

UK Venture Capital Financial Returns 2022

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Foreword

As the UK's economic development bank, and the largest investor in UK Venture Capital (VC), the British Business Bank seeks to provide a trusted information source on how UK VC funds performs. VC has an important role in supporting the UK economy by enabling the rapid growth of ambitious and innovative smaller businesses to reach their full potential. This will help establish a track record in relation to this asset class, hopefully enabling greater institutional investment into it.

Our annual UK Venture Capital Financial Returns report, now in its fourth year, has become recognised as an important evidence source on the performance of UK VC funds. The report provides a comprehensive and detailed assessment of fund performance, drawing on

existing data sources including PitchBook and Preqin, data from the performance of the Bank's own equity programmes, and information directly sourced from UK fund managers. The widespread coverage of funds reporting financial returns data enables us to provide a robust and independent assessment of the performance of the asset class.

Typically, UK institutional investors, such as pension funds, have allocated less capital to UK VC than overseas investors, partly due to a lack of transparency about financial returns of the industry. This has impacted on the level of capital available to high growth businesses in the UK.

This year's report found that UK VC funds continue to perform well compared to their US counterparts, and funds with 2002 vintage onwards have similar returns. This suggests that UK VC could be an attractive asset class for Limited Partners (LPs) currently investing or considering investing in US VC.

Global VC markets are now at a turning point. Whilst 2020 and 2021 were characterised by record levels of investment, higher company valuations and strong exit activity, 2022 has seen higher inflation and interest rates, and weaker public markets, putting pressure on investee company and fund valuations.

It is encouraging to see the performance of UK VC funds has held up so far, with fund valuations for more recent vintages being close to their 2021 levels. Despite good opportunities for investment remaining, fund managers indicate exit and fundraising conditions have worsened over 2022. Fund valuations are therefore likely to fall from their 2021 highs, as both companies and investors adapt to new macro-economic conditions.

The British Business Bank's programmes remain an important part of the UK VC market. The Bank has committed £2.8bn into 106 funds through its Enterprise Capital Fund programme and British Patient Capital. The overall performance of funds within these programmes demonstrates positive returns can be generated. The

Bank will continue to show its commitment to UK VC during these uncertain times.

The Bank's mission is to drive sustainable growth and prosperity across the UK, and to enable the transition to a net zero economy, by supporting access to finance for smaller businesses. This report is a core part of our annual research report programme, and its insights are a key part in delivering our objectives as a centre of expertise. Working with the wider VC community to improve both the coverage and accuracy of market data is also an important part of helping finance markets operate more effectively. I hope by doing so, we enable more high-growth innovative businesses to secure the finance they need so they can realise their potential and become the national and global success stories of the future.

Louis Taylor
CEO, British Business Bank

Executive summary

Venture Capital (VC) investors provide equity funding to early-stage companies with the potential for high growth. The UK VC industry has grown and matured substantially over the last 20 years.

This is the fourth year the British Business Bank has collected and published data on the performance of UK VC funds. The Bank has collected fund level data on VC returns directly from UK fund managers and combined this with data from commercial data providers and data from funds the Bank has invested in as a Limited Partner (LP) to provide the most comprehensive assessment of UK VC fund performance.

This report includes the fund performance data of 167 UK VC funds with a 2002–2020 vintage, making it the largest source of information available on the performance of UK VC funds. We estimate our dataset covers 42% of UK VC funds with a 2002 to 2020 vintage.

The report examines financial performance using Distributions to Paid-In capital (DPI) and Total Value to Paid-In capital (TVPI) multiples, with data generally covering performance up to 31 March 2022. The data is backwards looking largely covering fund performance over 2021 and therefore does not fully capture the changing economic conditions currently occurring in 2022 with rising energy prices, higher inflation and increasing interest rates.

Key findings



In the year to 31st March 2022, fund valuations for recent fund vintages have held up

Higher company valuations and strong exit activity in 2020 and 2021 have contributed to a material uplift in fund valuations over recent years. As of 31st March 2022, UK VC funds with a 2008 to 2013 vintage have generated a pooled TVPI multiple of 2.20, which is 0.11 points higher than a year ago. This shows UK VC fund valuations have so far been resilient to the adverse headwinds affecting global finance markets.

Whilst UK VC funds with a 2008 to 2013 vintage have seen a decrease in their pooled DPI multiple of 0.10 points, from 1.05 in 2021 to 0.95 in 2022, this is likely a result of further deployment. Realised returns are

locked in and the decline in reported DPI multiples are likely due to increases in the denominator as fund's committed capital increases.

For the 121 UK VC funds that have reported their fund performance in both the latest 2022 VC returns report and the previous 2021 report, 59% of funds have increased their reported TVPI multiples since a year ago, whilst 27% have kept them constant. A minority (14%) have written them down.

The pooled TVPI multiple for UK funds in both reports have decreased by 0.69 points compared to the figures they reported in 2021, showing valuations are becoming more realistic from their 2021 highs. However, the median TVPI multiple for these funds increased by 0.38%. Larger funds may be more likely to mark down their TVPI multiples leading to a larger impact on the reported pooled multiple. This may reflect larger funds being more likely to invest in later stage companies whose values have risen the most in recent years and which are now being revalued in response to current wider market volatility.

The full impact of rising energy prices, higher inflation, increasing interest rates and declining global stock markets is yet to be fully captured in these market return figures that go up to March 2022. Market research suggests further decline in fund valuations is likely over 2022 and beyond.

The Bank has undertaken primary research with UK fund managers with fieldwork occurring over September 2022. The research suggests a substantial deterioration in exit opportunities compared to 12 months ago. Only two out of 14 fund managers (14%) in the latest survey thought exit conditions for portfolio companies were currently good, which contrasts to last year's survey when almost all fund managers (93%) reported exit conditions were good or very good. Four out of 14 fund managers (29%) in the latest survey reported exit conditions to be poor in the 12 months to September 2022. Nearly three quarters of fund managers (ten out of 14) reported exit conditions have deteriorated over the last year, providing further evidence of the difficult environment for portfolio company exits.

2

UK VC funds continue to report similar returns overall compared to their US counterparts

Historically US VC financial returns were considered by many in the VC industry to be substantially higher than the performance of UK VC funds. Analysis of data within this report suggests that this is not the case, and returns are very similar between these two geographies since 2002.

Overall fund returns for UK VC funds with 2002 to 2017 vintage years show pooled DPI multiple of 0.84 and pooled TVPI multiple of 2.27. US funds of the same vintage generated higher pooled DPI multiples of 1.19, but the US pooled TVPI multiple of 2.31 is very close to the UK's figure.

In particular, the UK performs well across the earlier 2002–2007 post dotcom bubble vintage years where UK pooled DPI multiples are 0.14 points higher than in the US. Whilst the UK DPI and TVPI pooled multiples are lower than for US for funds with a 2008 to 2013 vintage year, UK performance is closer to the US in terms of pooled TVPI multiples for funds with a 2014–2020 vintage.

3

The top UK funds generate high returns, but their performance still lags behind that of the top US funds

VC market returns are driven by the performance of outlier funds. Previous research identified that the top performing US funds have substantially higher TVPI

multiples than the top UK VC funds. This is still true in the latest data, with the UK top performing one percentile funds with a 2002–2019 vintage generating TVPI return multiples of approximately 14, compared to around 29 in the US, but the UK's TVPI multiple is an improvement on 11 presented in last year's report.

Whilst TVPI multiples include unrealised assets, whose values may not be realised, a similar picture is seen for DPI multiples where the top percentile UK VC funds generate a return of six, but US VC funds generate a DPI of over 22. Outside of the top two percentile funds, UK upper decile funds outperform the US, showing UK funds have more consistent performance.

The performance of these outlier funds makes a disproportionate contribution to total market returns.

4

Returns on British Business Bank supported funds continue to rise as funds mature

As the largest LP investing in UK VC, the British Business Bank is committed to being transparent on the performance of funds it has invested in.

For VC funds supported by the Enterprise Capital Fund (ECF) programme with a 2006–2019 vintage year, the pooled DPI multiple is 0.65 overall, but 0.78 for other LPs due to the prioritised return structure. Both these DPI multiples are higher than the wider UK VC market DPI multiple of 0.53, showing ECF backed funds are outperforming the market in terms of their realised returns.

VC funds within the ECF programme have a pooled TVPI multiple of 2.05 but have a TVPI multiple of 2.98 for other LPs due to the ‘geared’ returns structure. Returns for other fund investors are now substantially higher than the 2.12 pooled TVPI for the overall UK VC market for comparable vintage years (2006–2019). Reported ECF programme DPI and TVPI multiples have increased compared to a year ago.

British Patient Capital (BPC) was established in June 2018 but was seeded with funds from the Bank’s VC Catalyst programme which operated between 2013 and mid-2018. VC funds in BPC’s portfolio with a 2013–2019 vintage have generated a pooled TVPI multiple of 1.94. This is higher than a year ago (1.73) but is lower than the overall UK VC market multiple of 2.19 for funds of the same vintage.

The lower TVPI multiple for BPC relative to the overall VC market is partly explained by the substantial increase in BPC’s VC fund investment activity in 2018 and 2019, which account for 54% of BPC’s portfolio over this period. In comparison, 41% of UK wider market funds had a 2018 to 2019 vintage.

This means the BPC portfolio is less mature than the overall VC market, reducing BPC’s relative performance. BPC’s mean average fund IRR return for VC funds with a 2013 to 2019 vintage is 29%, which is broadly similar to the overall market mean IRR of 32%. This suggests comparing BPC’s performance to the overall VC market using money multiples is being affected by differences on when investments were made.

Given the length of time required for returns in the asset class to materialise, combined with the ‘J-curve’ effect, a performance differential is to be expected. Comparisons on 2013–2017 vintage shows BPC’s performance to be similar but still below the overall market in terms of DPI multiples. BPC’s pooled TVPI multiple for these vintages is 0.27 points lower than the overall VC market.

This performance differential may be explained by fewer funds in the overall UK market disclosing their performance data. For 2018–19 vintages, BPC formed nearly half the sample of UK funds. BPC is a long-term equity investor looking to support companies over an extended frame. It is still too early in the life of BPC’s portfolio to draw meaningful conclusions about its long-term performance.

Conclusions

The report shows that UK VC continues to have good performance relative to the US. VC returns in the UK and elsewhere have been resilient to date but are likely to be adversely impacted by changing market conditions seen in 2022 and going forward.

We welcome comments and suggestions for ways in which UK VC financial returns data can be improved. We would also encourage fund managers (GPs) and institutional investors (LPs) who wish to contribute data to next year’s report to contact the Bank’s research team directly, to increase coverage even further, and make this data source even more robust.

Introduction

This is the British Business Bank's fourth annual report examining the financial performance of UK VC funds. The aim of this report is to improve the availability of information on UK VC returns by presenting anonymised market level data on the performance of UK VC funds.

As the largest UK investor in VC, and with the mission of making finance markets work more effectively for UK smaller businesses, the British Business Bank seeks to address this information gap by improving the data available on the performance of UK VC returns.

The Bank has collected fund level data on VC financial returns directly from fund managers and has combined this with other data including data from PitchBook and Preqin to provide the most comprehensive data source on the performance of UK VC funds. This data is collected on a best endeavours basis. It is important to acknowledge that the fund performance data included in this report covers the period up to 31st March 2022, and so does not fully reflect recent market conditions seen over the last six months.

14 fund managers completed this year's fund manager survey covering 36 UK VC funds. Whilst this survey cannot be considered representative of the overall UK VC industry, the survey provides useful qualitative insights into VC market providing context to the trends observed. Fieldwork for the survey was undertaken in

September 2022 over a four-week period and provides insight into current VC market conditions.

The report is broken down into the following sections:

- **Section 1** provides an overview of VC financial returns across the UK, US and rest of Europe. It also includes feedback from UK VC fund managers on current VC market conditions including exit opportunities and deal flow quality.
- **Section 2** assesses the performance of VC funds the Bank and British Patient Capital (BPC) has invested in and compares them against the overall VC market for funds of a similar vintage.

Appendix 1 contains the definitions of the key terms used throughout the report, whilst **Appendix 2** provides an overview of the different data sources used in the report. **Appendix 3** provides a description of the methodology used to create the combined dataset and **Appendix 4** provides detailed table of UK VC fund performance by two-year vintage category. **Appendix 5** contains further findings from the Bank's survey of fund managers.

Section 1

Overall market performance

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This section provides a summary of financial performance for the UK VC market up to 31 March 2022 using a combined dataset covering fund level data from PitchBook, Preqin, British Business Bank Management Information and data the Bank has collected from fund managers directly. It then compares the performance of UK VC funds against their counterparts in both the US and the rest of Europe (ROE) using combined data from PitchBook and Preqin.

Section 1 presents trends in the financial performance of UK VC for funds up to 2020 by two-year vintage year categories. Performance is also analysed by combining several years together into distinct groups to provide a robust assessment of performance and to allow for meaningful comparisons against the US and rest of Europe.

The section finishes with a longitudinal assessment of UK VC returns. As the British Business Bank has been producing this report for four years, we are able to compare the reported performance of funds over multiple years if they are present in previous datasets.

In this report, we compare the reported 2022 performance for 72% of the UK VC funds in this year's dataset against their reported performance in last year's (2021) report.

Feedback from fund managers on current market conditions provides additional and more up to date insights into deal quality, fundraising and exit opportunities.

VC returns over time

Figure 1.1 provides analysis of UK VC financial returns using two-year vintage year categories. Two-year vintage categories mitigate the impact of the small sample sizes for each vintage year category and the annual noise created by outlier funds.

The performance of UK VC funds is analysed using funds with a 2002 vintage onwards as this removes the impact of the dot-com bubble bursting in 2001 and provides a more balanced measure of VC fund performance.

UK VC market overall has performed strongly for funds established in the 2000's with several vintage year cohort groups reporting pooled TVPI multiples above two including 2004–2005 where the pooled TVPI multiple was nearly three. Pooled DPI multiples were around 1.40 for most vintage year groups established in the 2000 decade showing investors made returns on their VC investments.

The pooled DPI return multiple falls below one from 2012 onwards as there has been insufficient time for portfolio company exits to occur allowing for capital to be distributed to investors. Depending on stage, it can take many years before VC funds start exiting their portfolio companies through IPOs, trade sales and secondary sales. Therefore, early in a fund's life, the DPI return multiple is not a useful measure of current or expected performance.

TVPI multiples incorporate the unrealised value in the portfolio and so it is a more useful measure for calculating performance during the early part of a

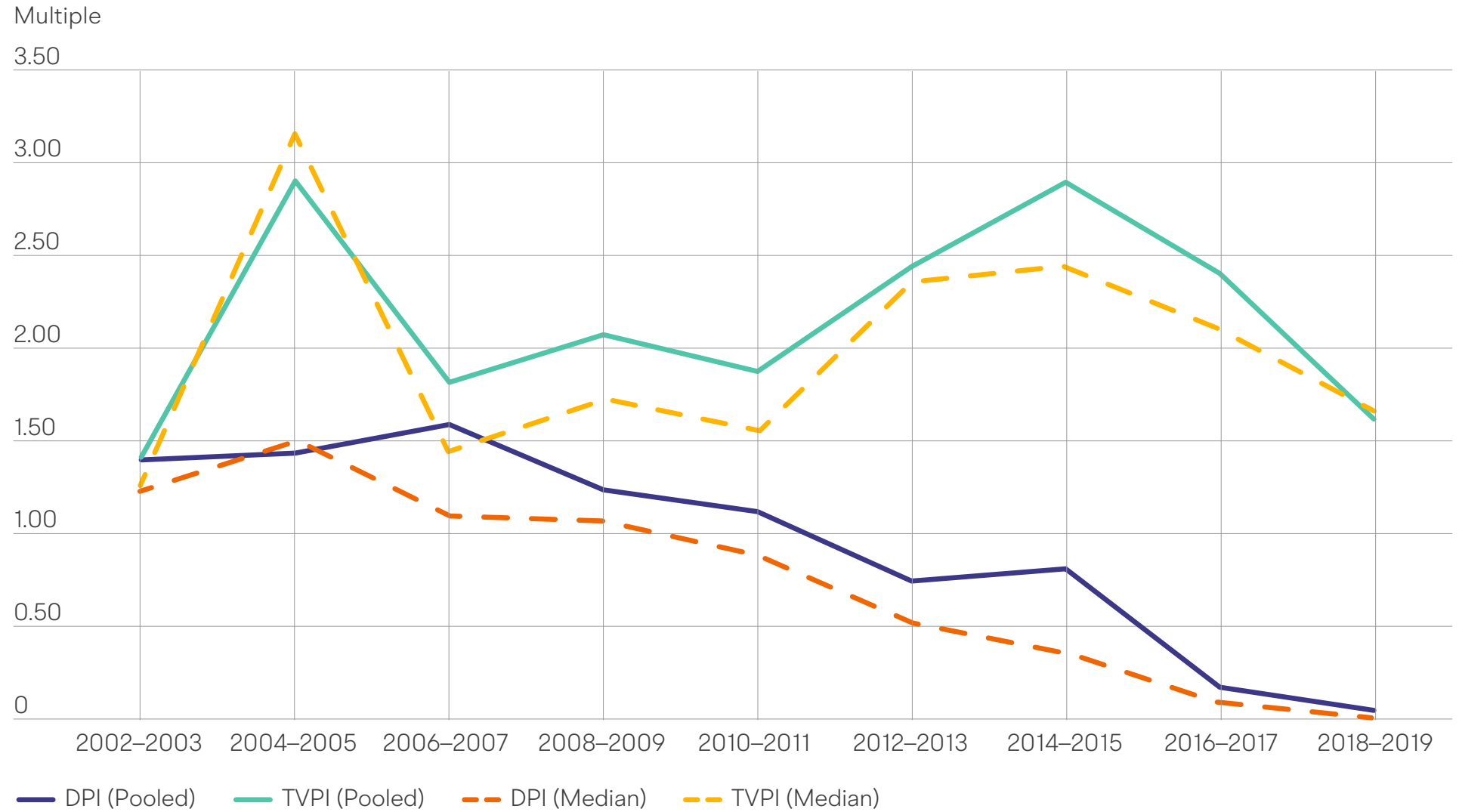
fund’s life. The TVPI measure therefore becomes more relevant from 2012 onwards. UK VC returned a pooled TVPI multiple of over two from 2012 onwards, up to 2017, showing the asset class has performed strongly.

However, TVPI multiples become a less useful measure early on in a VC funds life as they are affected by the ‘J-curve’. Fund TVPI multiples may reduce in the short run to below one due to the impact of fees and fund managers keeping the value of their unrealised investments close to cost until there is evidence of increased value (e.g. progress against milestones or additional funding rounds involving outside investors which validates company value). Company failures may also become apparent early on which will result in the value of investments being written down or written off, before promising companies can be identified in the portfolio. This means the reported fund TVPI performance multiple in the first few years of a fund’s life does not generally reflect the return investors can expect over the longer term.

Figure 1.1

UK VC funds financial returns by 2-year vintage category

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



Many organisations publishing VC returns, such as the BVCA,¹ do not publicly report since inception financial returns for funds less than four or five years old due to the 'J-curve' giving misleadingly low returns figures.

In that context, the relatively high TVPI multiples seen for 2018–2019 vintage funds of 1.61 (Pooled multiple) and 1.66 (median) may suggest recent vintage funds are following a different returns profile compared funds established in earlier periods. It may not be possible to sustain these higher valuations going forward. Last year's report showed 2018–19 vintage years generated a pooled and median TVPI of 1.34 and 1.01 respectively. This indicates the pooled and median TVPI has increased by 0.27 and 0.65 points in the space of a year showing strong increases in valuation of unrealised assets during the early part of a fund's life.

Another indication of increased fund valuations seen in recent vintages is seen in Table A5 within the appendix. The latest 2020 vintage (i.e. for funds around two years old) generated a pooled TVPI multiple of 1.87 and a median TVPI multiple of 1.36. This is very strong performance within funds' early life compared to historical returns. For funds aged two years old in the 2020 VC returns report² (i.e., those with a 2018 vintage year), the pooled and median TVPI was 1.00 and 0.94, respectively, showing investments were being held close to cost.

Last year's VC returns report described how fund managers were reporting market conditions to be very competitive in 2020 and 2021 with 59% of surveyed fund managers reported a high level of competition for deals and 31% reported some competition.

The competition for deals helped drive up company valuations in 2020 and 2021. Currently, only three out of 14 fund managers surveyed (equivalent to 21%) now report high levels of competition for deals. The majority (10 out of 14 fund managers) now report some competition, suggesting fewer fund managers are competing for deals in 2022 than previously (See Fig A.3 in Appendix 5).

Last year's VC returns report provided a comparison of UK VC fund performance compared to the US and rest of Europe. This section updates this analysis using the latest data, and it provides further confirmation that UK VC fund performance is similar to the performance of US VC funds.³

Figure 1.2 shows the pooled return, median and upper/lower quartile fund performance for UK, US and rest of Europe funds in the 2002–2017 vintage cohort. This time period was selected to be consistent with the data reported in the latest 2021 BVCA Performance Measurement Survey Report⁴ and provides an overall summary of market performance over a longer time period than presented later on in this section.⁵ The BVCA returns data is calculated as at 31 December 2021, so the time period is similar but is not exactly the same. BVCA data is therefore less likely to capture any recent mark downs reflecting changing economic conditions seen in the first quarter of 2022.

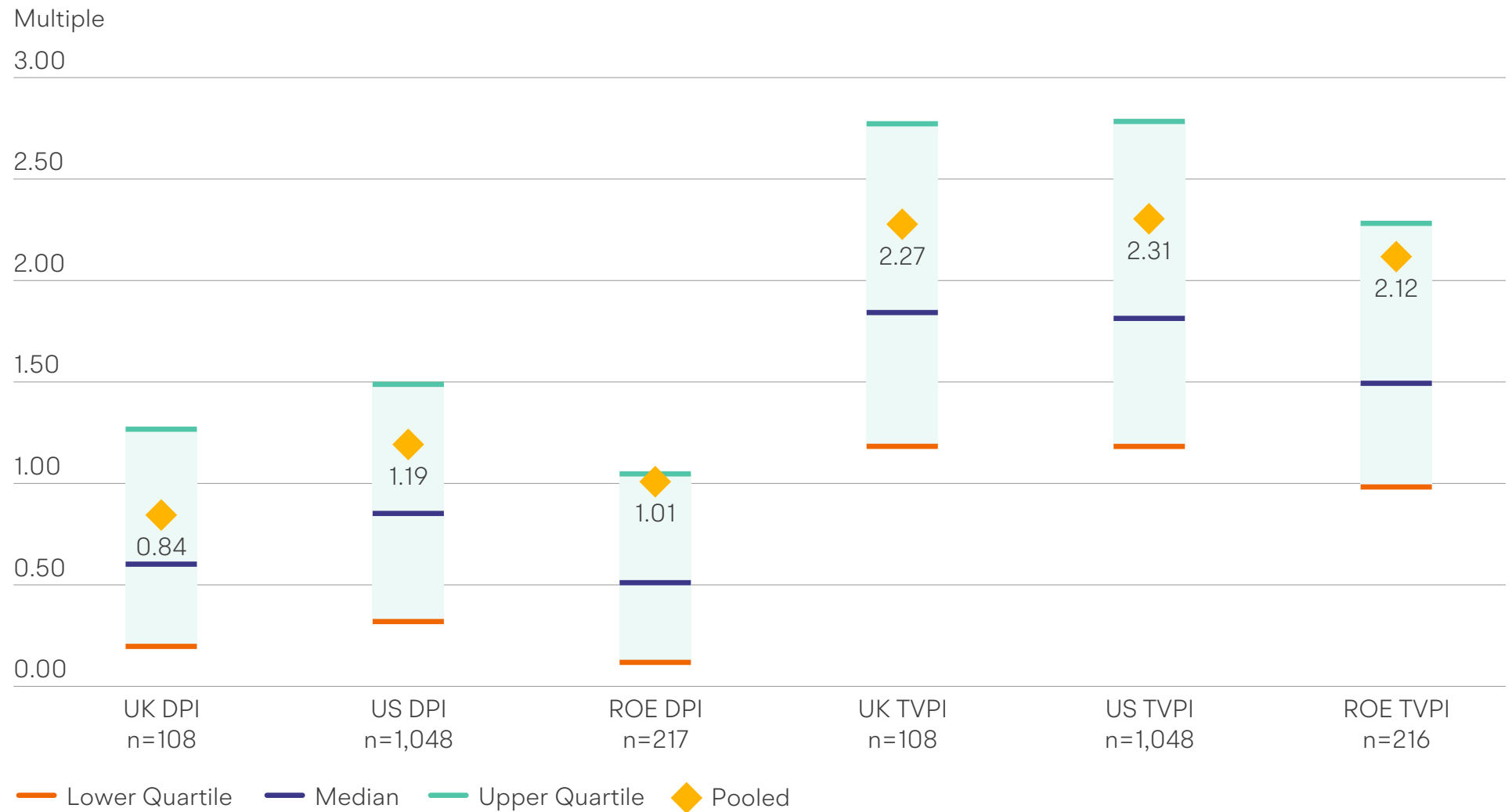
UK fund returns for funds with 2002–2017 vintage years show a pooled DPI multiple of 0.84 and pooled TVPI multiple of 2.27. Funds of this vintage also generated a mean IRR of 28%. The money multiples are broadly similar in scale to those reported by the BVCA for funds of the same vintage years, giving reassurance on the validity of the reported market performance in this report.

The BVCA reports a pooled DPI multiple of 1.02 and a pooled TVPI multiple of 2.21 for funds with a 2002–2017 vintage. BVCA member funds report higher DPI multiples

Figure 1.2

Performance multiples of UK, US and rest of Europe VC funds (2002–2017 vintage years)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



than our dataset, but the reported TVPI multiple is very close. BVCA report a market IRR of 12.6%, which is lower than the mean IRR reported in our dataset for funds of these vintage years, BVCA's IRR measure is likely to have greater coverage of UK funds as only 44% of funds (47 funds) in our dataset for 2002–2017 vintage years provide an IRR measure alongside the money multiple measures.

The performance of UK VC is broadly comparable to the US. The US has a higher pooled DPI multiple 1.19 compared to the UK's 0.84, but the US pooled TVPI multiple is similar to the UK at 2.31. The UK's lower DPI multiple relative to the US may reflect differences in the average age of funds in the 2002–2017 vintage group, with US funds being one year older on average than UK funds (2011 vintage compared to 2010). This means US funds have had additional time to exit their investments compared to UK funds, which may explain the higher DPI multiple.

The US has a lower mean IRR of 15% compared to the UK's 28%. The UK having a higher reported IRR than the US could reflect UK companies exiting earlier than their US counterparts. This in part may be due to sector differences. Equity Tracker 2022⁶ identified the UK had a greater share of investment in fintech and a lower

share of investment in deep tech and R&D intensive sectors. This could lead to UK companies generating returns quicker than US companies due to the long investment horizons required to develop and scale deep tech companies. Another explanation is that a higher percentage of US funds that report money multiples also report IRR measures (86%), so there is higher coverage of US funds.

UK VC fund performance is generally higher than the rest of Europe for funds with a 2002–2017 vintage. Although the rest of Europe has a higher pooled DPI multiple 1.01 compared to the UK's 0.84, the UK has higher upper quartile fund performance (1.27 compared to 1.05 for the rest of Europe). The rest of Europe's pooled DPI market performance is being driven by the strong performance of a small number of funds.

The UK has a higher pooled TVPI multiple of 2.27 compared to the rest of Europe's 2.12, showing UK performance is closer in performance to US funds than European funds. The rest of Europe performance is more uncertain due to relatively lower fund coverage. The rest of Europe has a mean IRR of 16% which is similar to the US's figure of 15%, but is lower than UK's figure of 28%.

For many of these funds in the 2002–2017 cohort, it is too early in their life to make a conclusive assessment, and so it is useful to assess the performance of older vintage funds in distinct categories.

High performing outlier funds and prevailing economic conditions can cause annual returns multiples to be volatile. Combining vintage years together can reduce some of the distortion arising from this annual noise and mitigates somewhat against the small sample sizes. It also allows consideration of wider economic factors. For these reasons, vintage years are grouped into the following wider cohorts to analyse performance over time:

Time period categories:

- 2002–2007: Positive economic growth post dot-com crisis
- 2008–2013: Recession and economic recovery
- 2014–2020: Latest time period

Greater importance should be attached to VC financial returns generated by funds in the 2002–2007 vintage year cohort, as these funds have had enough time to invest, develop and exit most of their investments as

demonstrated by the closeness of their pooled DPI and TVPI multiples.

Funds with a vintage year between 2008–2013 have had more time to develop and exit their investments than the most recent cohort, so provide a clearer indication of likely performance going forward. Given that its 2022, most of these funds will be approaching the end of their initial 10–12-year LP agreement but a sizeable proportion of the returns are yet to be realised.

Reported returns for the most recent 2014–2020 cohort are less likely to provide an accurate representation of actual underlying fund performance due to less time that has passed for companies to demonstrate progress in meeting their milestones. Whilst there is less evidence of a ‘J-curve’ in more recent fund vintages, there is greater uncertainty on the future returns investors will receive for these funds.

Fund TVPI multiples are themselves based on portfolio company valuations, which can change rapidly depending on company specific and wider market factors. Equity Tracker 2022 showed equity backed companies’ pre-money valuations have increased over time. The average pre-money valuation of a company increased sharply in 2021 reaching £34.2m, an 84%

increase on 2020. There were record company valuations in 2021 across all three company stages, but the largest increase in company valuations has been at the later growth stages, which increased by 88% in 2021 relative to 2020.

It is possible that the historically high valuations we currently see for VC backed companies may normalise over future years bringing the 2014–2020 cohort more in line with historic fund performance.

2002–2007 vintage year cohort

Figure 1.3 shows the pooled return, median and upper/lower quartile fund performance for UK, US and rest of Europe funds in the 2002–2007 vintage year cohort. This shows the UK performed similar to US VC funds for fund of these vintages. There was strong economic growth globally during this period which helps to explain the strong performance of VC funds in all three geographies.

The UK funds performed well across all measures in this period, generating a pooled DPI multiple of 1.49 and a pooled TVPI multiple of 1.78. The pooled DPI and pooled TVPI measures are relatively close to one another

showing most assets have been realised and funds are nearly fully divested. The UK has higher pooled DPI and TVPI multiples than the US, as the US pooled DPI multiple was 1.35 and the pooled TVPI multiple was 1.58 for funds of the same vintage. Rest of Europe funds in this cohort also generated high pooled multiples with a pooled DPI multiple of 1.48 and a pooled TVPI multiple of 1.79.

It is worth noting that the distribution of UK and US VC funds TVPI multiples are more similar to one another in terms of their upper and lower quartiles multiples. Both the UK and the US have higher upper and lower quartile TVPI figures than the rest of Europe funds. The pooled TVPI and DPI multiples for the rest of Europe funds lie outside the interquartile range indicating the pooled fund performance is heavily affected by large outlier funds. There are several large funds greater than £100m in size in the rest of Europe sample reporting high return multiples above the upper quartile. A single strong performing large fund will have a larger impact on the pooled return than a smaller fund with equivalent performance, which can lead to upward distortions in the pooled return. This means unless investors identify and invest in these outlier funds, actual returns would be lower than investing in UK or US funds.

One caveat is that fund coverage in the rest of Europe is substantially lower than for the UK and US. The Bank estimates over the full 2002–2020 dataset only 15% of rest of Europe VC funds report financial returns data compared to 42% in the UK and 22% in the US.⁷

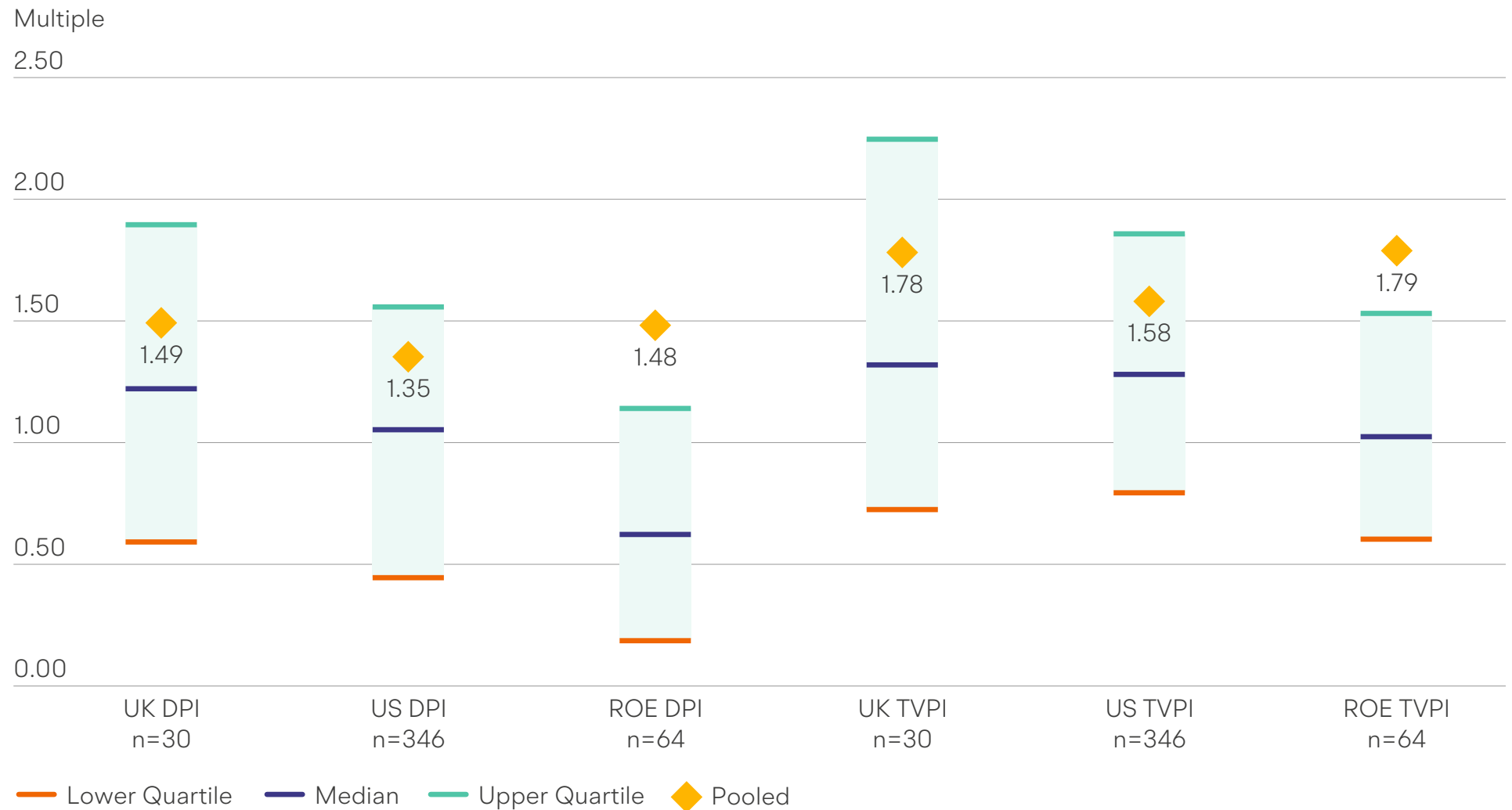
Given the lower overall coverage of European funds, it is possible that there is some additional selection bias affecting the results i.e. only the best performing European funds are sharing their data with commercial data providers. Additional caution is needed in interpreting the rest of Europe findings for these reasons.

This year’s US pooled DPI and TVPI multiple for 2002 to 2007 vintage category are almost identical to the figures reported in last year's report. This is not surprising given these funds are mainly liquidated and provides reassurance on the robustness of the US data. UK fund performance figures are slightly lower than reported previously in the 2021 VC return report (1.53 pooled DPI and 1.92 pooled multiple), but there is a larger change in the rest of Europe’s reported performance figures compared to those in last year’s report (Pooled DPI multiple of 1.80 and pooled TVPI multiple of 1.92).

Figure 1.3

Performance multiples of UK, US and rest of Europe VC funds, 2002–2007 cohort

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



Given the age of funds, and the uncertain economic outlook, it is possible UK and European VC fund managers have written down or written off their remaining unrealised investments in the prospect of future economic uncertainty. Lower rest of Europe fund coverage may also make the data series volatile compared to previously reported figures.

2008–2013 vintage year cohort

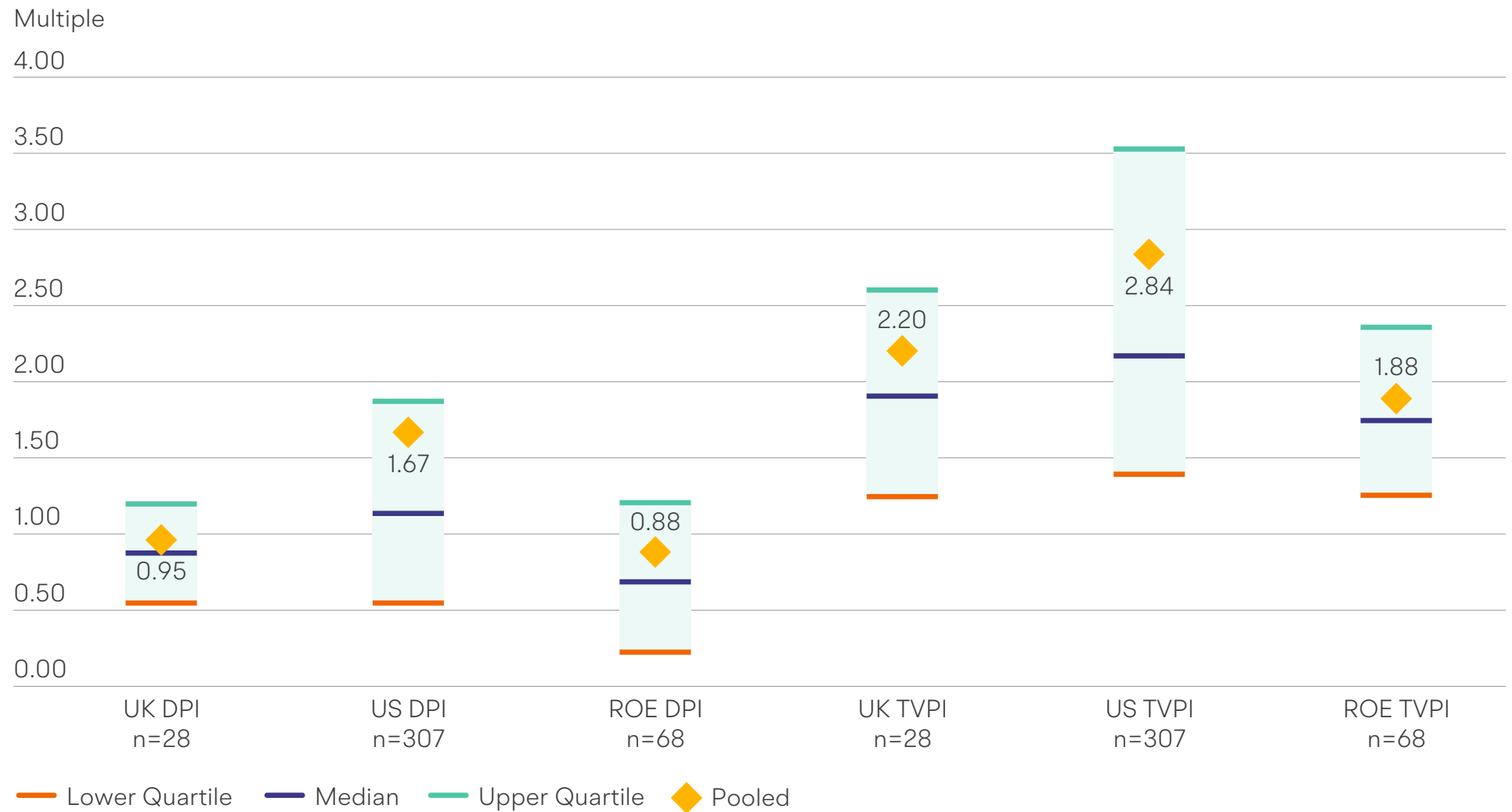
Figure 1.4 assess the performance of UK, US and rest of Europe VC funds with a 2008–2013 vintage year. UK VC funds generated a pooled DPI multiple of 0.95 and a pooled TVPI multiple of 2.20. Given that funds in this cohort have had less time to develop and exit their investments than those in the previous cohort, it is unsurprising that the DPI multiple was lower than that of the 2002–2007 cohort. Many of these funds will be approaching the end of their 10–12-year initial LP agreements, but the majority of the returns are yet to be realised.

The pooled TVPI of 2.20 is higher than for funds with a 2002–2007 vintage year which is an encouraging sign that these later vintage funds will produce either equivalent or greater performance than earlier vintages.

Figure 1.4

Performance multiples of UK, US and rest of Europe VC funds, 2008–2013 cohort

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



The median TVPI multiple of 1.90 suggests that this strong performance is broad based rather than being driven by a few outlier funds.

Despite the UK's strong performance, these multiples are lower than those reported by US funds for the same vintage years. 2008–2013 vintage US VC funds generated a pooled DPI multiple of 1.67 and a pooled TVPI multiple of 2.84. This extremely strong performance is driven by multiple US VC funds generating a TVPI multiple greater than eight with the largest reported TVPI being in excess of 28. This contrasts with the UK where the best performing fund over this period generated a TVPI multiple of 3.85. US VC funds overall performed strongly during this period with a median TVPI multiple of 2.17, higher than the 1.90 multiple generated by UK funds. Rest of Europe based VC funds also performed strongly over this period although they generated the lowest pooled multiples of all three geographies with a pooled DPI multiple of 0.88 and a pooled TVPI multiple of 1.88.

These strong performance figures show the ability of VC funds to perform countercyclically. These funds were established in the immediate aftermath of the Global Financial Crisis and subsequent recession and in the

case of the rest of Europe, the Eurozone crisis. Despite this, they have performed strongly. It has been well documented that several extremely successful companies received VC backing for the first time in this period such as Uber, Airbnb, Whatsapp, etc and have gone on to generate multibillion-dollar valuations leading to high performance multiples for their investors. This could suggest funds established in 2022 and 2023 during the forecast recession may provide strong returns for their investors.⁸

2014–2020 vintage year cohort

Figure 1.5 shows the performance for UK, US and rest of Europe funds with a vintage year between 2014 and 2020. It is too soon in the life of these funds to meaningfully assess the DPI multiple as many of these funds have not had sufficient time to develop and exit their portfolio companies. The median DPI multiple for this cohort is zero for both the UK and rest of Europe, and 0.11 for the US showing most funds have yet to realise any value from their investments. This highlights the importance of patience with VC investment as it takes many years to develop a company before a successful trade sale or IPO exit can occur.

The TVPI multiple is a more useful measure of performance for funds in this cohort. UK VC funds in this cohort have generated a pooled TVPI multiple of 2.10. This is very strong performance especially so early in the life of these funds. The strongest performing UK VC fund in the whole dataset has a TVPI multiple of nearly 14 and falls within this cohort.

US funds also performed strongly over this period, with pooled TVPI multiple of 2.19 and median TVPI multiple of 1.86 respectively. Performance of UK at this stage is promising with a pooled TVPI multiple of 2.10, just 0.09 points lower than the US suggesting performance is very close. The rest of Europe has a pooled TVPI multiple of 1.48, which is lower than the UK and US.

Caution must be taken in interpreting these high recent multiples given they are currently only 'on paper' in unrealised assets. This may suggest this recent global cohort of VC funds will go on to perform very strongly for investors, but it is also possible that some of these high valuations may not be sustained at exit, as valuations can be very volatile.

Global LP interest in VC as an asset class has expanded greatly, leading to annual records for VC fundraising and deal activity broken year after year across all three geographies. These strong TVPI performance multiples, although only indicative at this stage, help maintain LPs interest in VC.

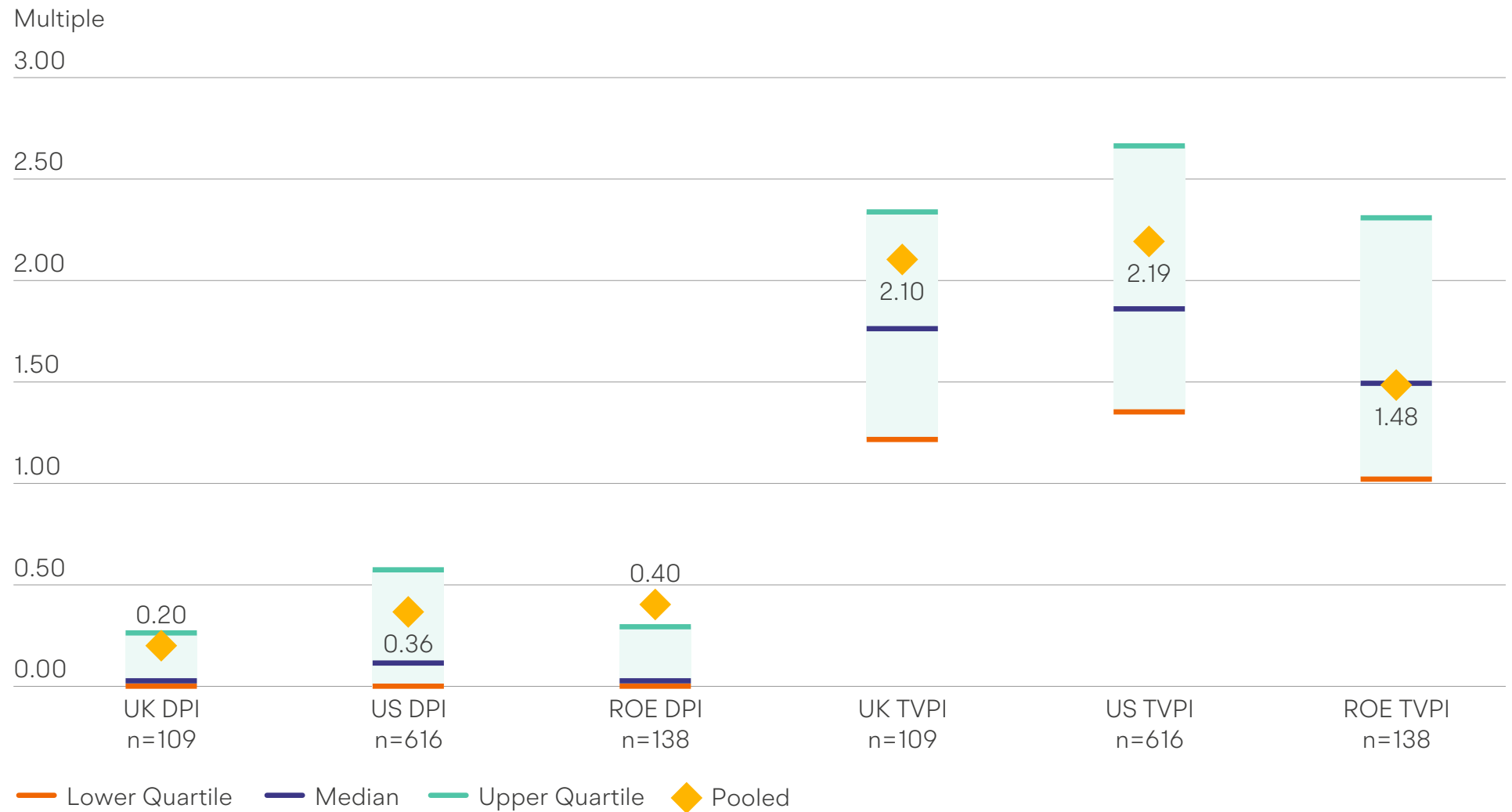
Assessment of performance compared to a year ago

Over recent years, there has been global increases in the amount of funding going into VC, which has contributed to increased valuations of venture capital backed companies. Several factors have contributed to the valuation increases including strong public markets trading at all-time highs.⁹ There was also strong exit activity in 2020 and 2021, allowing capital to be returned to investors. Recent strong VC fund raising conditions has enabled large amounts of dry powder to accumulate, combined with interest from non-traditional investors like hedge funds and mutual funds, leading to VC backed companies seeing upward pressure on valuations. Last year's VC fund manager survey showed a high proportion of fund managers (59%) reported high levels of competition for deals.

Figure 1.5

Performance multiples of UK, US and rest of Europe VC funds, 2014–2020 cohort

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



The Bank's Equity Tracker 2022¹⁰ shows company average pre-money valuations increased sharply in 2021 reaching £34.2m, an 84% increase on 2020. There were records set across all three stages, but this has mostly been driven by increases at the growth stage. These higher company valuations contribute to higher TVPI multiples as the underlying value of the portfolio has increased.

The economic environment has changed over 2022 but VC markets have largely been resilient to date. Despite greater economic uncertainty due to the invasion of Ukraine, high inflation, high energy prices and central banks rapidly increasing interest rates, UK equity finance continued its momentum into 2022, with record-breaking deal numbers and investment in the first quarter. £7.6bn was invested in Q1 2022, by far the highest amount of equity investment ever recorded in a single quarter. VC pre-money valuations have also displayed resilience in H1 2022 amid wider global uncertainty in financial markets. PitchBook's Q2 2022 European VC valuations report states "In the first half of the year, valuations across all financing stages paced above the figures in 2021, as investors and companies continued to close rounds – despite a significant decline

in valuations of publicly listed companies, particularly in the technology sector".

VC valuations are tied to periodic funding rounds, whereas public equities are subject to daily price swings based on market conditions. Only companies with an urgent need for capital have been forced into fundraising so far, but changes in valuation expectations is still to come.¹¹ Therefore, VC valuations are likely to show a slower and softer decline in their valuation multiples than public markets.

To see how recent valuation increases have impacted on reported fund performance, it is possible to see how reported performance figures differ between this year's report (which covers data up to the end of March 2022) and last year's report. Due to the time lag for funds reporting their performance, the data may not reflect current fund valuations.

Table 1 shows pooled DPI and TVPI multiples have declined slightly for funds within the 2002–2007 vintage years, but is broadly similar to the figures they were a year ago. This is expected given most of the funds are already liquidated or close to reaching the end of their life. For the more recent 2008–2013

Table 1

Changes in UK pooled multiple between 2021 and 2022 reports

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.

Cohort and multiple	2021 report	2022 report	Difference
2002–2007 vintage Pooled DPI	1.53	1.49	-0.04
2002–2007 vintage Pooled TVPI	1.92	1.78	-0.14
2008–2013 vintage Pooled DPI	1.05	0.95	-0.10
2008–2013 vintage Pooled TVPI	2.09	2.20	0.11

vintage years, the pooled DPI had declined by 0.10 points, but the pooled TVPI multiple has increased by 0.11 points compared to a year ago. Differences in the fund population between the two reports could determine these differences, and so some caution is recommended in interpreting these findings.

We have been publishing this report for four years and are able to compare reported performance of the **same funds** over multiple years. This section compares the performance of the same funds in the latest dataset (2022) and then compares performance to what they reported in last year’s report (2021). This allows us to see whether UK VC funds’ performance has changed over a 12-month period, and whether any changes in performance are down to different funds joining or leaving the dataset. Approximately 72% of UK funds are present in both datasets (121 VC funds), which makes this a robust assessment of performance over time.

Figure 1.6 shows 59% of UK funds in both datasets have increased their reported TVPI multiples since a year ago, whilst 27% have kept them constant. A minority of UK VC funds (14%) have written down their TVPI multiples compared to those reported 12 months ago. This suggests a largely positive story in terms of fund valuations, albeit as at 31st March 2022 before economic conditions worsened over the remaining part of 2022.

Compared to the US, the UK has a lower proportion of funds writing down their reported TVPI values (14% compared to 21%), but the rest of Europe has a higher proportion (23%). The US VC market is often seen to lead global trends in VC activity and so provides a barometer for future UK activity. 59% of UK funds have increased their reported TVPI multiples compared to a year ago, which is higher than the US where 52% of funds have increased their TVPI multiples. Only 35% of rest of Europe VC funds have increased their fund valuations since 2021 which may indicate more difficult market conditions than the UK or the US.

Figure 1.6

Proportion of funds changing their reported TVPI multiple in 2022 compared to their reported 2021 multiple

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.

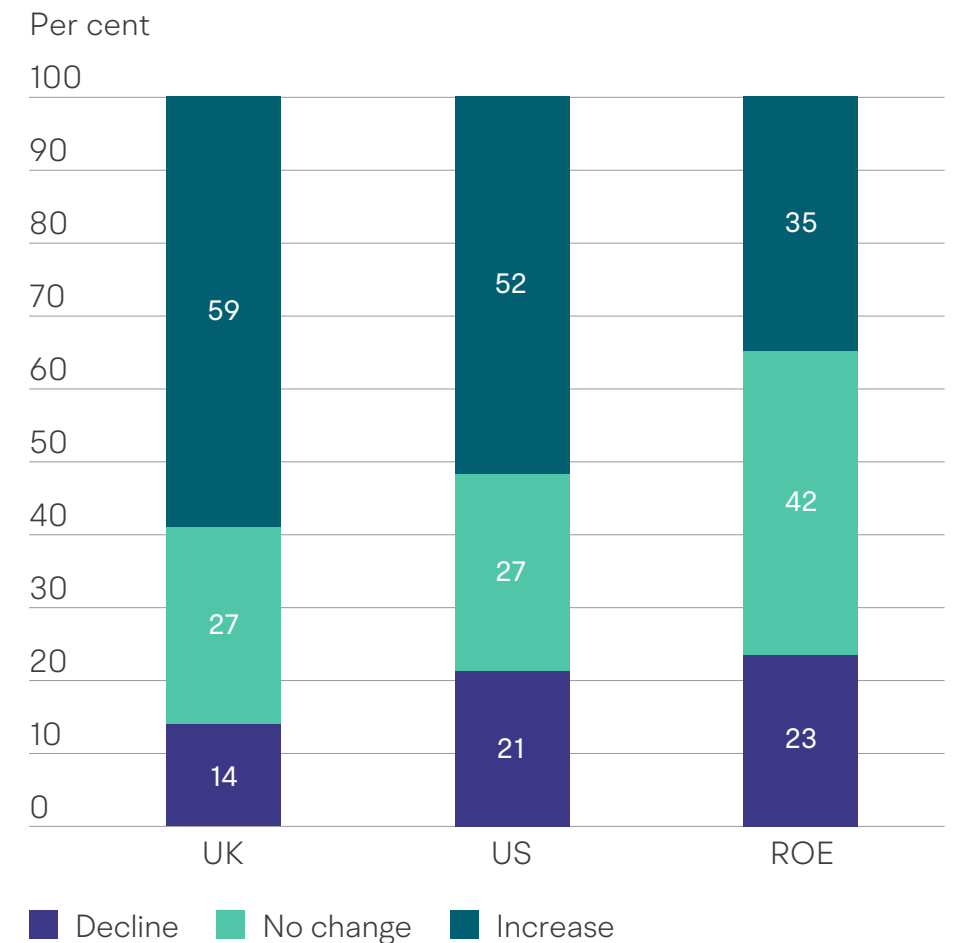


Figure 1.7 shows the pooled return multiples for UK VC funds in 2022 compared to 2021, for those funds that have reported performance in both years. The pooled DPI multiple for these funds has decreased slightly by 0.03 points over the past year, from 0.81 reported in 2021 to 0.78 in 2022. This is likely to be a result of further fund deployment (affecting the denominator) leading to a lower reported DPI multiple as the realised returns are locked in and will not have changed.

The pooled TVPI multiple has also decreased by 0.69 points, from 2.77 reported in 2020 to 2.08 in 2021. Larger funds may be more likely to mark down their TVPI multiple leading to a larger impact on the reported figures, reflecting larger funds investing in later stage companies. The median TVPI remains 0.38 points higher than a year ago (1.69 in 2022 compared to 1.33). Figure 1.7 also shows there has been a general upshift in the distribution of UK VC fund returns compared to a year ago. The decline in the pooled TVPI multiple is likely the result of larger funds writing down their investments, possibly as they are more likely to invest in later stage companies that are more exposed to changing exit conditions and deteriorating valuations.

There is a broadly comparable picture occurring in US VC funds. In terms of pooled market TVPI multiples, which have decreased by 0.57 points from 2.82 in 2021 to 2.25 points in 2022. Like the UK, the median TVPI multiple for funds in both datasets has increased since a year ago, increasing by 0.22 points. This suggests it is predominantly larger, and possibly later stage funds that are most likely to be valuing down their portfolios in response to market changes.

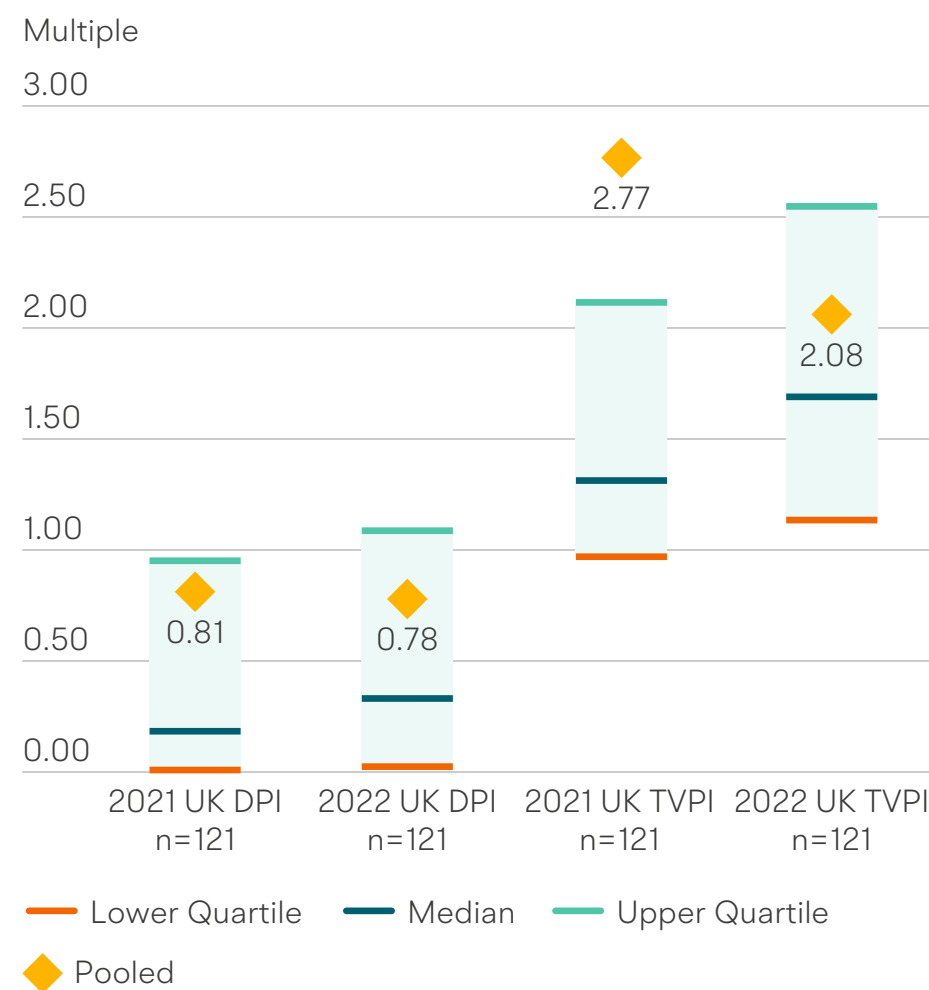
The fund performance figures presented in this report only cover up to March 2022, which does not fully reflect more recent economic conditions observed over summer and autumn 2022. The Bank undertook primary research with UK VC fund managers in September 2022, which provides further insight to suggest there is likely to be downward pressure on fund valuations over 2022 through lower competition for deals and fewer exit routes for portfolio companies.

Whilst the majority of fund managers (nine out of 14 fund managers equivalent to 64%) still see there are good quality deals in the market (See Figure A.2 in the appendix), four out of 14 fund managers (29%) reported

Figure 1.7

UK VC multiples, 2021 vs 2022 (Identical funds)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



deal flow quality had worsened over the last year. One fund manager clarified that deal flow volume remains broadly similar to previous years but founders with unreasonable expectations on their company valuations will find it difficult to raise funds.

This was echoed by another fund manager who suggested it was not the quality of individual companies that had declined compared to a year ago, but the volume of the pipeline had decreased as founders who have the cash are waiting to see how conditions turn out. Higher global interest rates are likely to have led to a fundamental shift in the cost of capital, which suggests VC markets are unlikely to go back to 2021 conditions. This will make it harder for VC backed companies to raise funding and there may be an increase in company failure rates as companies and investors adapt to new market conditions.

In terms of opportunities for exiting portfolio companies only two out of 14 fund managers (14%) thought the market was currently good, which contrasts to last year when almost all fund managers (93%) reported exit conditions were good or very good. Figure 1.8 shows around half of fund managers consulted reported the market to be currently poor or very poor in terms of exit opportunities for their companies. Nearly three quarters (ten out of 14 fund managers) reported that the market conditions for successful exits for portfolio investments have deteriorated compared on last year.

Weak exit conditions affect VC fund performance, as it reduces the opportunities and financial returns VCs can make by exiting their companies via a trade sale or Initial Public Offering (IPO). Weak exit conditions will also lead to decreased TVPI multiples, as valuations are based upon projected future exit return.

Distribution of fund returns

VC market returns are driven by the performance of the top outlier funds which generate very high returns for their investors. Previous VC returns report identified that the top performing US funds have substantially higher TVPI multiples than the top UK VC funds. This is still true in the latest data, with the top one percentile UK VC funds with a 2002–2020 vintage generating TVPI return multiples of around 14, compared to around 29 in the US. However, this is an improvement compared to last year's data when the top percentile UK VC funds with a 2002–2019 vintage generated a TVPI of around 11. This shows the UK VC market is following the US VC model with the top performing funds generating very high returns.

Figure 1.8

Fund manager views on current exit conditions and compared to previous year

Source: Bank survey of VC fund managers (2022 n=14, 2021 n=29).

Per cent
80

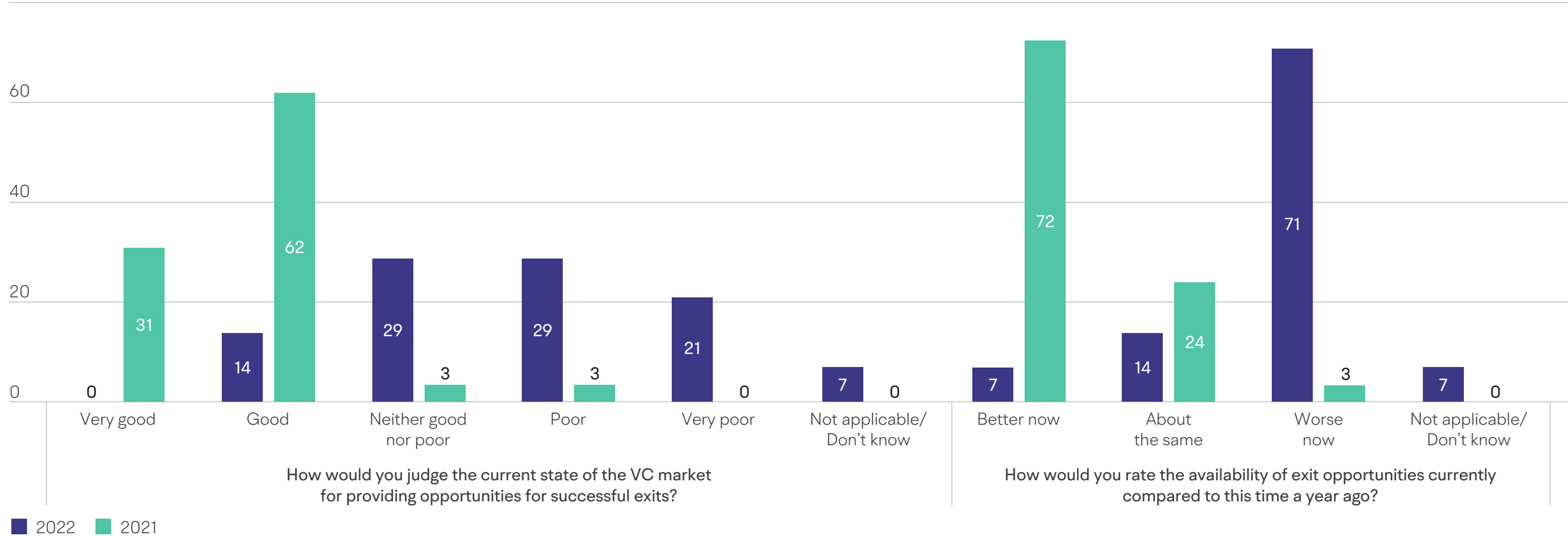


Figure 1.9 shows the distribution of fund TVPI multiples for UK, US and rest of Europe VC funds with a 2002–2020 vintage. This confirms that VC fund returns follow the Pareto principle, with a small number of outlier funds generating very strong returns whilst most funds generate lower performance. The distribution of UK VC returns largely follows the same distribution of US VC returns, except for the top 30% of funds, where US VC funds have higher TVPI performance compared to UK funds.

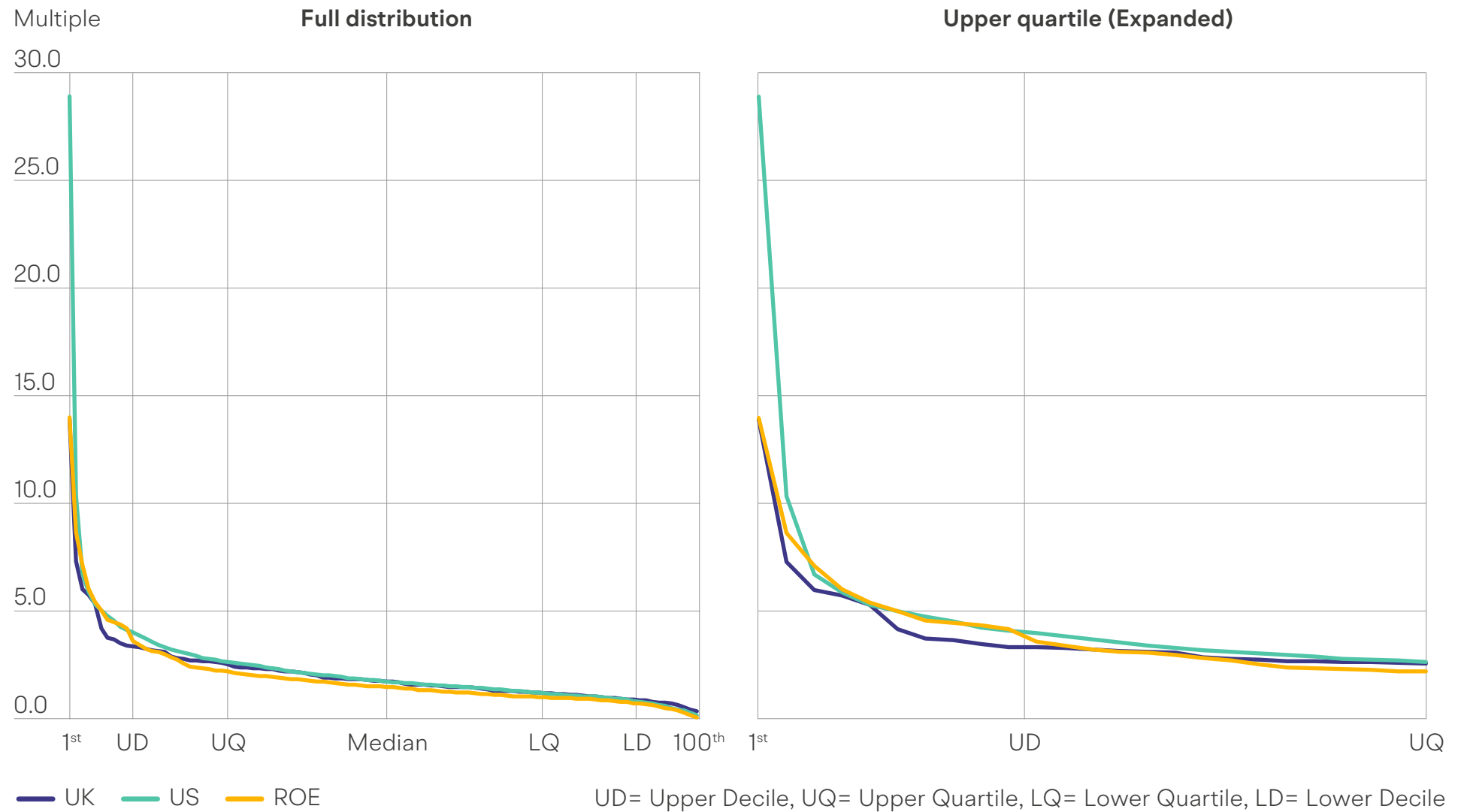
For the 167 UK VC funds reporting data, 26 generated a TVPI multiple above 3 (16%) and 38 generated a TVPI multiple between 2 and 3 (23%). Nearly half of the funds (45%) generated a TVPI multiple between one and two whilst the rest (17%) generated a TVPI multiple below 1. Whilst the top 10% of rest of Europe funds appear to have higher TVPI multiples compared to UK funds, this may reflect lower fund coverage.

The UK has a similar percentage as the US of funds generating TVPI multiples in broad returns categories. Whilst the US has a slightly higher percentage of funds reporting a TVPI over three (18% compared to 16% for the UK), the US also has slightly higher proportion of funds reporting a TVPI of less than one. In comparison, the rest of Europe has a greater proportion of funds reporting a

Figure 1.9

Ranked TVPI multiple distribution of UK, US and rest of Europe VC funds (2002–2020 vintage years)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



TVPI of less than one (28%), but similar proportions as the UK of funds reporting TVPIs greater than three (15%).

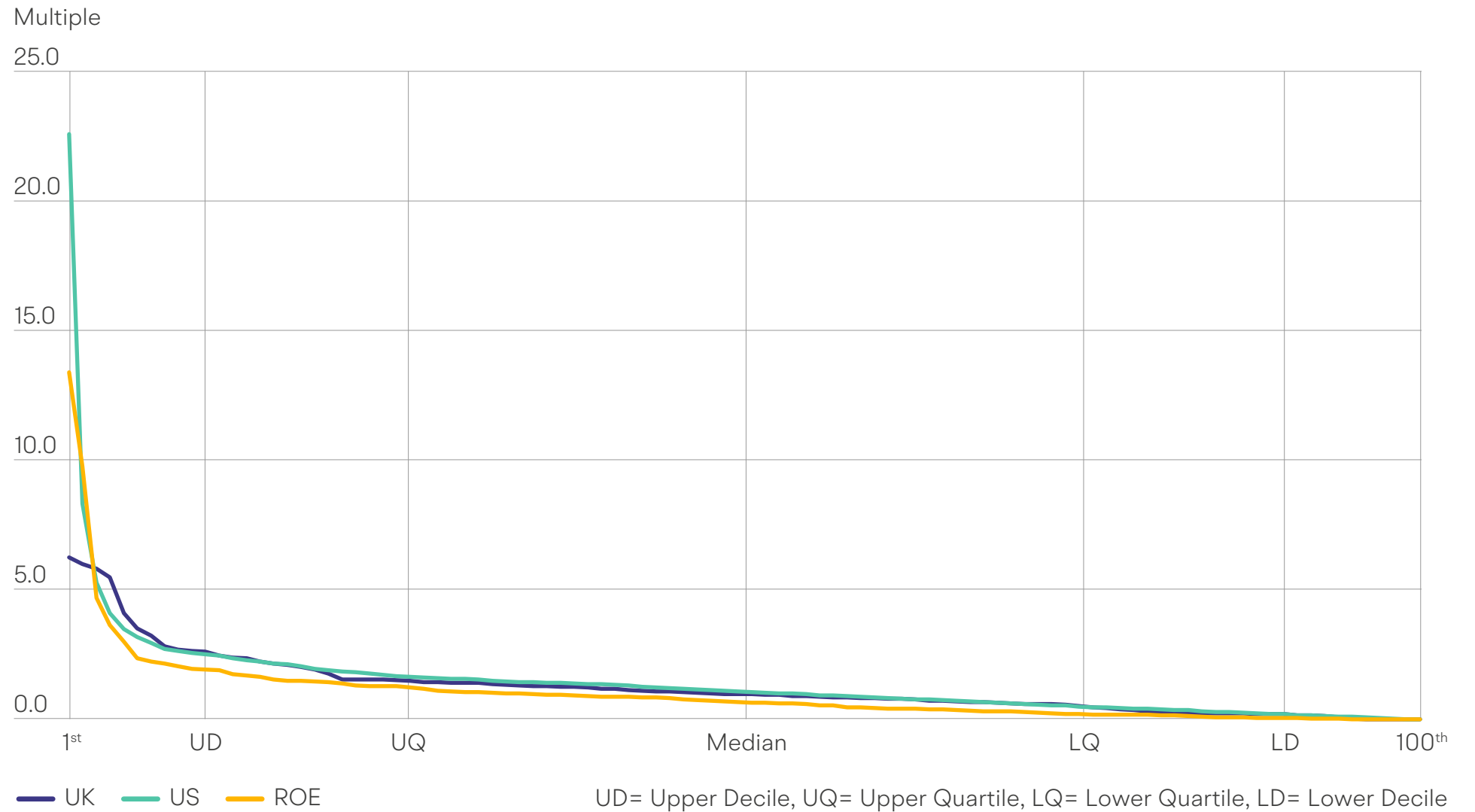
Figure 1.10 shows the distribution of fund DPI multiples for UK, US and rest of Europe VC funds with a 2002–2014 vintage. Extending the period beyond 2014 vintages would result in a long tail of funds reporting DPI multiples of 0 as they have not had sufficient time to develop and exit their investments. This would not give an accurate picture of the distribution of fund returns.

The shape of the UK’s DPI multiple distribution curve is broadly similar to that of the US except for the following differences. The top two percent of US funds generate substantially higher DPI multiples than the comparable top two percent of UK VC funds. The top US funds generate DPI multiples of nearly 23 compared to six for the UK. Between the top 2% and 10% percentiles, UK funds outperform their US counterparts, showing more consistent performance. From the 10% percentile until the 20% percentile the UK’s performance is almost identical to the US, before the US is slightly ahead, until the 58th percentile when the UK’s performance largely matches the US. In comparison, rest of Europe DPI fund performance lags behind the UK across all percentiles, other than the top two percent of funds where DPI multiples are substantially higher than the UK’s.

Figure 1.10

Ranked DPI multiple distribution of UK, US and Rest of Europe VC funds (2002–2014 vintage years)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



Section 2

Comparing British Business Bank and BPC VC fund performance to the wider market

Contents

Figure 2.1	ECF VC fund performance multiples (2006–2019 vintage years)	29
Figure 2.2	BPC VC fund performance multiples (2013–2019 vintage years)	30

This section provides an overview of the performance of VC funds the British Business Bank has invested in as a Limited Partner (LP), through its Enterprise Capital Fund (ECF) programme and through British Patient Capital (BPC).

These numbers may differ from the figures reported in the British Business Bank and BPC annual reports due to differences in the coverage of funds. For instance, the latest 2022 BPC Annual Report shows the BPC portfolio had a pooled TVPI multiple of 1.8 overall as at end of March 2022, up from 1.51 a year ago. BPC also has a pooled DPI multiple of 0.15 and an IRR of 32.9%. The BPC Annual report covers the performance all BPC funds including those classified as non-VC and those with a more recent vintage.

ECF programme

The British Business Bank has analysed the performance of the 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. 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 other private investors in the fund. In the event of good performance by the fund manager, private investors (identified below as other LPs) receive a greater share of the profits.

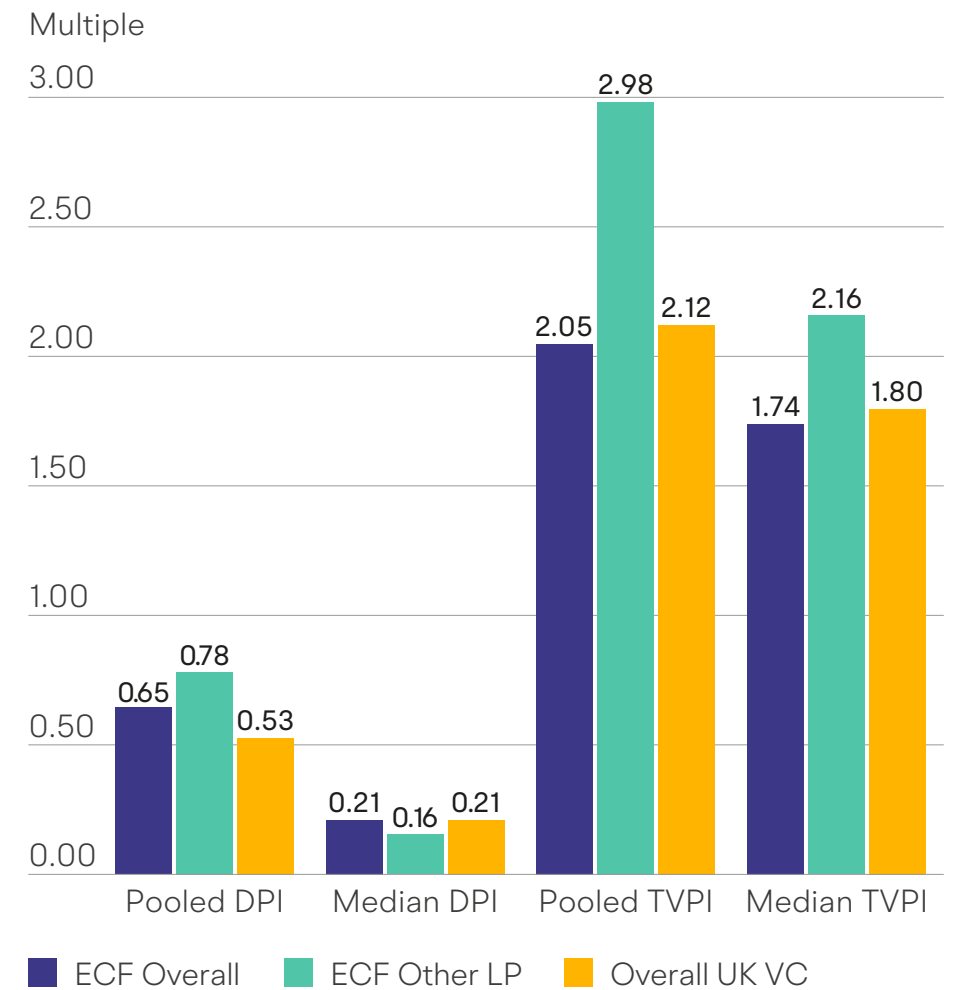
Figure 2.1 shows the overall pooled DPI multiple for VC funds invested in through the ECF programme between 2006 and 2019 is 0.65, equating to a pooled DPI multiple of 0.78 for other LPs. This is higher than the overall UK VC market pooled DPI of 0.53 for funds of the same vintage years.

VC funds within the Bank’s ECF programme have a pooled TVPI multiple of 2.05, equating to 2.98 for other LPs. Private investors in ECF supported funds therefore

Figure 2.1

ECF VC fund performance multiples (2006–2019 vintage years)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



have the potential to make substantially higher returns than the overall UK VC market (2.12 for the same vintage years), showing that the British Business Bank prioritised return mechanism is working as intended.

BPC

BPC was formed in 2018 in response to the Patient Capital Review to provide long-term equity support for UK later stage VC companies. BPC’s portfolio was seeded with investments made under the Bank’s VC Catalyst programme. This earlier programme had fund vintages between 2013–2017 and had a slightly different remit to BPC. The investment strategy of BPC has evolved from those initial seeding investment to focus more on funds that have later stage, growth equity strategies.

Figure 2.2 shows the VC funds BPC has invested in between 2013–2019 have generated a pooled DPI multiple of 0.24. This is broadly similar to the overall UK VC market pooled DPI for funds of the same vintage of 0.25.

BPC’s latest pooled DPI multiple of 0.24 is broadly similar to the one reported in last year’s report of 0.22.

The overall market figure has also stayed relatively flat at 0.25 from the 0.27 reported a year ago.

Figure 2.2 also shows the BPC pooled TVPI multiple of 1.94 is also lower than the UK VC market TVPI multiple (2.19) for funds of the same vintage (2013–2019). The BPC median fund TVPI multiple is 1.69, which is lower than the overall UK VC market multiple of 1.83.

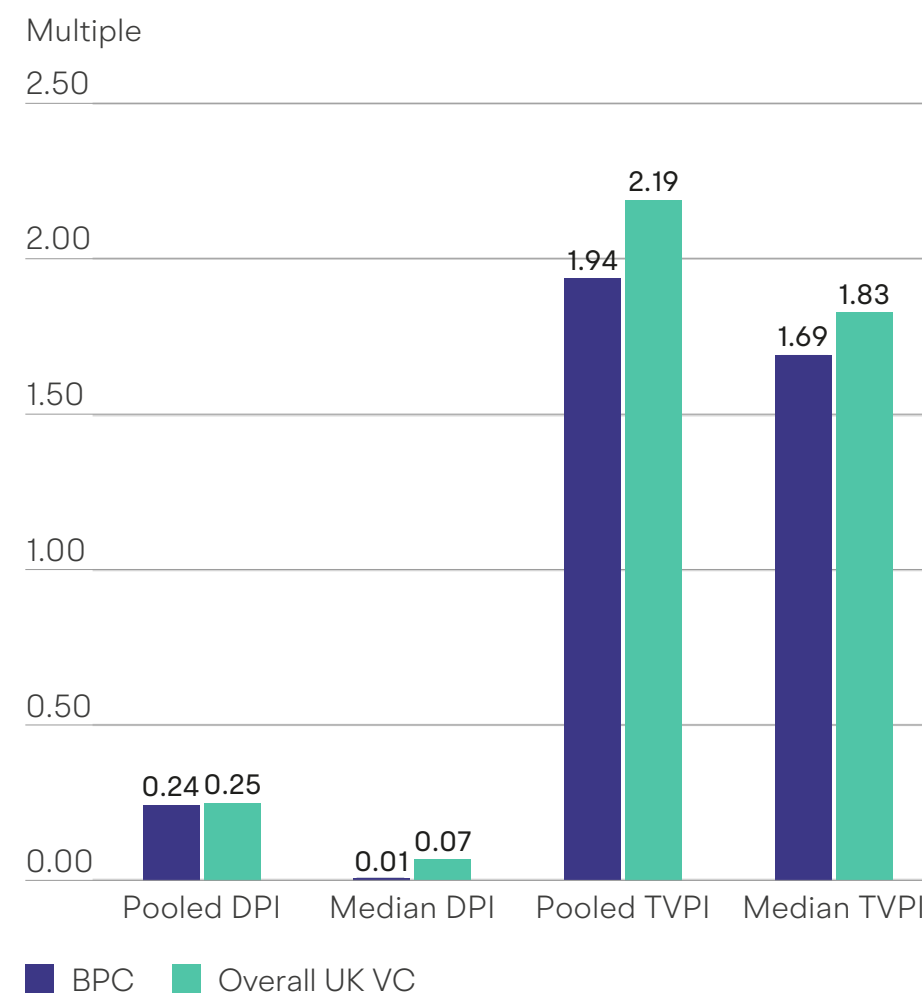
BPC portfolio funds now have a higher pooled TVPI multiple of 1.94 compared to the figures presented in last year’s report (1.73). This improvement in portfolio valuation is positive and is a similar increase to the increase seen in the overall VC market pooled TVPI multiple, which has increased from 2.00 to 2.19 in the same period.

The average vintage year for the BPC fund portfolio is half a year younger in age than the overall VC market due to BPC substantially increasing its activity in 2018. 54% of BPC portfolio funds have a 2018 to 2019 vintage compared to 41% in the overall VC market comparison. By fund value, the proportion is even greater with 58% of BPC funds established in 2018–19, compared to 48% of the overall VC market. This gives less time for the BPC portfolio to have developed compared to funds in the overall VC market.

Figure 2.2

BPC VC fund performance multiples (2013–2019 vintage years)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.



The Internal Rate of Return (IRR) measure takes into account the time value of money. BPC's mean average fund IRR return for VC funds with a 2013–2019 vintage year is 29%. The overall market IRR figure is 32%, is broadly similar to BPC's IRR. This confirms vintage year effects are affecting performance comparisons between BPC and the overall VC market using money multiple measures.

A comparison of 2013–2017 vintages shows BPC's pooled DPI multiples of 0.45 are slightly higher than the overall UK VC market pooled multiple of 0.40, which suggests the programme is performing as expected in terms of making a commercial return in line with the overall market. However, BPC's pooled TVPI multiple is 0.27 points lower than the overall market (2.35 compared to 2.62).

For 2018 and 2019 vintage funds (covering since BPC was established), BPC's performance is broadly in line with the overall market with a pooled DPI multiple of

0.06 compared to 0.04 in the overall UK VC market. The overall VC market has a pooled TVPI multiple of 1.66 compared to 1.56 for BPC, showing BPC's performance is broadly similar to the overall market, albeit slightly lower. Nearly half (46%) of UK VC funds with a 2018 to 2019 vintage submitting returns data are within the BPC portfolio, and so the overall market figures are also heavily influenced by BPC's involvement. This performance differential may be explained by fewer funds in the overall UK market disclosing their performance data, so that it is less representative of funds in the market.

It is still too early in the life of BPC to draw conclusions about the long-term performance of BPC's portfolio as many of BPC's funds are too young to be included in the analysis and the majority of the portfolio is currently unrealised.

Appendix 1

Definitions

Venture Capital

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. Many early-stage VC-backed companies are unlikely to have positive cash flows, or even be generating sales at the time of VC 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. VC-backed companies therefore differ to PE-backed companies which are more established.

This report focuses on the returns made by funds focused on making VC investments only. It does not compare the performance of returns generated from wider PE or other asset classes like public markets or infrastructure.

Financial performance metrics

There are several ways to measure VC financial returns. Deciding which measure to use is often context specific and dependent on the data available. The following measures are used to assess fund performance in this report:

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

Money multiples are the main measure used to assess fund performance throughout this report due to their availability. The Bank does not have access to the underlying cash flow data for fund managers reporting IRR data to commercial data providers.

Internal Rate of Return (IRR)

IRRs are widely used in private capital industries as they offer a way of comparing two investments with irregular cashflow timings and sizes. The IRR represents the discount rate at which the Net Present Value (NPV) of an investment's future cashflow 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.

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 financial return generated but a key limitation is that the time value for money is ignored. 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 (TVPI), but it is also useful to know the Residual Value to Paid-In Capital (RVPI) which is the difference between the two multiples:
 $TVPI = DPI + RVPI$

- **Distributions 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 fund's 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 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. The 'Book value' of unrealised investments is useful for assessing performance during the early part of a fund's 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. Globally, there are a number of well-

known later stage unicorn businesses that have received funding at a lower valuation to their previous funding 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.

- **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. Multiples tend to be a more conservative measure than IRR as a zero-rate reinvestment of cash flows is assumed.

Distribution of returns

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 return 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 the funds included.

- **Pooled return:** 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 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.

Fees

The financial return metrics presented for LP funds in this report are net of fees (i.e. fees are deducted) to show the return to investors. Fees comprise of two parts:

- **Management fees:** This allows VC funds to meet their own operating costs e.g. rent, office supplies and salaries. Management fees are usually calculated as a percentage of the funds committed and are usually charged every year the fund is in operation.

- **Carried interest (Carry):** These are performance related fees and are a proportion of fund profits from realised investments that goes to the fund manager. Carried interest is only paid if the fund is successful and has delivered at least a pre-agreed return to investors.

Appendix 2

Overview of data sources

BVCA

The British Private Equity and Venture Capital Association (BVCA) represents the interests of the UK VC and PE Industry and reports on the financial performance of its members.

BVCA's membership comprises over 700 members, including 325 private equity and venture capital firms and their investors, as well as advisers and financial institutions. The BVCA, in association with PwC, 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.¹² The report examines the performance of PE and VC funds and then benchmarks them against other asset classes, notably the UK public equity market.

Overall, 114 fund managers responded to the latest BVCA survey providing data as of 31 December 2021. Fund data is presented anonymously in pre-defined categories relating to vintage year.

Commercial data providers

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 (GPs) or LPs.

Preqin

Preqin, the Home of Alternatives™, empowers financial professionals who invest in or allocate to alternatives with essential data and insight to make confident decisions. It supports them throughout the entire investment lifecycle with critical information and leading analytics solutions. The company has pioneered rigorous methods of collecting private data for almost 20 years, enabling more than 200,000 professionals globally to streamline how they raise capital, source deals and investments, understand performance, and stay informed. For more information visit www.preqin.com.

PitchBook

PitchBook is a financial technology company that provides data on capital markets. PitchBook collects and analyses detailed data on the entire private equity, venture capital and M&A landscape - including public and private companies, investors, funds, investments and exits.

British Business Bank supported funds

The British Business Bank is the largest LP investor in UK VC.¹³ 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. The VC Catalyst programme was targeted at helping VC funds to reach a first close, which differs to the objective BPC has for increasing the amount of patient capital available to UK scale up businesses. 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 2 of the report.

The Bank has also included data on VC fund performance from its programmes delivered through a fund of funds mechanism including the UK Innovation Investment Fund (UKIIF)¹⁴ and the Managed funds¹⁵ programme.

British Business Bank fund manager survey

This year's report also includes the results of data the British Business Bank has directly collected from UK VC fund managers. The Bank collected fund level financial returns information from 14 fund managers (covering 36 funds), and also captured the views of these fund managers on current market conditions on quality of deal flow, exit opportunities for portfolio companies and the fund-raising environment. These fund managers were UK based, active in the VC market managing closed end funds, with a vintage year of between 2002 to 2020 vintage making VC investments in the UK.

Fieldwork for the survey was undertaken in September 2022 over a four-week period.

Appendix 3

Methodology for compiling dataset

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Data on individual UK VC funds with a 2002 to 2020 vintage year was downloaded from PitchBook and Preqin in September 2022. Consistent with earlier reports, 2002 was chosen as the first vintage year to avoid picking up effects from the dot-com bubble and also to be inline with BVCA reporting.

- Data from British Business Bank MI systems provided information on fund performance for funds supported under the ECF, UKIIF, Managed Funds and BPC (including VC Catalyst) programmes as these programmes are delivered by private sector fund managers that have raised funding from private sector sources.
- Funds with missing data relating to fund size, Paid in Capital (PIC), TVPI and DPI were removed from the underlying databases 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 value in relation to the reported fund size for the pooled financial return metrics. The individual reported fund TVPI and DPI multiples were used to calculate the median and quartile 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 taking advantage of initial early returns. For funds with a vintage year between 2002–2012, funds with the latest reporting date less than seven years were excluded. For funds with a vintage year of 2013 onwards, a reporting date of at least 2019 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 information reported 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 PE 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 2,527 VC funds (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.
- To increase coverage of funds, the individual funds from PitchBook, Preqin and British Business Bank were all merged into one single data file. To avoid the same fund appearing more than once, funds were deduplicated using the following sequential preference logic:
 1. British Business Bank supported fund. This information has been verified/ audited.
 2. British Business Bank survey data. This information has been supplied directly by fund managers.
 3. Most up to date reporting date. This to ensure the latest information is captured.
 4. Lowest TVPI multiple. This is to ensure the most conservative data source is chosen.

5. Largest fund. This is to ensure subsequent fund-raising closures are captured.

6. Oldest vintage.

– This gave a total combined dataset of 1,789 unique VC funds (Table A3).

Table A1

Number of VC funds 2002–2020 by data source (Raw downloaded numbers)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.

Region	Bank MI	Bank Survey	PitchBook	Preqin	Total
UK	137	36	126	88	387
US	5	-	1,594	1,319	2,918
ROE	17	-	169	311	497
Total	159	36	1,889	1,718	3,802

Table A2

Number of VC funds 2002–2020 by data source (Cleaned)

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.

Region	Bank MI	Bank Survey	PitchBook	Preqin	Total
UK	120	33	54	55	262
US	3	-	985	942	1,930
ROE	13	-	101	221	335
Total	136	33	1,140	1,218	2,527

Table A3

Number of VC funds 2002–2020 by data source (Cleaned and de-duplicated)

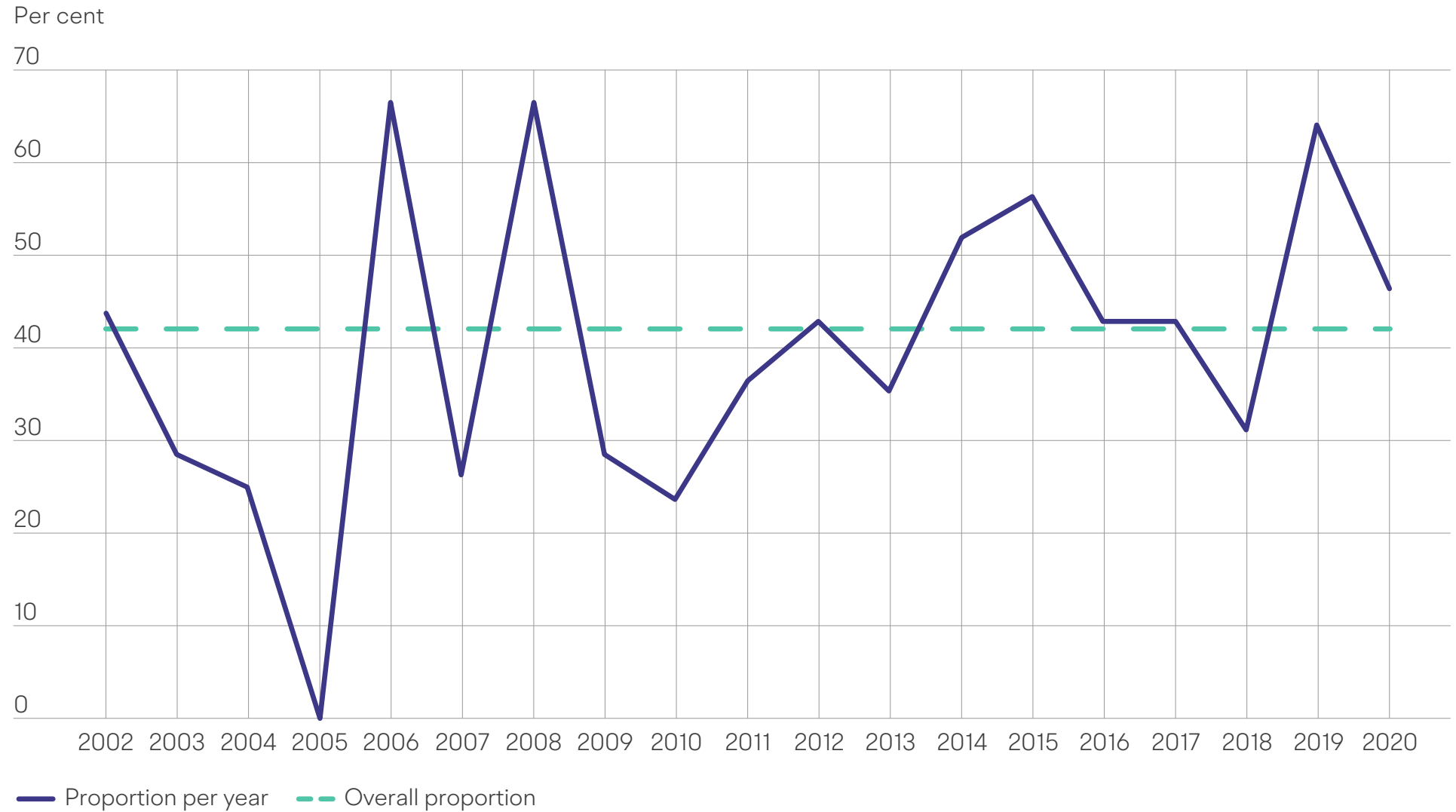
Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.

Region	Bank MI	Bank Survey	PitchBook	Preqin	Total
UK	104	17	20	26	167
US	3	-	774	562	1,339
ROE	13	-	76	194	283
Total	120	17	870	782	1,789

Figure A.1

Proportion of UK VC funds reporting financial returns data by vintage year

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



Appendix 4

Detailed UK performance by 2-year vintage category

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Table A5	TVPI performance multiple by two-year vintage category	44

Table A4

DPI performance multiple by two-year vintage category

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.

Years	Pooled Return	Upper Quartile	Median	Lower Quartile	Number of funds
2002–2003	1.39	1.48	1.24	0.73	11
2004–2005	*	*	*	*	*
2006–2007	1.58	2.40	1.09	0.24	17
2008–2009	1.23	1.33	1.06	0.86	8
2010–2011	1.11	1.17	0.88	0.77	8
2012–2013	0.74	0.99	0.41	0.16	12
2014–2015	0.80	1.01	0.35	0.24	26
2016–2017	0.16	0.28	0.07	0.01	24
2018–2019	0.04	0.01	0.00	0.00	39
2020	0.01	0.00	0.00	0.00	20

* Less than five funds

Table A5

TVPI performance multiple by two-year vintage category

Source: British Business Bank analysis of PitchBook, Preqin Ltd, Bank survey data and Bank MI data.

Years	Pooled Return	Upper Quartile	Median	Lower Quartile	Number of funds
2002–2003	1.41	1.48	1.24	0.77	11
2004–2005	*	*	*	*	*
2006–2007	1.81	2.76	1.81	0.70	17
2008–2009	2.07	2.36	1.72	1.24	8
2010–2011	1.87	2.58	1.56	1.18	8
2012–2013	2.44	2.86	2.37	1.41	12
2014–2015	2.89	3.22	2.44	1.61	26
2016–2017	2.40	2.61	2.4	1.29	24
2018–2019	1.61	1.86	1.66	1.19	39
2020	1.87	1.92	1.36	1.11	20

* Less than five funds

Appendix 5

Results from fund manager survey

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Figure A.2

Fund manager views on current quality of investments and compared to previous year

Source: Bank survey of VC fund managers (2022 n=14, 2021 n=29).

Per cent
80

60
40
20
0

Very good
Good
Neither good nor poor
Poor
Not applicable/
Don't know

How would you judge the current state of the VC market in terms of the quality of investments available?

■ 2022 ■ 2021

About the same
Improved
Worsened
Not applicable/
Don't know

How do these opportunities compare to those you were assessing this time a year ago?

■ 2022 ■ 2021

Figure A.3

Fund manager views on current competition for deals and compared to previous year

Source: Bank survey of VC fund managers (2022 n=14, 2021 n=29).

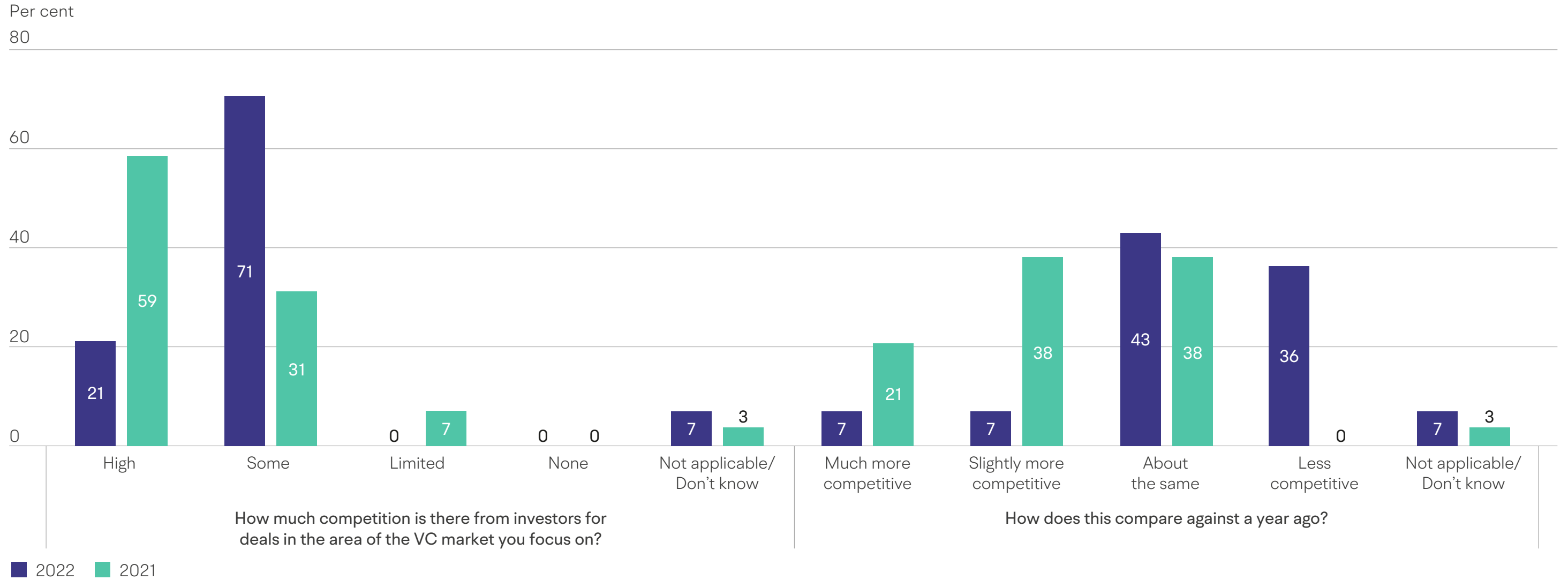
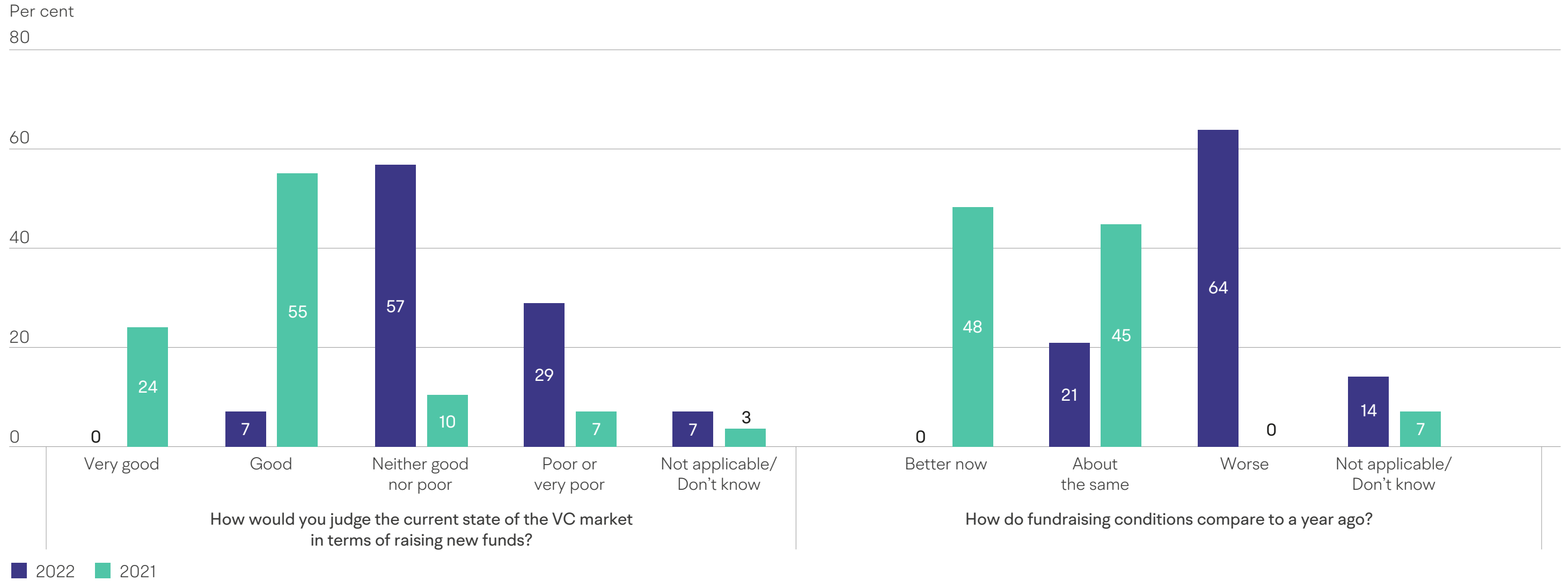


Figure A.4

Fund manager views on current fund raising conditions and compared to previous year

Source: Bank survey of VC fund managers (2022 n=14, 2021 n=29).



Endnotes

1. British Private Equity and Venture Capital Association, <https://www.bvca.co.uk/>.
2. <https://www.british-business-bank.co.uk/wp-content/uploads/2020/11/BBB-VC>Returns-Report-2020-FINAL-1.pdf>.
3. We are using PitchBook and Preqin's platform definition of Europe, which includes Russia.
4. <https://www.bvca.co.uk/Portals/0/Documents/Research/Industry%20Performance/BVCA-Performance-Measurement-Survey-2021.pdf>.
5. The BVCA now publish since inception returns from different years, which will enable the analysis to be extended in future years.
6. <https://www.british-business-bank.co.uk/small-business-equity-tracker-2022/>.
7. This is based on assessing the number of funds contained in the cleaned dataset (A3) against the number of VC funds that Preqin identified with a 2002 to 2020 vintage year. Some of the funds in the wider fund population may not be VC funds or targeted at the relevant geography.
8. <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-summary-and-minutes/2022/monetary-policy-summary-and-minutes-november-2022.pdf>.
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13. British Business Bank analysis of PitchBook.
14. <https://www.british-business-bank.co.uk/ourpartners/uk-innovation-investment-fund/>.
15. <https://www.bbinv.co.uk/managed-funds/>.

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British Business Bank plc

Steel City House
West Street
Sheffield S1 2GQ

t. 0114 206 2131

e. info@british-business-bank.co.uk

british-business-bank.co.uk

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