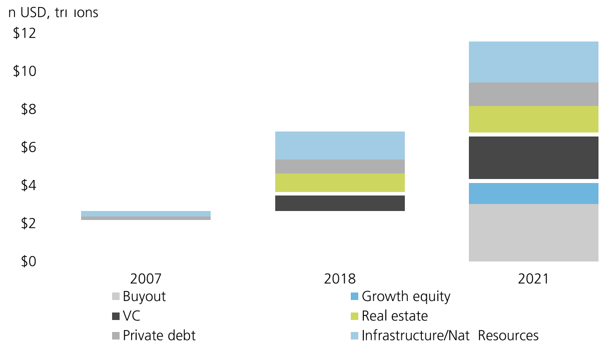
Fig. 1: The private market industry has grown rapidly in the last decade

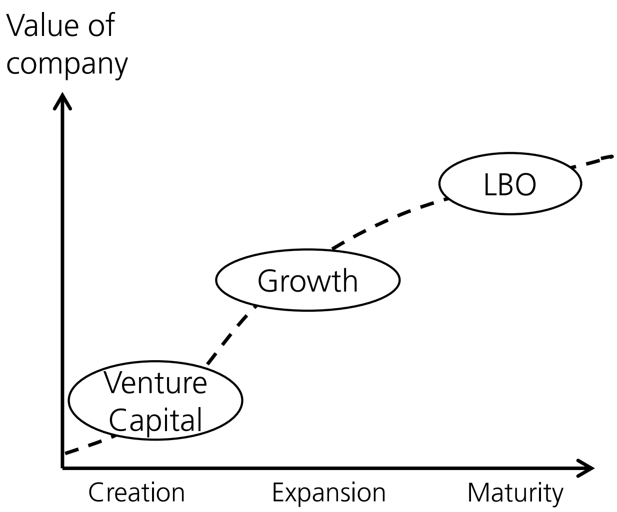
With over USD 2tn, venture capital represents more than 20% of total private markets AUM



Source: Pitchbook. Data as of 2022.

Fig. 2: Investing in a company's life cycle

VC investors typically seek to invest in startup businesses



Source: UBS

Sources of value add

Venture capital funds aim to add value to their portfolio investments via the following:

- **Identifying successful businesses with limited track records:** Given the high failure rate of VC investments (60% of deals deliver a MOIC, or multiple of invested capital, <1x), the manager's ability to identify early-stage companies that can become successful businesses is critical.
- **Providing confidence to next round of investors:** Certain high-profile VC firms can provide a vote of confidence for the next round of investors. VC firms can also source potential investors.
- **Developing product strategy:** VC firms help commercialize a product by formulating the company's value proposition and sales strategy, starting from proof of concept to establishing a successful installed base.
- **Establishing key customers:** VC firms use their network by identifying key customer groups to establish a foothold into the market. A successful entry can help the portfolio company earn a solid reputation for further opportunities.
- **Building depth in management team:** With management teams often lacking depth, VC firms help hire and establish complete teams including C-suite positions and middle management layers upon successful funding rounds.
- **Managing exit process:** VC firms tap into its transaction experience by assembling a pool of candidate acquirers, proposing potential synergies with those acquirers, conducting negotiations on behalf of the ownership syndicate, and preparing for public listing if exiting through an IPO.

Performance analysis

Introduction to vintage year returns

- Private market returns are assessed using vintage year performance, which reflects the sum of all cash flows (contributions, distributions) from funds incepted in the referenced year.
- For example, if hypothetical fund ABC reported vintage year 2005 IRR of 15%, ABC was incepted in 2005 and the IRR reflects all investment activity performed over the course of its lifecycle: contributions and distributions made in 2005, 2006, 2007, etc., until the end of the fund, which typically lasts 12–13 years.
- If hypothetical fund XYZ reported vintage year 2008 TVPI of 1.3x, the fund returned USD 1.30 for every USD 1 invested through the duration of the fund's life.

Historical performance and comparisons versus public market returns

- Using Cambridge Associates data, venture capital delivered a median 24.4% pooled vintage year IRR and 2.54x TVPI over the 1993–2018 period.
- The standard deviation of vintage year IRR was 28.8% and 1.43x on a TVPI basis over the 1993–2018 period.
- VC strategies outperformed public markets when observing public market equivalent (PME) returns. With the Russell 2000 PME of 10.1%, VC outperformed listed equities by about 1427bps over the 1993–2018 period.
- However, we note that this return premium is skewed higher due to the dot-com bubble during the mid-to-late 90s. When measuring the return premium

excluding these periods (2000–2018), the median premium narrows to 697bps net of fees.

- VC outperformed the Russell 2000 PME in 21 out of 26 vintage years during the 1993–2018 period.
- We observe significant differences in lower quartile versus upper quartile performance of VC funds, indicating elevated dispersion between fund managers and highlighting the importance of manager due diligence.

How do VC returns compare versus other private equity strategies?

- VC generated the highest median TVPI and median IRR versus that of buyout and growth equity.
- VC funds target startup stage companies. As a consequence, VC returns exhibit the highest variability versus other strategies when observing the standard deviation in IRR and TVPI multiples.
- Per vintage year, VC returns show the highest amount of outlier years versus other strategies. VC recorded the only negative IRR vintage years.

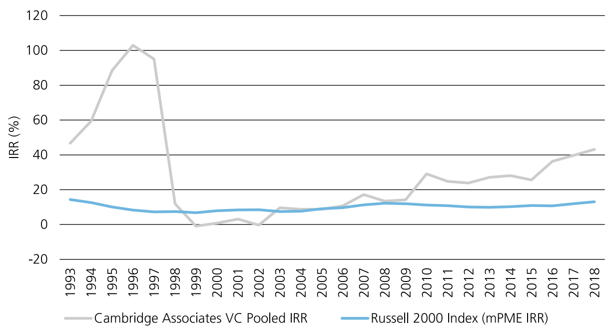
Table 1: Median pooled performance for vintage years 1993–2018

	Global Buyout	Global Growth	US Venture Capital
Median Pooled IRR (%)	16.28	14.73	24.35
Std Deviation IRR (%)	6.48	10.69	28.75
Median Pooled TVPI	1.92x	1.97x	2.54x
Std Deviation TVPI	0.24x	0.56x	1.43x

Source: Cambridge Associates, UBS. Data as of August 2022

Fig. 3: VC pooled IRR vs. Russell 2000

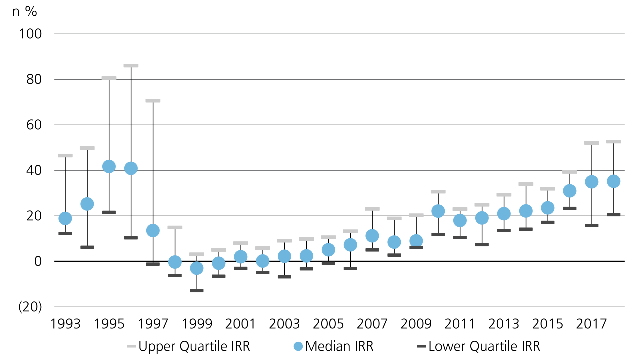
VC has outperformed public markets in 21 out of 26 vintage years between 1993 and 2018



Source: Cambridge Associates, UBS. Data as of August 2022.

Fig. 4: VC return dispersion per vintage year between 1993–2018

High level of dispersions within each vintage year show importance of manager selection

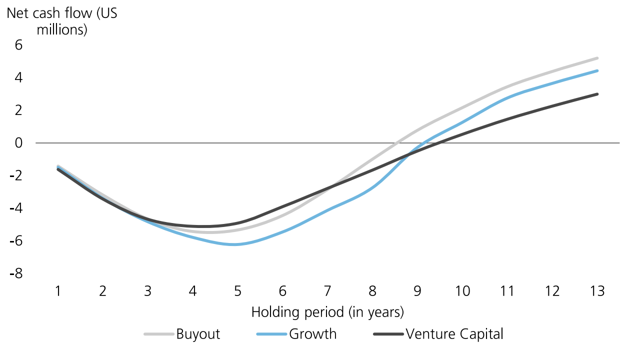


Source: Cambridge Associates, UBS. Data as of August 2022.

Venture capital and the business cycle

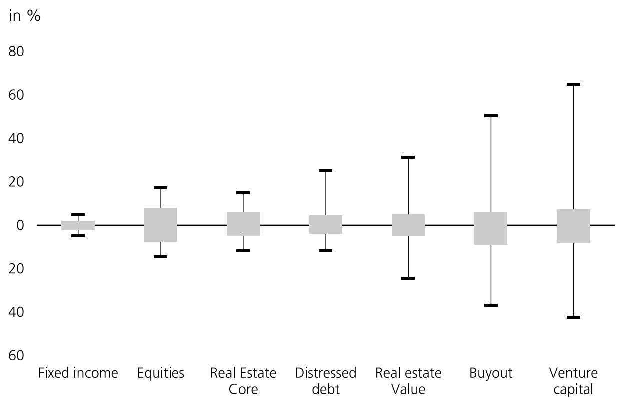
- Given the early-stage nature of VC targets, returns are susceptible to idiosyncratic risk and are generally less linked to economic cycles compared to other private equity strategies.
- However, the market environment can influence company revenue growth, entry/exit valuations, IPO/M&A sentiment, and levels of dry powder.
- Sentiment in the technology and healthcare/life sciences can drive strategy returns given deal activity concentration in these sectors.
- VC returns were highest during the 1996 vintage year. This period preceded a strong rise in valuation multiples leading up to the dot-com bubble.
- VC returns were lowest during the dot-com bubble, with (1)–2% IRR for 1999–2002 vintages.
- When observing performance before the financial crisis, VC returns in 2006–2007 vintage years outperformed the Russell 2000 PME by about 263bps. However, before the dot-com bubble in 1999–2000, VC IRR underperformed the Russell 2000 PME by about 720bps.
- When observing performance during the financial crisis, VC returns in the 2008 vintage year outperformed the Russell 2000 PME by 119bps. During the dot-com bubble in 2001–2002, VC returns underperformed the Russell 2000 PME by 700bps.

Fig. 5: Cumulative net cash flows of various private equity strategies ("J" curve)
VC strategies typically last to break even versus other PE strategies



Source: Pitchbook, UBS. Figures normalized to USD 10m commitment.

Fig. 6: Public vs. private manager fund returns
VC exhibits highest dispersion compared to other private strategies and traditional markets



Source: Pitchbook, Bloomberg, UBS. Dispersion of fund returns relative to median performance. Data references 1995-2018 for private market funds, 1995-2021 for traditional equity and fixed income funds. Data as of August 2022.

Venture capital in your portfolio

- VC strategies (especially early and mid stage) are less correlated to equity markets versus that of buyout or growth equity strategies and can provide a differentiated source of returns to investor portfolios.
- VC strategies can provide a source of absolute returns to portfolios by providing access to potentially disruptive companies at the forefront of innovation.
- The types of companies targeted by VC mangers typically do not trade on public markets due to their unproven business models.
- VC funds have taken 9–10 years to break even when measuring historical cash flows. This duration is longer than that of buyout strategies given that investment in earlier stage companies can take longer to develop and realize value.
- VC fund managers seek to earn a return premium through an active approach to identifying and partnering with companies to establish successful business models.

Risks

- Risks of investing in VC funds include blind pool structure, potential for unwanted or unintended sector risks or concentration, and competition for investment opportunities from strategic buyers and other VC firms.
- Given the complex nature of pooling together financial, business, and managerial resources, there are execution risks in enacting transformational change, particularly as a minority investor.
- VC investments are historically riskier versus other private equity strategies, with around 60% of deals returning a TVPI below 1x. Fund returns will be dependent on outlier investments that generate enough to offset losses in the portfolio.
- VC fund managers may encounter dilution on their investments upon subsequent fundraising rounds. Improved valuation of underlying investments can offset this dilution.
- Startup companies are vulnerable to business and financial risk given high sensitivity to competitive pressure and limited financial resources. Sector exposure tends to tilt toward technology and healthcare/life sciences areas.
- Ability of private equity funds to exit portfolio company investments and return capital to investors is dependent on prevailing equity market conditions.
- Other, more general private market risks also apply, including significant illiquidity of fund vehicles, limited control, disclosure, and transparency on underlying holdings, and high fees. These risks cannot be fully eliminated, but can be reduced through extensive institutional due diligence and rigorous investment and monitoring processes.

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