For this reason, these datasets are not examined further as part of this report.

OTHER SOURCES OF INFORMATION ON VC FINANCIAL RETURNS

The British Business Bank is the largest UK based LP investor in UK VC.[29] The Bank monitors the performance of the funds it has invested in by collecting information directly from fund managers. LP status ensures this information is fully verified and has full coverage of funds it has invested in. In line with the Bank's role in addressing market failures in finance markets, the characteristics of funds invested in through the Enterprise Capital Fund (ECF) programme may differ to the wider UK VC market due to their focus on early stage market, smaller deals sizes affected by the equity gap and emerging fund managers.

Since 2013, BPC through the Bank's previous VC Catalyst programme has invested on commercial terms in VC funds targeting UK scale up companies.[30] It is early days in the life of these funds, but a summary of performance to date compared to the wider VC market is included in Section 6.

The European Investment Fund (EIF) is also a large investor in VC funds and has published information on the performance of its VC portfolio by vintage year and country.[31]

There are other sources of information on VC markets including Crunchbase[32], Dealroom[33] and Beauhurst.[34] These provide information on VC deals, exits and investors, but currently do not provide information on VC fund returns.

SECTION 3:

VC FINANCIAL RETURNS ACROSS DIFFERENT DATA SOURCES

There is uncertainty on the actual performance of UK VC funds due to the large variation between different data sources in the reported VC return for the same vintage years. This makes it difficult for institutional investors to assess the track record of the asset class.

Figures 1 and 2 show the pooled average, median average and the upper/ lower quartile DPI and TVPI multiples for UK VC funds within a 2002-2013 vintage year cohort. This time period was selected to be consistent with the data reported in the latest full BVCA Measurement Report.[35] Reported pooled average DPI multiples for the 2002-2013 vintage cohort of UK-based VC funds vary between data sources from 0.87 to 1.54, whilst reported pooled TVPI multiples for the same cohort vary from 1.50 to 2.06.[36]

Commercial datasets like PitchBook and Preqin tend to report higher fund financial returns for the UK when compared to published BVCA numbers and British Business Bank programmes. This could be a result of fund selection bias with good performing funds having a higher propensity to disclose their data to PitchBook and Preqin, or poorer performing funds choosing to not publicly disclose their financial returns. The BVCA data may also differ because coverage reflects its membership. BVCA includes the names of the fund managers responding to its survey, which mainly comprises of established fund managers, and therefore may not be fully representative of the wider UK VC market. The BVCA data in the sample is only reported as of December 2017, whereas data from the other providers has been updated much more recently. It is notable that the BVCA pooled mean average is above the upper quartile fund performance, which could suggest the BVCA returns figures are influenced by a small number of highly successful larger funds.

Drawing comparisons in performance between the British Business Bank backed funds and the PitchBook and Preqin reported multiples may also not be a fair comparison. Most of the British Business Bank supported funds within the 2002-2013 vintage year cohort are part of the ECF programme,[37] which is predominately targeted at addressing market failures affecting early stage companies, through investment in emerging fund managers. As a result, the funds in this sample are therefore likely to be smaller than the wider VC market and targeting companies at an earlier stage of development. Also, since the ECF programme only started in 2006 the British Business Bank portfolio within this sample is weighted to the later vintage years (2006-2013).[38] This could adversely affect reported performance as the fund managers in the British Business Bank cohort will have had less time on average to exit their investments.

FIG 1

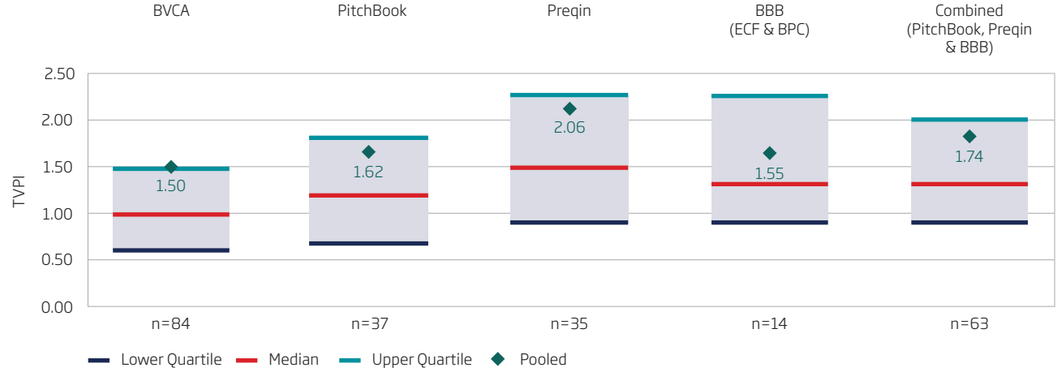
COMPARISON OF UK VC 2002-2013 VINTAGE YEAR DPI FUND PERFORMANCE BY DATA SOURCE

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

FIG 2

COMPARISON OF UK VC 2002-2013 VINTAGE YEAR TVPI FUND PERFORMANCE BY DATA SOURCE

Source: British Business Bank analysis of BVCA, PitchBook, Preqin and BBB MI data



Only a small number of the funds the British Business Bank has invested in provide data to PitchBook or Preqin on their financial returns. The Bank has compared the performance of individual funds it has invested in, against the data these funds have reported to PitchBook or Preqin in order to assess the reliability of the self-reported data. In most cases, the reported figures are comparable to the ones recorded under the Bank's MI system with only small differences, suggesting these commercial data sources give a reliable indication of fund performance.

Reported DPI multiples in commercial data providers generally lie within 0.05 points of the figures reported in the Bank's MI data and the pooled TVPI generally lie within 0.40 points of the figures the Bank holds on fund performance. Differences may exist due to timing, LPs investing at first or second close and possible exchange rate effects but there is no evidence of these funds systematically reporting higher returns to commercial data providers. However, for a very small number of funds the reported figures are substantially different, the reasons for which cannot be explained by simply looking at the data.[39] This analysis therefore suggests the underlying quality of reported returns from named fund databases is of sufficient quality to draw conclusions at the market level.

A comparison is also made between PitchBook and Preqin for the US and Rest of Europe for the same cohort of funds with vintage years 2002-2013.[40] Figure 3 shows the reported PitchBook and Preqin financial return multiples for the US are very similar to one another. TVPI multiples for US funds in this cohort are 1.73 and 1.60 for PitchBook and Preqin respectively. Pooled DPI is also very close at 1.02 for PitchBook and 1.01 for Preqin. This provides reassurance that the US VC returns reported by PitchBook and Preqin are an accurate reflection of VC performance in the US.

Figures 4 and 5 further examines the accuracy of PitchBook and Preqin's reported figures by comparing them to Cambridge Associates data for the equivalent vintage years.[41] All three data sources show similar yearly trends in their reported TVPI and DPI multiples.

FIG 3

COMPARISON OF US VC 2002-2013 VINTAGE YEAR FUND PERFORMANCE BY DATA SOURCE

Source: British Business Bank analysis of PitchBook and Preqin

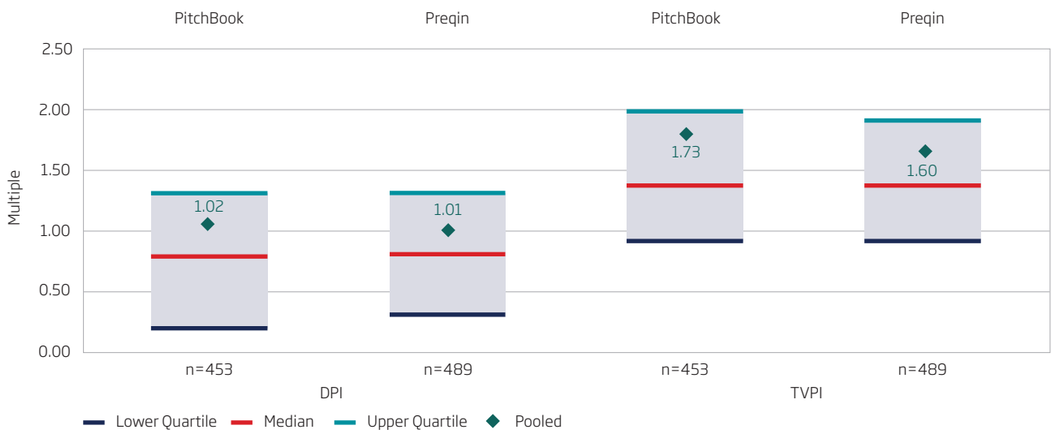


FIG 4

COMPARISON OF US VC 2002-2017 VINTAGE YEAR POOLED DPI FUND PERFORMANCE BY DATA SOURCE

Source: British Business Bank analysis of PitchBook, Preqin and Cambridge Associates

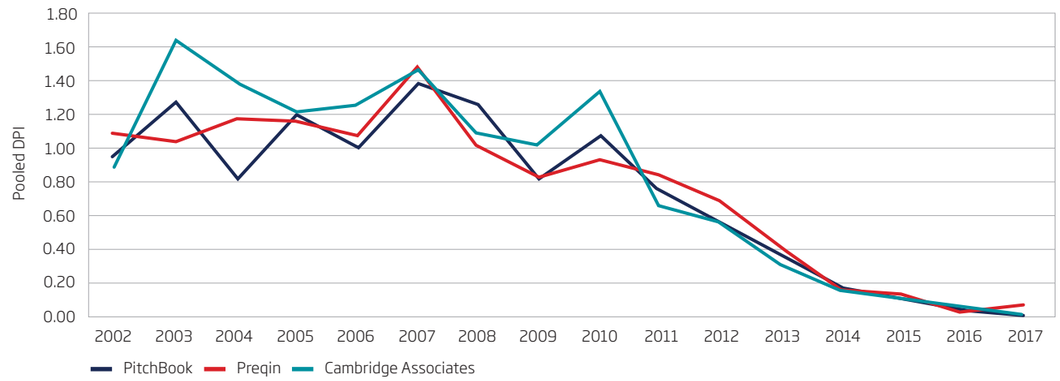
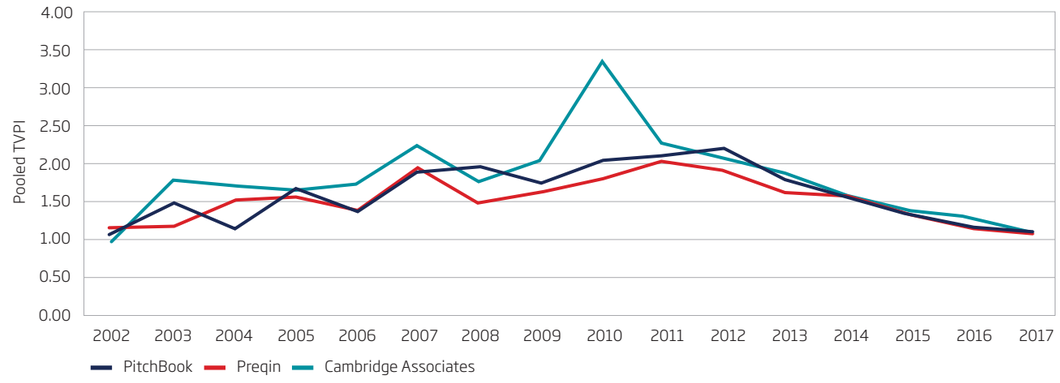


FIG 5

COMPARISON OF US VC 2002-2017 VINTAGE YEAR POOLED TVPI FUND PERFORMANCE BY DATA SOURCES

Source: British Business Bank analysis of PitchBook, Preqin and Cambridge Associates



Whilst there is little variation in reported DPI and TVPI multiples for US VC funds, the reported money multiple performance figures for funds based in the Rest of Europe (i.e. excluding the UK) show considerable variation. Figure 6 shows PitchBook gives an estimated pooled DPI multiple of 1.20 for Rest of Europe VC funds compared to 0.76 for Preqin over the same 2002-2013 vintage year cohort. Figure 6 also shows differences exist in the reported pooled TVPI multiple with PitchBook reporting a multiple of 1.80, and Preqin reports a multiple of 1.52. We are not aware of any other published sources of information on European VC returns that can be used to verify the figures, but the large range in reported performance multiples creates uncertainty around the actual level of performance for Rest of Europe VC funds.[42]

EXPLAINING THESE DIFFERENCES

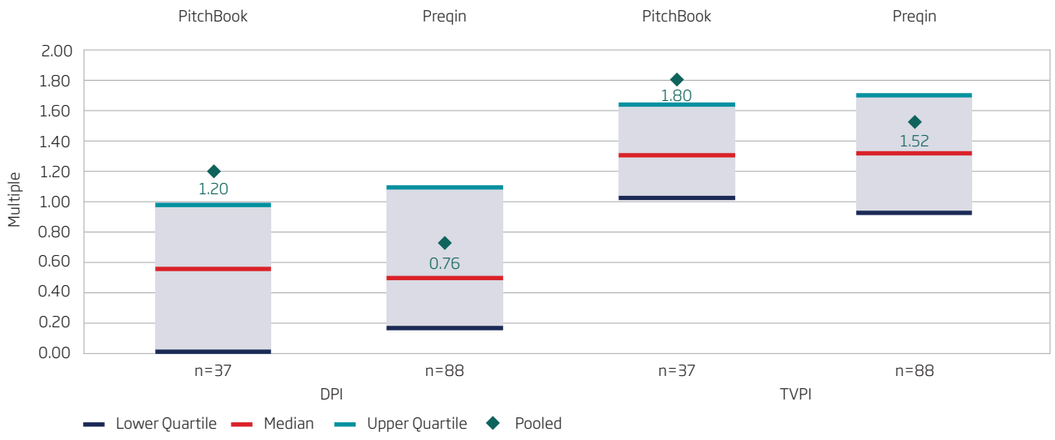
One reason for the divergence in the reported Rest of Europe returns figures between different data providers is the low propensity of VC funds and LPs disclosing their financial returns. Low coverage increases uncertainty around the actual level of financial returns as the sample of funds submitting returns data may not be representative of the wider fund population.

US Freedom Of Information (FOI) legislation requires US public pension funds to disclose the performance of their investments into VC funds. For example, the California Public Employees's Retirement System (Calpers) publicly publishes fund level performance on its website of all the PE funds it has invested in, covering a total of 253 funds.[43] This means data providers tend to have more representative coverage of US VC funds. Whilst, the UK has no explicit legal obligation for public pension LPs to disclose performance data, the UK generally benefits from an open disclosure culture in order to promote the market and attract private institutional investors.

FIG 6

COMPARISON OF REST OF EUROPE VC 2002-2013 VINTAGE YEAR FUND DPI AND TVPI PERFORMANCE BY DATA SOURCE

Source: British Business Bank analysis of PitchBook and Preqin



Comparing the number of VC funds with disclosed TVPI multiples in Preqin to the overall reported population of VC funds for each vintage year shows the relative coverage of funds disclosing data. Figure 7 shows Preqin captures the TVPI information of just 13% of the Rest of Europe VC funds with 2002-2017 vintage year. Coverage is likely to not be representative of the wider population of VC funds and heavily dependent on the composition of funds included in the sample.[44]

A higher proportion of US funds (21%) disclose TVPI multiples, but Figure 8 shows the proportion has fallen over time.[45] As a result, Preqin now captures financial returns information for a higher proportion of UK VC funds (22%) than the US over 2002-2017 vintage years. The decline in coverage for US VC funds since 2002 is also evident when looking at PitchBook data. Further analysis reveals it does not appear to be as a result of declining participation by public pension funds in US VC. A possible explanation is that since the financial crisis US fund managers and LPs have become less willing to disclose financial returns information, especially in the early part of a fund's life.[46]

The low proportion of funds reporting financial returns information relative to the population of VC funds in the market is common across all VC datasets and leads to increased uncertainty around the actual financial returns. FOI legislation in the US may help contribute to a more representative sample of US funds providing data.

The relatively low proportion of VC funds disclosing financial returns information provides strong justification for combining fund level data from different data sources to increase coverage, so that the sample of funds included is more representative of the wider population of VC funds. Fund level data on the performance of VC funds from Preqin and PitchBook was combined with data from the British Business Bank to create a composite dataset. This allows a more reliable assessment of VC returns to be made across different time periods and geographies.

Funds appearing more than once were removed from the combined dataset to avoid double counting. The appendix at the back of the report provides more details of the methodology used to aggregate and clean the dataset.

FIG 7

INCIDENCE OF VC FUNDS REPORTING FINANCIAL RETURNS MULTIPLES BY GEOGRAPHY

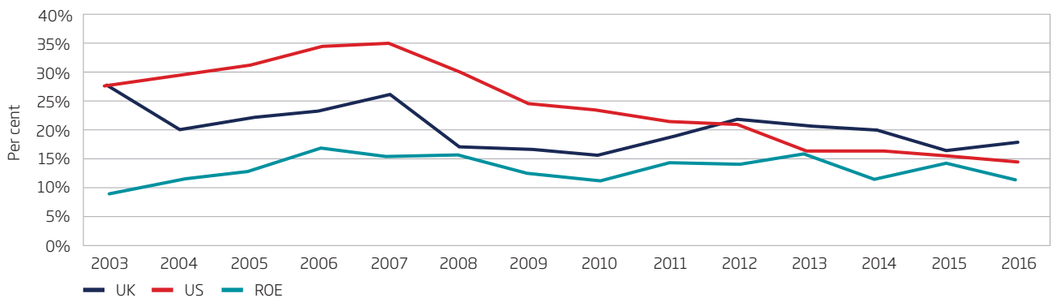
	Number of VC funds with 2002-2017 vintage	**Number of funds reporting TVPI multiples**	**Proportion (% in bracket 2002-2012 vintage)**
UK	236	51	22% (24%)
Rest of Europe	1,045	135	13% (14%)
US	3,363	697	21% (29%)

Source: British Business Bank analysis of Preqin (5th September 2019)

FIG 8

PROPORTION OF VC FUNDS REPORTING TVPI DATA BY VINTAGE YEAR (3-YEAR MOVING AVERAGE)

Source: British Business Bank analysis of Preqin (5th September 2019)



SECTION 4:

LONG RUN VC FINANCIAL RETURNS

This chapter reviews long run financial returns, first for the US VC markets and then for the US and UK combined VC markets, highlighting both the long run trends and the significant variation between annual cohorts.

HISTORICAL US VC RETURNS: 1980-2001

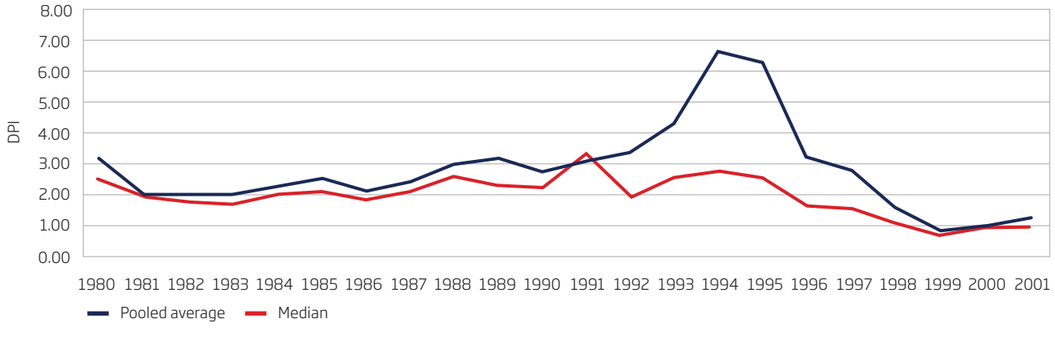
The US VC market is widely acknowledged as the most developed VC market in the world, with the industry having matured over many years. The first US VC investors emerged in 1946, but it was the 1950's and 1960's before the US VC industry truly established itself with the Small Business Investment Act of 1958 which enabled the Small Business Administration (SBA) to grant licenses to Small Business Investment Companies (SBIC's) to invest in companies. Many technology investment companies were launched in the early 1970s, including many well-known names such as Kleiner Perkins and Sequoia Capital.[47] The increase in VC in the 1970's coincided with two legislative changes. The 1978 Revenue Act reduced capital gains tax from 49.5% to 28%. Changes to the Employee Retirement Income Security Act (ERISA) in the same year allowed pension funds to consider VC a 'prudent' investment,[48] resulting in a flow of institutional money into VC, and providing the blueprint for how the VC industry operates today.

Exploring the long run returns generated by the US VC industry provides an insight into what high level of financial returns might look like in a mature market. Preqin records financial returns data for US VC funds with a vintage of 1980 onwards.[49] Figure 9 shows US VC funds performed extremely well for selected years in the mid 1990's with pooled DPI multiples in excess of 4 between 1993 and 1995, at least 3 from 1991 to 1996. These high returns were driven in part by the emergence of the internet, albeit resulting in the dot-com bubble in the 1990's, which led to rapidly increasing valuations and a flood of new technology company IPOs.

FIG 9

POOLED AND MEDIAN DPI FOR US VC FUNDS BY VINTAGE YEAR

Source: British Business Bank analysis of Preqin (5th September 2019)



The dot-com bubble burst in 2000, ending investors' exuberance around a shift towards a new economy based on the internet. For VC funds established towards the end of the bubble from 1997, performance was substantially lower, with pooled and median DPI multiples of less than one in several years meaning these funds failed to return their investors capital.

Assessing long run US VC financial returns over a 20-year time horizon, confirms very high fund performance was not sustained over the entire time period. Figure 10 shows the yearly average reported pooled DPI for funds with a 1980's vintage was 2.56, and for VC funds with a 1990's vintage, the pooled DPI multiple was 2.22. The data challenges the perception that the US VC industry consistently produces very high fund returns and provides a benchmark for judging the current performance of the VC industry in the next section of the report.

FIG 10

POOLED AND MEDIAN DPI FOR US VC FUNDS

	Average DPI 1980-1989 vintage years	Average DPI 1990-1999 vintage years
Pooled DPI	2.56	2.22
Median DPI	2.06	1.51
Number of funds	181	356

Source: British Business Bank analysis of Preqin

US AND UK VC RETURNS: 2002 ONWARDS (POST DOT-COM BUBBLE)

Reviewing the performance of VC vintages from 2002 onwards removes funds whose active portfolios were adversely affected by the bursting of the dot com bubble, and therefore provides a more balanced view of market performance. Figure 11 shows the pooled TVPI multiple for US and UK VC funds varies from 1.12 in 2003 to 2.04 in 2011 and 2012. Likewise, the pooled DPI multiple varies from 0.03 in 2016 to 1.29 in 2002.

It can take at least three years before VC funds start exiting their portfolio companies through IPOs, trade sales and secondary sales, but in practice the time scale to exit is much longer. British Business Bank analysis of PitchBook suggests UK VC-backed companies take 5.3 years on average to exit via an IPO.[50] This explains why fund DPI multiples are less than 1 or close to zero for VC fund vintages after 2009. The DPI return multiple is therefore not a useful measure of current or expected future performance during the early part of a fund's life.

The overall VC asset class has consistently generated pooled TVPI multiples exceeding 1.50 from funds with a vintage year from 2007 onwards for eight consecutive years. Whilst representing a positive level of return, actual performance is lower than the widely quoted 3 times return benchmark many LPs quote as the required level of return to offset the risk and illiquidity of the asset class.[51, 52]

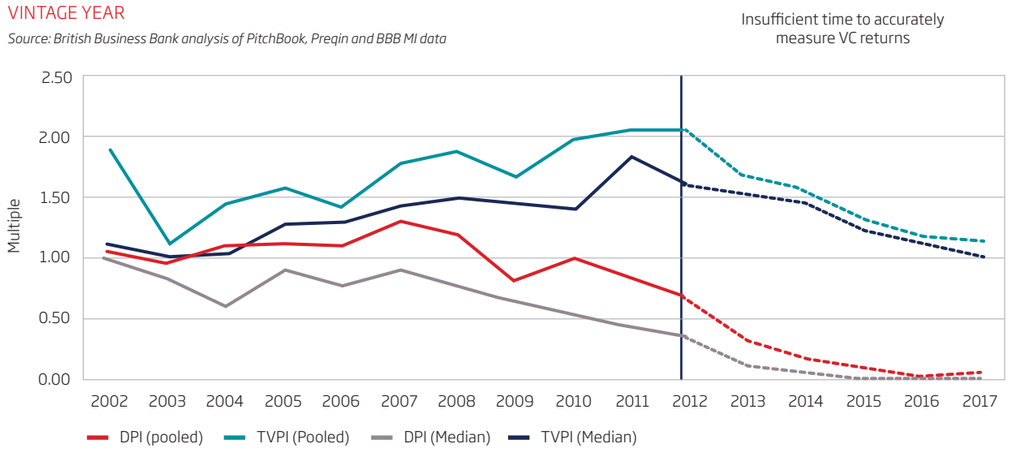
Pooled TVPI multiples decline below 1.50 for funds with a vintage of 2015 onwards, but this reflects their relative immature nature rather than a decline in the underlying fund performance.[53] Funds are affected by the J-curve in the early stages of their life, meaning the reported returns of funds in the first couple of years do not generally reflect the return investors can expect over the longer term. Fund managers may keep the value of their unrealised investments close to cost until there is evidence of an increase in their value, whilst company failures may become more apparent early on. Although the 2005 vintage year performed well with a TVPI of 1.57, pooled TVPI was less than 1.50 between 2002 and 2004 which may suggest VC underperformed during the early part of the decade as a result of the dot-com bubble bursting.

Median TVPI multiples were relatively poor in the early 2000's at close to 1, but improved from 2005 onwards, providing support that VC performance has improved overall from the middle of the decade. Over the 10-year period between 2005 and 2014, yearly median fund TVPI returns averaged 1.47.

FIG 11

OVERALL US AND UK VC FUNDS FINANCIAL RETURNS BY VINTAGE YEAR

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data



SECTION 5:

VC FINANCIAL RETURNS ACROSS GEOGRAPHY

High performing outlier funds can cause annual returns multiples to be volatile, as shown in Figures 10 and 11. Grouping vintage years together can reduce some of the distortion arising from annual noise and small sample sizes. In this section the data is also disaggregated by geography to compare UK and US performance, which further limits the sample size. To provide more meaningful analysis, vintage years are grouped into the following cohorts to analyse performance:

- **2002-2006:** Post dot-com bubble
- **2007-2011:** Recession and economic recovery
- **2012-2016:** Latest time period

These five-year time bands were selected to ensure broadly comparable data between the two countries. However, it is important to acknowledge that the UK and US economies were in recession at different time periods during the global financial crisis.[54] In order to ensure the presented results are not being caused by the choice of year category, Figures 18 and 19 also provide a comparison between the UK and the US over time using two-year vintage year categories. Whilst UK data has a small number of funds reporting data, the inclusion of verified performance data from funds the British Business Bank has invested in means robust comparisons can still be made. The approach taken strengthens the reliability of the data and confirms the validity of the findings presented below.

Due to the low coverage of Rest of Europe VC funds and the large variation in reported performance between different data sources, performance figures for Rest of Europe are not reported in this section.

Greater importance should be attached to VC financial returns generated by funds in the 2002-2006 vintage year cohort, as these funds have had enough time to invest, develop and exit most of their investments. Funds with a vintage year between 2007-2011 have had more time to develop than the most recent cohort, so can provide an indication of likely performance going forward, but a substantial proportion of the returns are not yet realised.

Reported returns for the most recent 2012-2016 cohort are less likely to provide an accurate representation of actual underlying fund performance. These funds are still early in their life and will likely have not had enough time to develop companies to exit, thus DPI is expected to be low. Company valuations are also likely to be conservative due to the J-curve effect, and thus the reported TVPI for this cohort may not reflect the actual return investors can expect.

TVPI valuations are themselves based on portfolio company valuations, which can change rapidly depending on company specific and wider market factors. A recent example of this is the 'The We Company', which was valued at $47bn during its last private round of funding, but greater investor scrutiny for its upcoming IPO could have valued the company at little more than $10bn.[55]

2002-2006 VINTAGE YEAR COHORT

Figures 12 and 13 compare the pooled mean, median and upper/ lower quartile fund performance between the UK and US for funds in the 2002-2006 vintage year cohort. The UK exceeds the US in both the pooled TVPI and DPI multiples for this cohort of funds. UK VC funds generated a pooled DPI multiple of 1.95 and a pooled TVPI multiple of 2.17, compared to 1.04 and 1.35 for US VC funds respectively. Whilst there is less variation in the median DPI, the UK median DPI at 0.94 is again higher than the US multiple of 0.81.

UK VC funds outperforming their US counterparts in the 2002-2006 vintage year cohort is due to the combination of strong performance by UK funds and relative underperformance by US funds compared to historical data. Seven of the 24 UK VC funds included in this cohort reported a TVPI greater than 2, demonstrating the stronger UK performance was not caused by a single high performing outlier fund. Verified performance data from British Business Bank supported funds is also more positive for these vintages, confirming the validity of these findings.

Analysis of Cambridge Associates data confirms the relatively poor performance of US VC funds in this cohort, especially compared to historic data. One explanation might be that US VC fund managers were more greatly affected by the bursting of the dot-com bubble in 2000 than UK fund managers, leading to relatively more cautious investment strategies amongst US fund managers in subsequent time periods. This would also help to explain why US upper quartile returns for this cohort are much lower than the equivalent UK figures, despite median performance being relative similar.

A pooled DPI multiple of 1.95 for UK VC funds in this vintage year cohort appears to be comparable to the long-term performance of US VC funds in the 1980's and 1990's. US VC funds with a 1980's vintage generated a pooled DPI multiple of 2.22 on average and funds with a 1990's vintage had an average yearly pooled DPI of 2.56. In this context, the performance of UK VC funds is respectable, and could be attractive to LPs that have considered investing into VC.

UK VC industry outperformance in 2002-2006 vintages was grounded in strong market fundamentals. For institutional LPs new to the VC asset class, without privileged access to the most elite US VC funds, exposure to the wider UK VC sector is broadly comparable to the wider US VC sector.

FIG 12

DPI (2002-2006 VINTAGE FUNDS) BY GEOGRAPHIC AREA

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

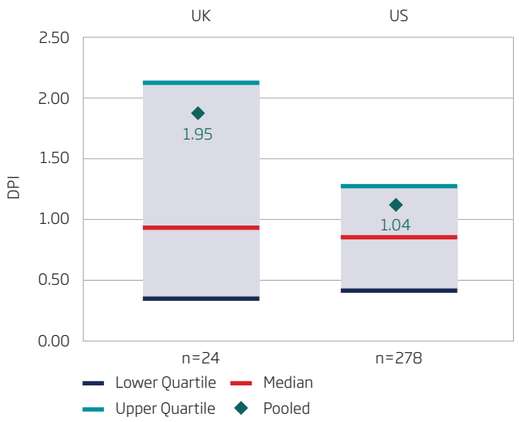
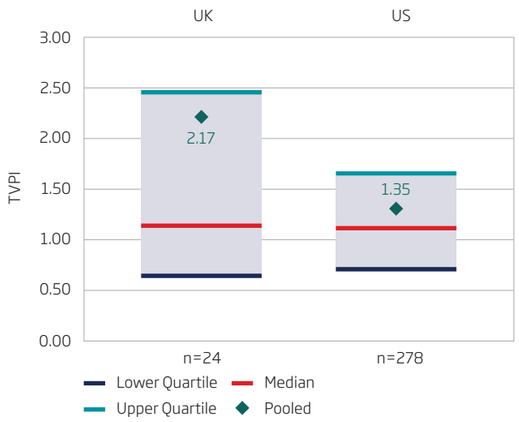


FIG 13

TVPI (2002-2006 VINTAGE FUNDS) BY GEOGRAPHIC AREA

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data



2007-2011 VINTAGE YEAR COHORT

Figures 14 and 15 compare performance between the UK and the US of VC funds with a 2007-2011 vintage year. Despite UK funds outperforming US funds in the previous cohort, this was not sustained in the 2007-2011 vintage cohort. UK VC funds generated a pooled DPI multiple of 0.86 and a pooled TVPI multiple of 1.54, compared to pooled DPI of 1.12 and TVPI of 1.88 for US VC funds. However, more positively, on both pooled DPI and TVPI multiples, the UK is only 0.3 points lower than the performance of US VC funds of the same vintage.

Median performance is much closer; UK funds generated a median DPI of 0.72 compared to 0.71 in the US, and a median TVPI of 1.42 compared to 1.52 in the US. The similarity of median return multiples compared to the pooled returns suggests that the US pooled figure is driven by the performance of outlier funds that perform very well. This finding is supported by looking at the performance of the five highest performing funds in terms of reported TVPI multiple within the 2007-2011 cohort. The five highest performing US VC funds within this cohort had TVPIs multiples in the range of 7 to 9, whilst the five highest performing UK VC funds reported TVPI multiples in the range of 1.80 to 2.50. The distribution of VC financial returns between the UK and the US are explored further at the end of this section.

It is also important to point out that the difference in average VC returns between the UK and US for this cohort is far less substantial than the variation in returns within the individual VC markets. It follows therefore that investors willing to put money into US VC could also consider the UK market.

FIG 14

DPI (2007-2011 VINTAGE FUNDS) BY GEOGRAPHIC AREA

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

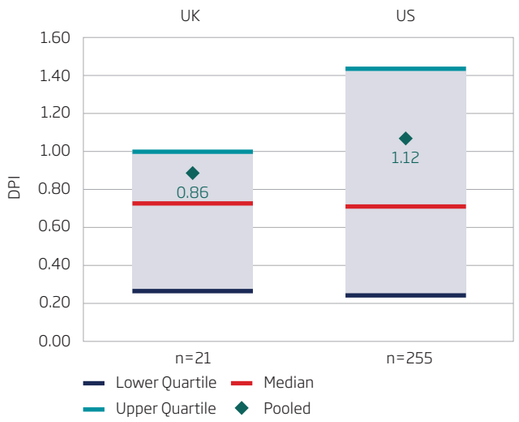
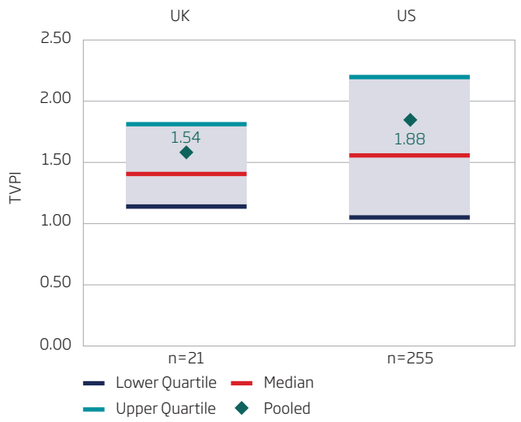


FIG 15

TVPI (2007-2011 VINTAGE FUNDS) BY GEOGRAPHIC AREA

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data



2012-2016 VINTAGE YEAR COHORT

This final section explores VC financial returns between the UK and the US for this most recent vintage year cohort. Figures 16 and 17 compare performance between the UK and the US of VC funds with a vintage year between 2012-2016. It is too soon to assess the DPI performance of funds in this cohort, as they are too early in their life to have had sufficient time to develop and exit many of their portfolio investments. Whilst UK VC funds have generated a pooled DPI multiple of 0.36, which is higher than the US (0.22), the median DPI for both geographies is 0. Therefore, most funds in this cohort have not yet made a single portfolio company exit which highlights the limited usefulness of analysing DPI multiples for such a recent cohort of funds. This also suggests VC investing requires patience as it takes many years to develop a company before it can be able to exit via a trade sale or IPO.

TVPI multiples for this cohort are slightly more informative than DPI multiples, but there is little difference between pooled TVPI across the two geographies. UK VC funds with a vintage year between 2012-2016 have a pooled TVPI multiple of 1.49, compared to 1.52 in the US. There is also little difference in the range of TVPI values reported by UK funds and US funds, with the upper/lower quartiles being very similar between the UK and US. This reflects the limitations even TVPI has when analysing the returns of funds this early in their life, as fund managers will often value their portfolio company investments at close to cost until another financing round is raised.

FIG 16

DPI (2012-2016 VINTAGE FUNDS) BY GEOGRAPHIC AREA

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

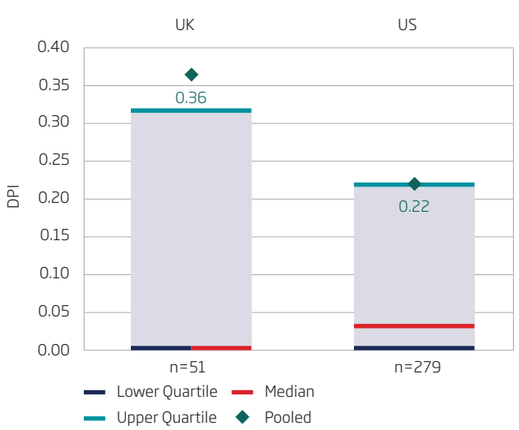
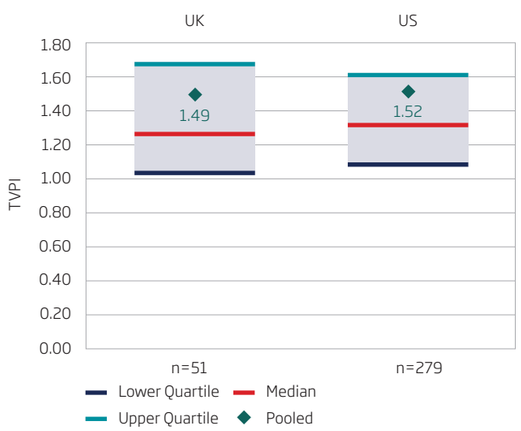


FIG 17

TVPI (2012-2016 VINTAGE FUNDS) BY GEOGRAPHIC AREA

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data



EXPLORING UK AND US VC RETURNS IN DETAIL

Combining the 2002-2006 and 2007-2011 vintage year cohorts together shows UK VC fund performance is slightly higher than the US over the full time period. The pooled TVPI multiple for UK VC funds over the 2002-2011 vintage year cohort was 1.74 compared to 1.62 for US funds. The UK also had a higher pooled DPI multiple of 1.20 compared to 1.08 for VC funds in the US. This provides further evidence that UK VC funds performed well during the decade.

Figures 18 and 19 compare VC returns in the UK and US over 2002-2017, but segmented into two-year vintage cohorts. Although the number of funds in each UK vintage year cohort is relatively small, this analysis is consistent with the above findings. UK VC funds outperformed their US counterparts during the early 2000's, but for more recent vintages US funds have slightly higher pooled TVPI multiples than UK funds.

FIG 18

US-UK DPI COMPARISON (2-YEAR VINTAGE COHORTS)

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

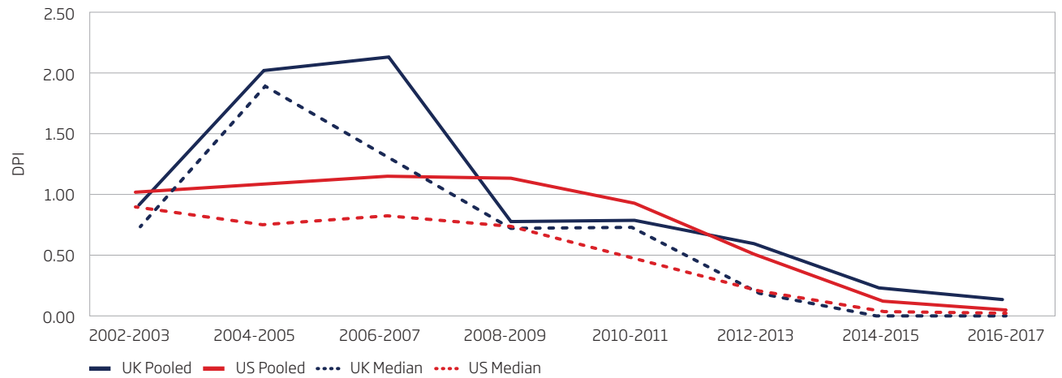
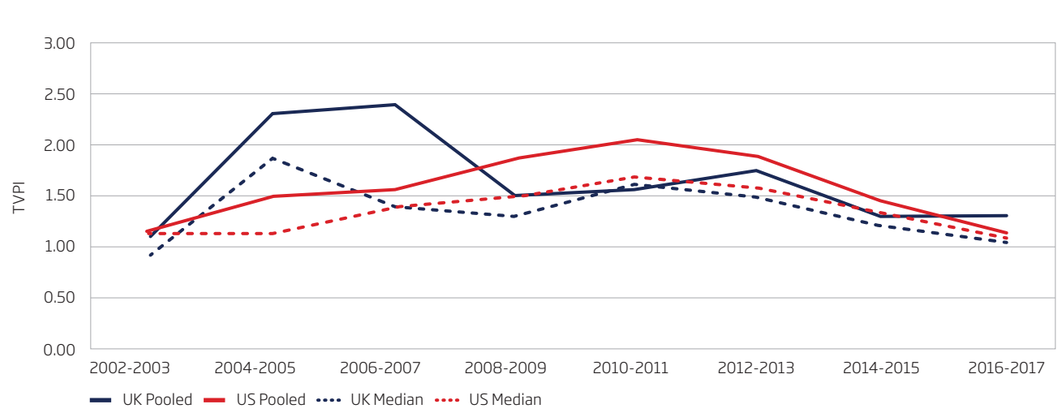


FIG 19

US-UK TVPI COMPARISON TVPI (2-YEAR VINTAGE COHORTS)

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data



Overall the analysis demonstrates that for funds with a 2002-2016 vintage, performance of UK VC funds is comparable to the performance of US VC funds. The pooled TVPI multiples of UK VC funds drops below the level of US VC funds for funds with a 2008 vintage onwards, after exceeding their US counterparts by a considerable margin for earlier vintages.

The pooled DPI multiple of UK funds is ahead of US funds up to 2006-07, before declining in 2008-09 to below the US. From 2012-2013, the performance gap between the US and UK narrows and the UK then subsequently tracks the performance of US funds closely.

The relatively close performance between UK and US funds in reported median DPI and TVPI multiples over time may provide support for LPs to consider investing in the UK VC market. The median DPI of UK funds compares favourably to the equivalent US figure for many of the vintage year cohorts. UK median VC fund TVPI is much closer to the US median than the pooled TVPI multiples, with the UK median figure tracking closely the US figures from 2008-09 onwards.

These findings suggest that the performance of most UK and US VC fund is very similar, but the higher pooled market returns reported for US VC funds is caused by the performance of top outlier funds. This conclusion is confirmed in Figure 20 which shows the distribution of fund TVPI returns for UK and the US funds with a 2002 to 2016 vintage. Whilst the shape of the distribution is almost identical between the two countries for 92% of funds, US funds in the top 8 percentiles have higher TVPI multiples than the comparable UK VC funds.

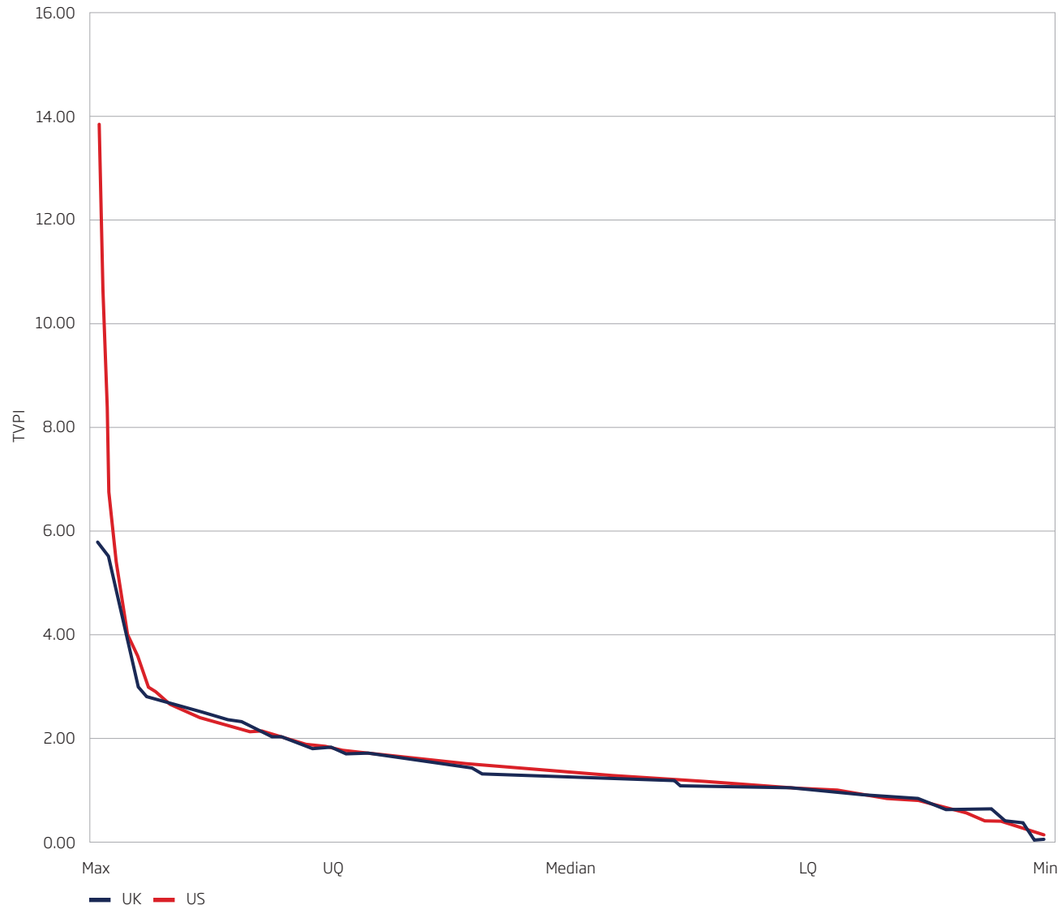
The major difference therefore lies in the achieved multiples of these top performing funds. For instance, the top US VC fund in the sample achieves a TVPI of 13.8, whilst the highest UK fund TVPI is 5.7.

Taken together, the findings presented in this report suggest UK VC could be an attractive option for both LP investors already investing in US VC and unable to access more allocation within the top US funds and those LPs not currently invested in VC and considering both the US and UK. A key challenge for the UK VC market is therefore to increase the performance these outlier funds which return over 5 times their committed capital and help contribute to the overall pooled market return figures.

FIG 20

RANKED TVPI DISTRIBUTION OF UK AND US VC FUNDS (2002-2016 VINTAGE YEARS)

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data



SECTION 6:

BENCHMARKING BBB AND BPC VC FUND PERFORMANCE TO THE WIDER MARKET

This section provides an overview of performance of VC funds the British Business Bank has invested in as an LP. These numbers may differ from the figures reported in the British Business Bank and BPC annual reports due to differences in coverage of funds.[56] For instance, the BPC Annual Report shows the BPC portfolio had a TVPI multiple of 1.15 overall as at end of March 2019.

The British Business Bank has analysed the performance[57] of the Enterprise Capital Fund (ECF) programme, which was established in 2006 to increase the amount of equity finance available to high growth innovate SMEs affected by the equity gap.[58] Since inception the ECF programme has invested in 29 funds with a total of £1.3bn capital committed (including third party capital), making the programme an important part of the UK VC industry. The ECF programme has helped 16 fund managers to raise their first institutional fund, and so far, 63% of these have already gone on to raise a further fund.[59]

The ECF programme is designed to address identified market failures leading to an equity gap by facilitating the establishment of VC funds targeting high growth potential companies seeking smaller amounts of equity finance. A key feature of the ECF programme is the 'geared' return structure designed to increase returns for private investors so that they are competitive with other market investment opportunities. The British Business Bank receives a 3% prioritised return but, after repayment of capital, the Bank receives a lower share of the profit compared to the other private investors in the fund. In the event of good performance by the fund manager, private investors receive a greater share of the profits.

The overall pooled DPI multiple for VC funds[60] invested in through the ECF programme between 2006 and 2016 is 0.47, equating to a pooled DPI of 0.50 for other LPs. This is lower than the wider UK VC market pooled DPI of 0.77 for funds of the same vintage. However, the lower realised returns may reflect the earlier stage nature of the funds relative to the overall market leading to portfolio company exits taking longer to materialise.

VC funds within the ECF programme have a pooled TVPI multiple of 1.41, equating to 1.78 for other LPs. Other LPs in the ECF programme are therefore have the potential to make higher returns than the wider market (1.63 for the same vintage years), showing that the British Business Bank prioritised return mechanism is working as intended. This higher level of performance could make the ECF programme an attractive asset class for LP investors wishing to invest in UK VC.

Figure 22 shows for the VC funds BPC has invested in between 2013-2016, the pooled DPI multiple generated to date is 0.18.[61] This is identical to the wider UK VC market pooled DPI for funds of the same vintage, which suggests the programme is performing as expected in terms of making a commercial return. It should be noted that it is early stage in the life of the programme, and performance is based on just 7 BPC supported funds, so these figures are likely to be highly volatile. It is also important to acknowledge that there are large variations in the performance of individual funds within this overall figure.

Although the BPC pooled TVPI multiples of 1.29 is slightly lower than the UK market benchmark (1.40) for funds of the same vintage, the BPC median fund TVPI performance is 1.21. This is higher than the equivalent UK market multiple figure of 1.18. It is too early in the life of BPC to draw strong conclusions about future performance as most BPC invested VC funds are too young to be included in the analysis and most of the portfolio is currently unrealised, but the outlook for future performance looks promising.

FIG 21

ECF VC FUND RETURNS (2006-2016 VINTAGES)

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

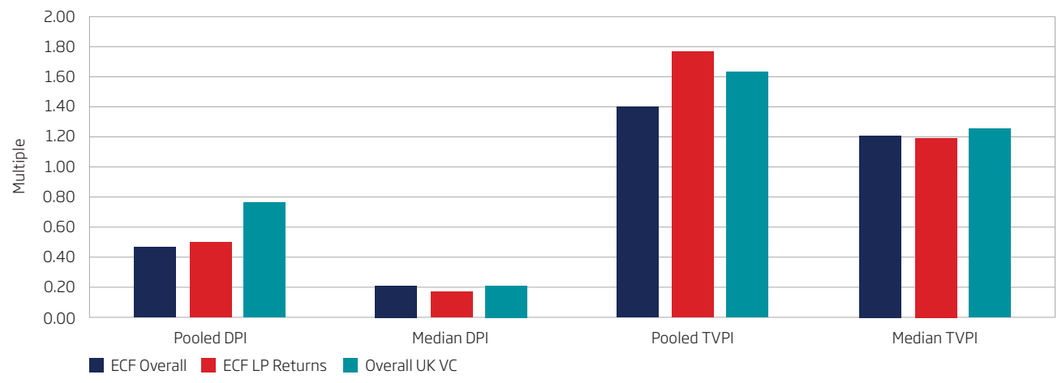
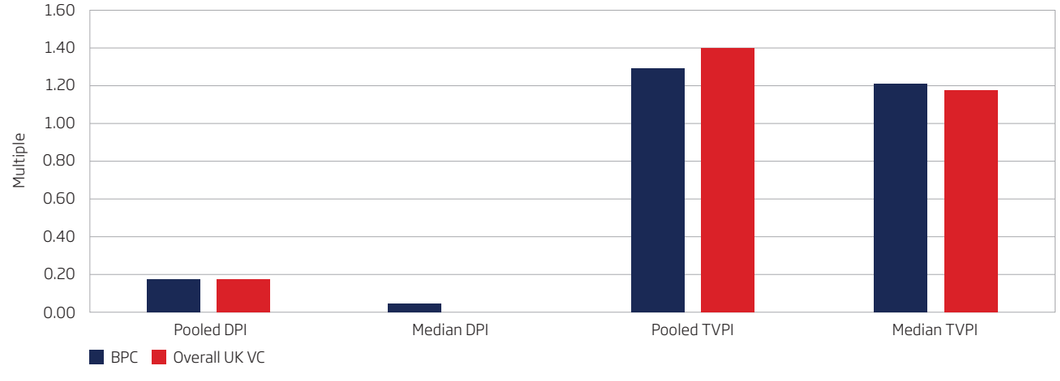


FIG 22

BPC VC FUND RETURNS (2013-2016 VINTAGES)

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data



SECTION 7:

CONCLUSIONS

The 'equity gap' for smaller unquoted companies was first identified by the Macmillan Report in 1931 and provides the rationale for the British Business Bank's activities today. Early stage equity investment in the UK has continued to suffer in the intervening years both from periods of actual poor investment returns and perceived poor investment returns. This is exacerbated by limited and opaque publicly available data on the performance of VC funds.

However, the UK VC industry has transformed over the last decade as talent, networks, and exit routes have strengthened. These historical perceptions of poor investment performance are increasingly out of date.

The British Business Bank was founded in 2014 to make finance markets for smaller firms work better. Through our commitments in equity fund managers, the Bank is an active investor supporting companies commercialising new technology emerging from UK universities and research laboratories. The Bank believes that catalysing, documenting and publicising strong, proven investment returns for the VC asset class makes the market work better in two ways:

First, the Bank is itself a large institutional investor into UK VC, primarily on a commercial basis. We seek returns on our investment in order to meet our own return targets, but also to satisfy our policy goal of encouraging private investment into the asset class. In the long run, there must be a strong business case based on both actual and expected investment returns to sustainably attract additional private institutional capital. Therefore, our investments seek to prove that such financial returns can be made, enriching both the Exchequer and the wider UK innovation ecosystem by attracting more capital.

Second, regular publication of more transparent and reliable performance data helps suppliers of investment capital to make asset allocation decisions with greater confidence. Such information can also encourage more scientific and investment talent to migrate to the UK VC sector, creating a positive reinforcement cycle. Our recent 'Future of defined contributions pensions' report[62] stated *'The British Business Bank will continue to take the lead in improving the quality and availability of UK industry-level data on historic returns, increasing the broader transparency of the asset class'.* The Bank therefore intends for this report to be the first of an ongoing series and become a trusted data source for the UK VC market.

Going forward, we intend to work with the wider VC industry to improve data coverage and accuracy. Comments and suggestions from all corners are most welcome.

The evidence shows that the absolute returns based on money multiples produced by the UK VC sector since 2002 have been strong. Pooled TVPI multiples have been above 1 throughout the relevant period of analysis, set against an investment environment of low interest rates. These market returns have been made through exposure to early stage companies and investments in software and other forms of emerging technology where the UK's science and technical base is internationally competitive.

In fact, the UK VC sector is competitive against its more developed counterpart in the US. UK VC returns are neither considerably nor consistently below those found in the US; rather, UK VC funds with a 2002-2006 vintage outperformed US VC funds of the same vintage. From 2007 onwards, the financial performance of UK VC funds has been comparable to the US with UK performance only slightly lower than US funds of the same vintage.

UK VC funds share a similar distribution of fund TVPI performance compared to their much more numerous US peers, except for a handful of top American VC funds that greatly outperform. Moreover, whilst 17 US VC funds in the 2002-2016 vintage cohort have a TVPI multiple greater than 5 compared to just 2 in the UK, this number comprises of just 2.1% of US VC funds, the exact same percentage as the UK. The major difference lies in the achieved multiples of these top performers, with the highest performing US funds generating TVPI multiples in excess of 10, but the highest UK fund TVPI is 5.7. This finding suggests UK VC could be an attractive option for both LP investors already investing in US VC and unable to access more allocation within the top US funds and those LPs not currently invested in VC and considering both the US and UK.

The UK VC market has substantially less capital available than in than the US, even after accounting for differences in size of the two economies. The Bank's 2019 Equity Tracker report[63] shows the US VC market was 1.7 times larger than the UK between 2016 and 2018, despite the UK market being ahead of the US in terms of GDP-weighted deal numbers. This suggests UK companies are currently unable to raise the same levels of capital as there US counterparts, which may restrict company growth. This is evidenced by UK companies seeking larger rounds of equity finance being reliant on overseas investors[64] to provide this capital, which could be a result of UK VC fund size lagging behind US VC funds.[65] UK VC-backed companies are also less likely to use venture debt than their US counterparts.[66] The conclusion is that there is scope for increased additional capital into the UK VC market without the risk of over-saturation.

Greater transparency around the potential returns available from investing in UK VC could help unlock more institutional investment in the asset class, which could allow UK VC funds to increase in scale and better meet the funding needs of UK high-growth companies as they scale up.

APPENDIX: METHODOLOGY

- Data on individual VC and Growth Capital funds based in Europe and the United States with a 2002 to 2018 vintage year was downloaded from PitchBook and Preqin between 26 July and 1 August 2019. 2002 was chosen as the first vintage year to avoid picking up effects from the dot-com bubble and also to be consistent with BVCA reporting. Fund data was downloaded in US dollars to be consistent throughout.
- Data from British Business Bank MI systems was also extracted for funds under the ECF, UKIIF and British Patient Capital (including VC Catalyst) programmes as these programmes are delivered by private sector fund managers that have raised funding from private sector sources. The closed fund size was converted from Pound Sterling to US dollars using the relevant £/$ Exchange. This gave a total dataset of 2,764 US and European VC and Growth Capital funds (Table A1).
- Funds with missing data relating to fund size, PIC, TVPI and DPI were removed from the underlying dataset as it was not possible to calculate market return figures. For instance, the reported PIC, TVPI and DPI multiples were used to calculate the commitment drawn, realised value and unrealised values in relation to the reported fund size for the pooled financial return metrics.[67] The individual reported fund TVPI and DPI multiples were used to calculate the median, quartile and decile returns figures.
- The PitchBook and Preqin data was then cleaned to remove 'old' fund data, which might relate to funds strategically reporting returns, for instance by taking advantage of initial early returns. For funds with a vintage year between 2002-2010, funds with the latest reporting date less than seven years since fund inception was excluded. For funds with a vintage year of 2011 onwards, a reporting date of at least 2017 was required.
- The data was then visually checked for errors with a focus on the largest reported TVPI and DPI multiples, but it was not possible or feasible to check the accuracy of reported information for every fund.
- Funds were assessed to ensure only VC funds were captured. This sometimes involves reclassifying funds from their PitchBook and Preqin fund classification. All growth capital and buyout funds were removed from the dataset. In addition, VC funds which entirely invested in geographic areas and developing countries outside of their listed location was also removed from the dataset.
- This gave a total dataset of 1,664 VC funds with a 2002-2017 vintage (Table A2). Financial returns figures may therefore differ to the numbers published by PitchBook and Preqin themselves which include all VC funds in their relevant fund populations. 2018 fund vintage was removed from the full A1 dataset due to insufficient time for fund performance to be assessed.
- To increase coverage of funds, the individual funds from PitchBook, Preqin and BBB were all merged into one single data set. To avoid the same fund appearing more than once, funds were de-duplicated using the following sequential preference logic:[68]

1. **British Business Bank supported fund.** This information has been verified/ audited.
2. **Most up to date reporting date.** This to ensure the latest information is captured.
3. **Lowest TVPI Multiple.** This is to ensure most conservative data source is chosen.
4. **Largest fund.** This is to ensure subsequent fund-raising closures are captured
5. **Oldest Vintage**

- This gave a total combined dataset of 1,146 unique VC funds with a 2002-2017 vintage year (Table A3) which was used for the financial returns analysis across different geographies in Section 4 and 5.

TABLE A1

NUMBER OF VC AND GROWTH CAPITAL FUNDS 2002 - 2018 BY GEOGRAPHY AND DATA SOURCE (RAW DOWNLOADED NUMBERS)

	BBB	PitchBook	Preqin	Total
UK	68	139	83	290
Rest of Europe	3	141	208	352
US		1,159	963	2,122
Total	71	1,439	1,254	2,764

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

TABLE A2

NUMBER OF VC FUNDS 2002 - 2017 BY GEOGRAPHY AND DATA SOURCE (CLEANED)

	BBB	PitchBook	Preqin	Total
UK	47	58	54	159
Rest of Europe	3	54	128	185
US		627	693	1,320
Total	50	739	875	1,664

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

TABLE A3

NUMBER OF VC FUNDS 2002 - 2017 BY GEOGRAPHY AND DATA SOURCE (CLEANED AND DE-DUPLICATED)

	BBB	PitchBook	Preqin	Total
UK	45	36	29	110
Rest of Europe	3	32	114	149
US		430	457	887
Total	48	498	600	1,146

Source: British Business Bank analysis of PitchBook, Preqin and BBB MI data

ACKNOWLEDGEMENTS

This analysis and report was written by Dan van der Schans and Joel Connolly in the British Business Bank Economics Team. We would like to thank David Woods in British Patient Capital for his assistance in reviewing and classifying the fund level data.

We are grateful to PitchBook and Preqin for allowing us the use of their data.

ENDNOTES

1. Only LP funds which are classified as VC are included within this assessment. Growth Capital funds are not included within the British Business Bank and BPC figures to ensure an accurate and fair comparison to the wider VC market. To protect the commercial interests of the VC funds that the Bank has invested in, the Bank is not able to disclose the individual performance data of funds it has invested in.
2. BIS (2012) 'SME access to external finance' states 'It is widely recognised that an 'equity gap' exists in the provision of modest amounts of equity finance to SMEs. This is also due to asymmetric information between the investor and the business on the likely viability and profitability of the business.'
3. British Business Bank (2019) 'Future of Defined contributions pensions: Enabling access to Venture Capital and Growth Equity' https://www.british-business-bank.co.uk/wp-content/uploads/2019/09/Oliver-Wyman-British-Business-Bank-The-Future-of-Defined-Contribution-Pensions.pdf
4. VC Adventure (2014) 'Venture outcomes are even more skewed than you think' https://www.sethlevine.com/archives/2014/08/venture-outcomes-are-even-more-skewed-than-you-think.html
5. DealBook (2014) 'In WhatsApp Deal, Sequoia Capital may make 50 times its money' https://dealbook.nytimes.com/2014/02/20/in-whatsapp-deal-sequoia-capital-may-make-50-times-its-money/
6. Nexit Ventures (2018) 'Why VCs seek 10x returns' https://www.nexitventures.com/blog/vcs-seek-10x-returns/
7. Top Tier (2017) 'The 80/20 Rule in Venture' http://blog.ttcp.com/8020-rule-venture/
8. Kaplan, S and Lerner, J. (2016) 'Venture Capital Data: Opportunities and Challenges' https://www.hbs.edu/faculty/Publication%20Files/17-012_10de1f93-30e4-4a98-858c-4137556ec037.pdf
9. Wealthfront (2014) 'Demystifying Venture Capital Economics, Part 1' https://blog.wealthfront.com/venture-capital-economics/
10. Although secondary sales are possible, these usually occur at large discounts to the current valuation.
11. British Business Bank (2019) 'Small Business Equity Tracker 2019' https://www.british-business-bank.co.uk/wp-content/uploads/2017/07/239-Small-Business-Equity-Tracker-Report_2017WEB.pdf.
12. INSEAD (2011) 'Value and Return Measurement in Private Equity: An Overview' https://www.criticaleye.com/inspiring/insights-servfile.cfm?id=2842
13. Mattermark (2016) 'Everything You've Ever Wanted to Know About VC Returns (But Were Afraid to Ask' https://mattermark.com/about-venture-capital-returns-valuations/
14. There are several different methodologies used by VC firms to calculate the value of a company, including last round valuation, comparison with comparable companies and more recently the Option Pricing Model. All of which can result in different valuations of the same company.
15. Kaplan, S and Lerner, J. (2016) 'Venture Capital Data: Opportunities and Challenges' https://www.hbs.edu/faculty/Publication%20Files/17-012_10de1f93-30e4-4a98-858c-4137556ec037.pdf
16. Mattermark (2016) 'Everything You've Ever Wanted to Know About VC Returns (But Were Afraid to Ask) https://mattermark.com/about-venture-capital-returns-valuations/
17. McKinsey and Company (2004) 'Internal rate of return: A cautionary tale' https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/internal-rate-of-return-a-cautionary-tale
18. Invest Europe (2018) 'Professional Standards Handbook' https://www.investeurope.eu/media/710939/IE_Professional-Standards-Handbook-2018.pdf
19. A £100 return at the beginning is treated the same as £100 return at the end of the fund's life.
20. Fair Value is defined by US and International accounting standards as 'the price that would be received to sell an asset or paid to transfer a liability in an Orderly Transaction between Market Participants at the Measurement Date.' As quoted page 7 of International Private Equity and Venture Capital Valuation (2015) http://www.privateequityvaluation.com/download/i/mark_dl/u/4012990401/4632604968/IPEV%20Valuation%20Guidelines%20December%202015%20-%20updated%20for%20terms.pdf
21. Medium (2016) 'Why your investor might pass on your next fund: An LP's perspective on benchmarking in Venture Capital' https://medium.com/sapphire-ventures-perspectives/why-your-investor-might-pass-on-your-next-fund-884dfc34f8d0
22. For examples, see the CB Insights Downround tracker: https://www.cbinsights.com/research-downround-tracker
23. Ang and Sorensen (2012) 'Risks, returns and optimal holdings of private equity: A survey of existing approaches' https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2119849
24. The Venture Company (2013) 'How Top-Quartile runs out of merit' https://www.venturecompany.com/blog/2013/03/how-top-quartile-runs-out-of-merit/
25. https://www.bvca.co.uk/
26. BVCA (2018) 'Performance Measurement Survey 2017' https://www.bvca.co.uk/Portals/0/Documents/Research/Industry%20Performance/BVCA-Perfomance-Measurement-Survey-2017.pdf
27. Kaplan, S and Lerner, J (2016) 'Venture Capital Data: Opportunities and Challenges' http://www.nber.org/papers/w22500
28. https://www.cambridgeassociates.com/who-we-serve/endowments-foundations/
29. British Business Bank analysis of PitchBook.
30. https://www.britishpatientcapital.co.uk/portfolio/
31. European Investment Fund (2017) 'European Investment Fund Venture Capital Portfolio Performance – EIF own resources Vintage and Team Location: As at 30/06/17'_https://ftalphaville-cdn.ft.com/wp-content/uploads/2017/12/21152533/EIF-Own-Resources_VC-Performance-Data-by-Vintage-and-Team-Location-as-at....pdf
32. https://www.crunchbase.com/
33. https://dealroom.co/
34. https://www.beauhurst.com/
35. BVCA (2018) 'Performance Measurement Survey (PMS) 2017' https://www.bvca.co.uk/Portals/0/Documents/Research/Industry%20Performance/BVCA-Perfomance-Measurement-Survey-2017.pdf
36. Excluding British Business Bank invested funds.
37. The VC Catalyst programme started investing in funds in 2013.
38. The reported returns for the British Business Bank in Figure 1 and 2 relate to overall fund returns for the ECF funds and do not take into account the geared returns position for private investors. In practice, LPs will achieve higher returns if funds perform well.
39. PitchBook and Preqin's databases are continuously being updated. Since undertaking the analysis in August, the author is aware of data being corrected for one of the funds.
40. These numbers will differ to the ones PitchBook and Preqin report themselves due to the additional data cleaning that the British Business Bank has undertaken, e.g. by removing 'old' fund data.
41. Cambridge Associates (2019) 'US Venture Capital Index and Selected Benchmark Statistics' March 31, 2019 https://www.cambridgeassociates.com/private-investment-benchmarks/
42. It is not possible to compare the European returns figures to Cambridge Associates or other data providers. Cambridge Associates does not publish data on the European VC market as it is included within other markets.
43. https://www.calpers.ca.gov/page/investments/asset-classes/private-equity/pep-fund-performance
44. Analysis of PitchBook confirms that the coverage of returns data for the Rest of Europe is lower than for the UK and US
45. This decline in coverage of US VC funds is also seen in the PitchBook data.
46. Kauffman report identifies several named fund managers that have previously declared they would not accept public capital investors into their funds to avoid publicly disclosing information on performance under FOI legislation. Kauffman Foundation (2012) '"We have met the enemy… and he is us" Lessons from Twenty Years of the Kauffman Foundation's Investments in Venture Capital Funds and The Triumph of Hope over Experience' https://angel.co/pdf/kauffman-foundation-venture-capital.pdf
47. Ramos-Lynch (2018) 'A Super Fast Overview and History of Tech VC'https://blog.usejournal.com/a-super-fast-overview-and-history-of-tech-vc-714ae54ec72
48. Gompers (1994) 'The rise and fall of Venture Capital' https://thebhc.org/sites/default/files/beh/BEHprint/v023n2/p0001-p0026.pdf
49. Preqin also captures the financial returns for European VC funds within these vintage years, but the number of funds captured per year is relatively small (less than 10) until 1997.
50. British Business Bank (2019) 'Small Business Equity Tracker'
51. TechCrunch (2017) 'The Meeting that showed me the truth about VCs' https://techcrunch.com/2017/06/01/the-meeting-that-showed-me-the-truth-about-vcs/?renderMode=ie11
52. Medium (2016) 'Why your investor might pass on your next fund: An Lp's perspective on benchmarking in Venture Capital' https://medium.com/sapphire-ventures-perspectives/why-your-investor-might-pass-on-your-next-fund-884dfc34f8d0
53. Capital Dynamics (2009) 'The PE J-curve: cash flow considerations from primary and secondary points of view' https://www.capdyn.com/Customer-Content/www/news/PDFs/the-private-equity-j-curve_private-equity-mathematics_apr-09__2_.pdf
54. The US economy went into recession in December 2007 with the bursting of the subprime mortgage bubble. UK GDP growth turned negative in Q2 2008 and remained negative for 5 quarters before beginning to recover in 2010.
55. https://www.businessinsider.com/wework-ipo-timeline-delayed-ceo-adam-neumann-scandals-explained-2019-9?r=US&IR=T#september-17-wework-bonds-fell-at-a-record-pace-after-the-company-delayed-its-plan-to-go-public-18
56. The financial returns information covers fund performance as of end of March 2019 in line with the figures contained in the BPC Annual Report. However, the figures differ in terms of fund coverage. Only the performance of LP funds classified as VC are included within the British Business Bank and BPC figures within this report. Growth Capital funds and listed vehicles are excluded to ensure an accurate comparison with the wider VC market. Furthermore, performance is assessed for the fund, not just the returns received by the British Business Bank. A fund vintage of up to 2016 was chosen to ensure a meaningful comparison of market performance, as it is too soon to assess the performance of more recent vintage funds.
57. To protect the commercial interests of the VC funds that the Bank has invested in, the Bank is not able to disclose the individual performance data of any of the funds that it has invested in.
58. BIS (2009) 'The supply of equity finance to SMEs: Revisiting the "Equity Gap" http://www.sqw.co.uk/files/8713/8712/1030/47.pdf
59. https://www.british-business-bank.co.uk/wp-content/uploads/2019/05/BBB_ECF_Investor_Workshop_Slide_Pack_May_2019_Final.pdf
60. This covers LP funds classified as VC only. Growth capital funds are excluded from these returns figures.
61. This includes funds invested in as part of the VC Catalyst programme.
62. British Business Bank (2019) 'Future of defined contributions pensions: Enabling access to Venture Capital and Growth Equity' https://www.british-business-bank.co.uk/wp-content/uploads/2019/09/Oliver-Wyman-British-Business-Bank-The-Future-of-Defined-Contribution-Pensions.pdf
63. British Business Bank (2019) 'Small Business Equity Tracker' https://www.british-business-bank.co.uk/wp-content/uploads/2019/06/Small-Business-Equity-Tracker-2019.pdf
64. British Business Bank analysis of Beauhurst show 69% of all equity deals above £10m between 2016-2018 involved an overseas equity investor.
65. British Business Bank analysis of PitchBook shows the average US VC fund was £160m in size compared to £123m (2016-2018 vintage, excluding funds less than £10m).
66. British Business Bank analysis of Preqin shows 10% of UK VC-backed companies received venture debt between 2016 and October 2019, compared to 15% of US VC-backed companies.
67. A pooled approach takes into account larger funds have a larger impact on the overall market financial returns.
68. This was undertaken by specific fund name and also visually to take into account variations of the same fund name. E.g. use of Roman numerals and numbers, differences in plural e.g. partner and partners. In some instances, abbreviations are used, e.g. SEP instead of Scottish Equity Partners and where possible these are taken into account.

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