



GLOBAL

PitchBook Benchmarks

AS OF Q2 2023



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Introduction

PitchBook Benchmarks aim to help both LPs and GPs better understand fund performance relative to broader asset classes and other private market strategies. We present performance through several lenses—including internal rates of return (IRRs) and cash multiples—to provide a holistic view for assessing performance within and between strategies, as well as across vintage years. Furthermore, the returns of private market funds are measured relative to easily accessible public market substitutes using a public market equivalent (PME) metric.

We have expanded PitchBook Benchmarks to include additional slices based on fund strategy and geography, enabling performance comparisons with more representative peer groups. We include dedicated PitchBook Benchmarks for North America, Europe, private equity, venture capital, real estate, real assets, private debt, funds of funds, and secondaries. To easily access the supporting data in this PDF, be sure to download the accompanying Excel data packs.

As transparency is fundamental to our benchmarking efforts, subscribers to the PitchBook Platform can use the data packs to gain direct access to all the underlying funds and performance metrics used to calculate our Benchmarks.

[Commitment pacing and cash flow models](#) are available in the Portfolio Forecasting tool in the PitchBook platform.

PitchBook clients have access to [all the underlying funds](#) as well as additional benchmarking analysis using the [Custom Benchmarks Tool](#).

Additional PitchBook research specific to fund returns can be found in our [Fund Performance Evaluation analyst workspace](#).

Our goal is to provide the most transparent, comprehensive, and useful fund performance data for private market professionals. We hope that our Benchmarks prove useful in your practice, and we welcome any and all feedback that may arise as you make your way through our various benchmark groupings. Should there be any additional benchmark categories or data points you would like to see included in the future, please contact us directly at benchmarks@pitchbook.com.

Clients can access additional data and vintage years in the Excel data packs:

Global	Europe	North America	Private equity
Venture capital	Real estate	Real assets	Private debt
Funds of funds	Secondaries		

Additional PitchBook Benchmark PDFs:

Global	Europe	North America	Private equity
Venture capital	Real estate	Real assets	Private debt
Funds of funds	Secondaries		

Methodology

Fund classifications

Private equity

Buyout
Growth/expansion
Restructuring/turnaround
Diversified PE

Venture capital

Real estate

Real estate core
Real estate core plus
Real estate value added
Real estate opportunistic
Real estate distressed

Real assets

Infrastructure core
Infrastructure value added
Infrastructure opportunistic
Infrastructure greenfield
Oil & gas
Timber
Metals/mining
Agriculture

Private debt

Direct lending
Bridge financing
Distressed debt
Credit special situations
Infrastructure debt
Venture debt
Real estate debt
Mezzanine

Funds of funds

Secondaries

Note: Benchmark reports prior to the Q4 2021 release included Mezzanine under Private Equity.

Data composition

PitchBook’s fund returns data is primarily sourced from individual LP reports, serving as the baseline for our estimates of activity across an entire fund. For any given fund, return profiles will vary for LPs due to a range of factors, including fee discounts, timing of commitments and inclusion of co-investments. This granularity of LP-reported returns—all available on the PitchBook Platform—provides helpful insight to industry practitioners but results in discrepancies that must be addressed when calculating fund-level returns.

To be included in pooled calculations, a fund must have: (i) at least one LP report within two years of the fund’s vintage, and (ii) LP reports in at least 45% of applicable reporting periods. To mitigate discrepancies among multiple LPs reporting, the PitchBook Benchmarks (iii) determine returns for each fund based on data from all LP reports in a given period. For periods that lack an LP report, (iv) a

straight-line interpolation calculation is used to populate the missing data; interpolated data is used for approximately 10% of reporting periods, a figure that has been steadily declining.

Beginning with the PitchBook Benchmarks with data as of Q4 2019, we expanded our dataset to include funds with a reported IRR, even if the fund’s cash flow data does not meet the pooled calculation criteria. In our Q2 2021 report, we made additional improvements to the inclusion criteria for reported IRRs, which caused some shifts in vintage year data counts compared with prior iterations.

Due to lag in reporting for some funds and liquidation causing older funds to no longer report returns, we will pull forward cash multiples and IRR information from previous quarters under the following stipulations: (i) we extend cash multiples and IRR after five years since fund inception if reported NAV was less than 5% of commitments. (ii) If NAV is unknown or is greater than 5% after five years, we extend cash multiples and IRR if the fund is older than eight years as of the last known data (iii) For funds less than five years or are less than eight years with NAV greater than 5%, we extend cash multiples and IRRs from the prior quarter if available.

We strive to maintain consistency from edition to edition of PitchBook Benchmarks, but fund classifications will change occasionally, and new funds will be incorporated into the dataset as we gather more information.

All returns data in this report is net of fees and carry.

Definitions and calculation methodologies

Fund count: Represents how many funds are included in a given sample. Note that some funds in our dataset have a reported IRR but lack sufficient cash flow information to be included in pooled calculations.

Median calculations: Shows the middle data point for a sample group.

Public market index returns: Instances where the return of a public market index is cited, we have calculated the annualized return for the given period. All public indices are total return and denominated in US dollars.

Standard deviation: Calculates the dispersion of reported IRRs for a given peer group using the sample-based standard deviation methodology.

Vintage year: Vintage Year is the year in which a fund makes its first investment by delivering capital to a project or company. When we cannot confirm the year of first investment, the year of the fund's final close is used as the vintage year.

Internal rate of return (IRR): IRR represents the rate at which an historical series of cash flows are discounted so that the net present value of the cash flows equals zero. For pooled calculations, any remaining unrealized value in the fund is treated as a distribution in the most recent reporting period. This explains why some vintages show high IRRs but low DPI values.

Horizon IRR: Horizon IRR is a capital-weighted pooled calculation that shows the IRR for a certain range in time. For example, the one-year horizon IRR figures in the report may show the IRR performance for the one-year period beginning in Q2 20x0 through the end of Q1 20x1 while the three-year horizon IRR is for the period beginning in Q2 20x0 through the end of Q1 20x3.

Quarterly return: Calculated as the aggregate percentage change in aggregate NAV for each group of funds in a sample, considering contributions and distributions during the quarter. This makes the calculation tantamount to a quarterly compounded growth rate. Interpolated and extended data are not used in this calculation. Preliminary data is only available for the Global Benchmarks report and will be published when NAV captured nears 50% of the expected NAV for all private capital funds with cash flow history.

$$\text{Quarterly return} = \left[\left(\frac{\text{NAV at end of quarter} + \text{distributions during the quarter} - \text{contributions during the quarter}}{\text{NAV at the beginning of the quarter}} \right) \right] - 1$$

Distributions to paid-in (DPI) multiple: A measurement of the capital that has been distributed back to LPs as a proportion of the total paid-in, or contributed, capital. DPI is also known as the cash-on-cash multiple or the realization multiple.

Remaining value to paid-in (RVPI) multiple: A measurement of the unrealized return of a fund as a proportion of the total paid-in, or contributed, capital.

Total value to paid-in (TVPI) multiple: A measurement of both the realized and unrealized value of a fund as a proportion of the total paid-in, or contributed, capital. Also known as the investment multiple, TVPI can be found by adding together the DPI and RVPI of a fund.

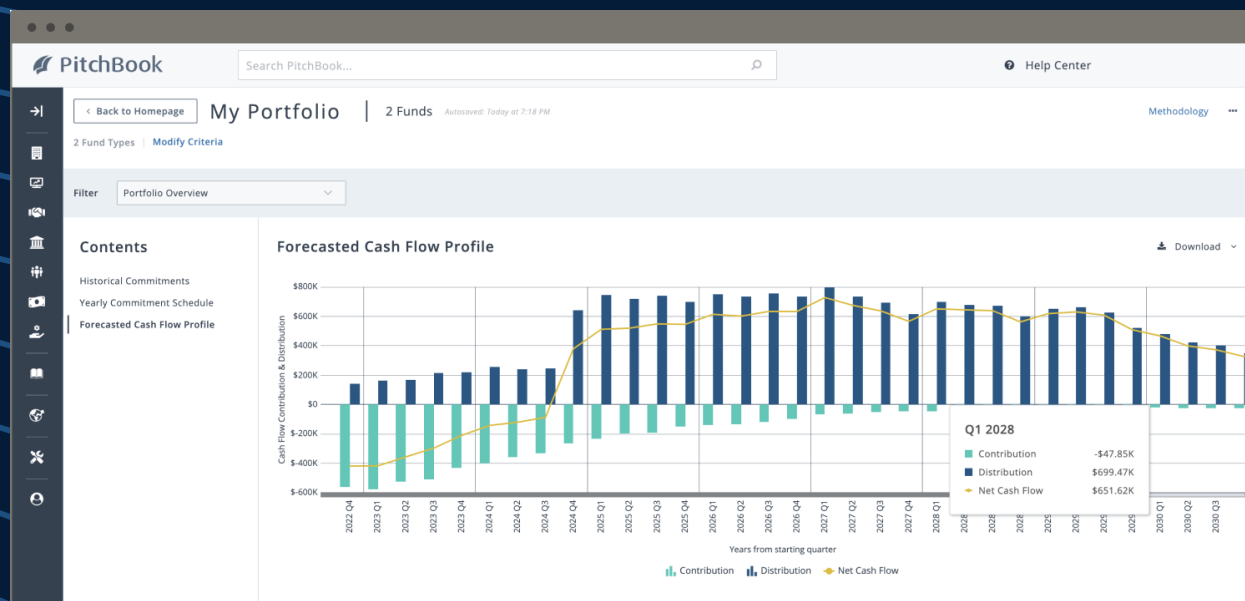
Pooled calculations: Pooled calculations combine cashflow data from a group of funds to create a capital-weighted IRR value. All cash flows and NAVs for each fund in the sample group (e.g. all private capital funds, 2004 vintage VC funds, etc.) are aggregated in the calculation. For vintage-specific calculations, we begin the calculation in Q1 of the vintage year, regardless of which quarter a fund first called capital. In cases where the sample has unrealized value, the ending NAV is treated as a cash outflow in the last reporting period.

Equal-weighted pooled calculations: Using the same methodology as the pooled calculations, the equal-weighted version expresses each fund's cash flows and ending NAV as a ratio of fund size. The result is that each fund in these calculations has an equal impact on the output, regardless of the fund size.

Public market equivalent (PME) calculations: PME metrics benchmark the performance of a fund (or group of funds) against an index. A white paper detailing the calculations and methodology behind the PME benchmarks can be found at pitchbook.com. [PitchBook News & Analysis](#) also contains several articles with PME benchmarks and analysis. All PME figures are calculated using the Kaplan-Schoar PME method: When using a KS-PME, a value greater than 1.0 implies outperformance of the fund over the public index (net of all fees).

$$\text{PME}_{\text{KS-TVPI}, T} = \frac{\frac{\text{NAV}_T}{I_T} + \sum_{t=0}^T \left(\frac{\text{distribution}_t}{I_t} \right)}{\sum_{t=0}^T \left(\frac{\text{contribution}_t}{I_t} \right)}$$

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Helping allocators answer the important questions when it comes to managing private fund structures in their portfolios

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With these models, you can confidently forecast the cash flows of private market funds and develop a commitment schedule to achieve your target allocations.

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Private capital

Private capital

Horizon IRRs

Strategy	Q3 2023*	Q2 2023	1-year	3-year	5-year	10-year	15-year	20-year
Private capital	0.18%	2.15%	4.43%	18.76%	13.95%	13.47%	10.61%	12.04%
Private equity	0.27%	2.94%	6.56%	22.90%	17.56%	16.41%	12.36%	14.55%
Venture capital	-0.66%	-0.04%	-7.96%	18.05%	16.43%	15.13%	11.07%	10.37%
Real estate	2.34%	0.25%	-1.23%	13.04%	9.30%	10.98%	7.00%	7.92%
Real assets	-2.45%	2.35%	9.38%	15.66%	8.48%	7.78%	7.48%	8.09%
Private debt	0.25%	1.59%	6.94%	10.09%	7.71%	8.21%	8.24%	8.81%
Funds of funds	3.18%	1.17%	-3.66%	20.19%	15.79%	13.74%	9.96%	10.95%
Secondaries	0.62%	1.58%	0.17%	20.89%	14.39%	13.45%	11.79%	12.82%
S&P 500	-3.27%	16.89%	19.59%	14.60%	12.32%	12.81%	10.88%	10.04%
Morningstar Global	-3.19%	13.49%	16.73%	11.27%	8.16%	9.15%	7.23%	8.95%
MSCI World Small Cap Growth	-5.90%	11.52%	16.36%	7.00%	5.31%	9.17%	7.94%	10.09%
Morningstar Global Real Estate	-5.77%	0.98%	-5.14%	1.96%	0.56%	3.79%	4.27%	7.42%
Morningstar Real Assets	-3.75%	2.11%	1.94%	6.47%	3.60%	3.00%	3.23%	5.77%
Morningstar Global High Yield	0.12%	5.84%	10.05%	2.50%	2.62%	3.79%	5.99%	6.33%

*For private fund strategies these are preliminary quarterly returns.

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Note: All public index values are total return CAGRs.

Private capital

Equal-weighted horizon IRRs

Strategy	Q3 2023*	Q2 2023	1-year	3-year	5-year	10-year	15-year	20-year
Private capital	0.50%	1.90%	1.02%	18.64%	14.03%	13.07%	10.39%	11.31%
Private equity	0.78%	3.04%	7.21%	23.73%	17.11%	15.37%	11.96%	14.46%
Venture capital	0.38%	0.05%	-8.63%	21.94%	18.01%	15.13%	10.88%	9.82%
Real estate	-0.85%	0.55%	-1.32%	11.49%	9.31%	10.24%	7.13%	7.70%
Real assets	-1.17%	2.30%	7.63%	13.59%	7.37%	7.06%	7.06%	8.53%
Private debt	1.53%	2.36%	6.42%	9.64%	7.88%	8.87%	8.19%	9.12%
Funds of funds	1.51%	1.30%	-4.90%	20.93%	16.52%	14.86%	12.11%	12.31%
Secondaries	-0.01%	5.40%	4.58%	19.75%	12.94%	12.31%	10.55%	12.01%
S&P 500	-3.27%	16.89%	19.59%	14.60%	12.32%	12.81%	10.88%	10.04%
Morningstar Global	-3.19%	13.49%	16.73%	11.27%	8.16%	9.15%	7.23%	8.95%
MSCI World Small Cap Growth	-5.90%	11.52%	16.36%	7.00%	5.31%	9.17%	7.94%	10.09%
Morningstar Global Real Estate	-5.77%	0.98%	-5.14%	1.96%	0.56%	3.79%	4.27%	7.42%
Morningstar Real Assets	-3.75%	2.11%	1.94%	6.47%	3.60%	3.00%	3.23%	5.77%
Morningstar Global High Yield	0.12%	5.84%	10.05%	2.50%	2.62%	3.79%	5.99%	6.33%

*For private fund strategies these are preliminary quarterly returns.

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Note: All public index values are total return CAGRs.

Annual horizon IRRs

Select global strategies

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	15-year horizon IRR
Private debt 19.5%	Growth/ expansion 20.6%	Oil & gas 19.6%	Secondaries 14.9%	Venture capital 21.5%	Venture capital 20.3%	Buyout 13.6%	Oil & gas 19.3%	Buyout 19.8%	Growth/ expansion 18.2%	Growth/ expansion 19.5%	Venture capital 35.1%	Venture capital 57.2%	Oil & gas 32.0%	Infrastructure 7.0%	Growth/ expansion 13.9%
Buyout 8.4%	Secondaries 20.5%	Secondaries 13.9%	Buyout 14.7%	Real estate 18.6%	Infrastructure 14.1%	Venture capital 12.4%	Buyout 12.5%	Secondaries 16.0%	Venture capital 18.1%	Venture capital 17.0%	Growth/ expansion 33.5%	Growth/ expansion 51.5%	Infrastructure 9.7%	Buyout 6.8%	Buyout 12.2%
Growth/ expansion 7.6%	Private debt 18.4%	Venture capital 10.8%	Private debt 13.9%	Buyout 18.0%	Growth/ expansion 13.5%	Growth/ expansion 11.9%	Private capital 10.0%	Growth/ expansion 15.6%	Funds of funds 16.7%	Buyout 15.9%	Funds of funds 24.0%	Secondaries 45.9%	Real estate 6.6%	Private capital 4.3%	Secondaries 11.8%
Oil & gas 5.1%	Buyout 17.4%	Growth/ expansion 10.1%	Growth/ expansion 13.1%	Growth/ expansion 17.5%	Real estate 13.1%	Funds of funds 11.9%	Infrastructure 9.2%	Private capital 14.8%	Secondaries 14.2%	Funds of funds 12.0%	Buyout 21.1%	Funds of funds 45.2%	Private debt 4.4%	Private debt 3.7%	Venture capital 11.1%
Private capital 2.4%	Oil & gas 17.1%	Real estate 9.0%	Private capital 12.6%	Private capital 15.8%	Funds of funds 12.9%	Real estate 11.6%	Real estate 8.9%	Real estate 13.1%	Infrastructure 12.0%	Private capital 11.6%	Private capital 15.4%	Buyout 44.8%	Secondaries 4.1%	Growth/ expansion 2.3%	Private capital 10.6%
Funds of funds 1.2%	Private capital 15.7%	Private capital 8.2%	Real estate 11.1%	Funds of funds 11.7%	Buyout 12.5%	Infrastructure 10.4%	Growth/ expansion 8.6%	Funds of funds 12.2%	Buyout 10.9%	Secondaries 9.7%	Secondaries 11.7%	Oil & gas 44.0%	Private capital 0.4%	Secondaries 1.9%	Funds of funds 10.0%
Venture capital -0.1%	Venture capital 11.8%	Infrastructure 8.1%	Funds of funds 8.0%	Private debt 11.3%	Private capital 12.4%	Private capital 10.3%	Private debt 8.6%	Private debt 10.4%	Private capital 10.8%	Private debt 8.2%	Infrastructure 7.9%	Private capital 38.2%	Buyout -0.7%	Funds of funds 1.2%	Infrastructure 9.0%
Infrastructure -3.5%	Real estate 11.1%	Buyout 7.9%	Infrastructure 7.3%	Secondaries 10.2%	Secondaries 12.3%	Secondaries 10.2%	Funds of funds 7.3%	Venture capital 9.7%	Real estate 7.5%	Real estate 8.0%	Real estate 4.3%	Real estate 27.2%	Funds of funds -5.8%	Real estate 0.1%	Private debt 8.2%
Secondaries -7.8%	Infrastructure 6.5%	Funds of funds 6.8%	Venture capital 7.3%	Oil & gas 7.0%	Private debt 10.8%	Private debt 5.2%	Secondaries 7.2%	Oil & gas 8.5%	Private debt 5.8%	Infrastructure 7.0%	Private debt 3.3%	Private debt 17.8%	Growth/ expansion -6.7%	Venture capital -0.6%	Real estate 7.0%
Real estate -35.5%	Funds of funds 5.1%	Private debt 3.3%	Oil & gas 7.1%	Infrastructure 4.4%	Oil & gas -2.7%	Oil & gas -21.5%	Venture capital 0.2%	Infrastructure 7.7%	Oil & gas 4.2%	Oil & gas -12.0%	Oil & gas -20.5%	Infrastructure 15.8%	Venture capital -17.4%	Oil & gas -2.1%	Oil & gas 5.5%

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private equity

Private equity

IRRs by vintage

Pooled IRRs

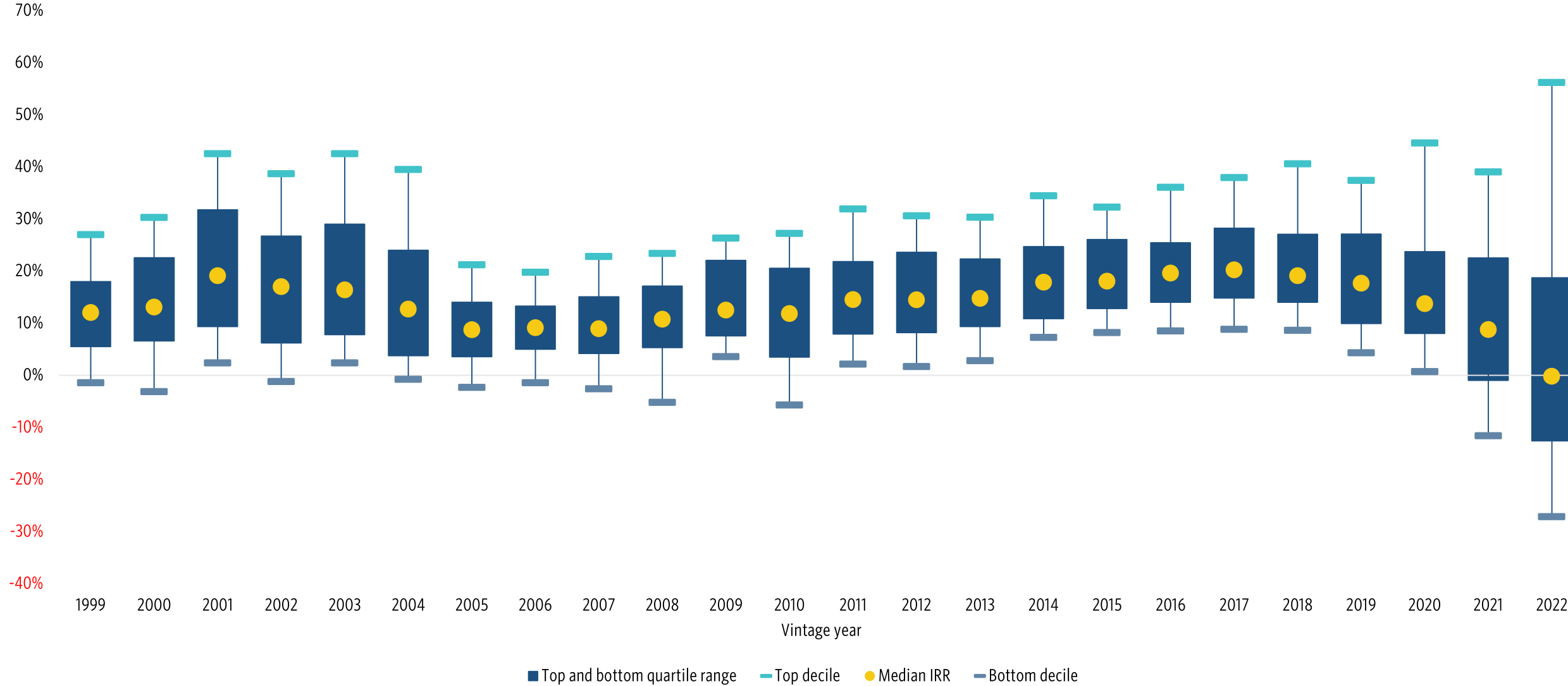
IRR quantiles

Vintage year	Pooled IRR	Equal-weighted pooled IRR	Number of funds	Top decile	Top quartile	Median IRR	Bottom quartile	Bottom decile	Standard deviation	Number of funds
1999	10.94%	10.80%	38	26.96%	17.97%	12.01%	5.49%	-1.45%	11.64%	87
2000	15.09%	12.43%	51	30.25%	22.54%	13.05%	6.56%	-3.19%	12.53%	110
2001	27.18%	22.29%	28	42.50%	31.75%	19.10%	9.33%	2.35%	18.95%	66
2002	20.41%	17.40%	29	38.66%	26.70%	16.98%	6.20%	-1.24%	17.92%	59
2003	16.73%	14.01%	30	42.48%	29.00%	16.37%	7.78%	2.36%	33.40%	75
2004	10.37%	10.89%	43	39.45%	23.98%	12.66%	3.75%	-0.81%	19.27%	74
2005	9.87%	9.36%	69	21.16%	14.00%	8.70%	3.53%	-2.36%	13.66%	113
2006	8.26%	8.20%	100	19.74%	13.25%	9.10%	5.00%	-1.46%	10.56%	163
2007	8.99%	9.28%	112	22.77%	15.05%	8.90%	4.18%	-2.61%	12.77%	184
2008	13.19%	11.07%	99	23.33%	17.10%	10.73%	5.30%	-5.23%	17.29%	139
2009	12.41%	13.65%	38	26.30%	22.05%	12.48%	7.57%	3.55%	15.78%	56
2010	11.35%	11.64%	45	27.19%	20.53%	11.80%	3.46%	-5.75%	13.94%	69
2011	14.67%	14.92%	75	31.88%	21.78%	14.51%	7.90%	2.10%	17.21%	101
2012	15.69%	14.86%	90	30.57%	23.60%	14.45%	8.16%	1.63%	14.76%	114
2013	14.38%	14.37%	89	30.30%	22.31%	14.75%	9.34%	2.78%	11.34%	105
2014	19.37%	18.69%	82	34.42%	24.67%	17.85%	10.84%	7.24%	13.55%	102
2015	19.97%	19.35%	92	32.25%	26.02%	18.03%	12.79%	8.15%	10.14%	104
2016	19.68%	20.78%	107	36.06%	25.41%	19.59%	14.00%	8.48%	13.22%	122
2017	23.28%	21.63%	107	37.91%	28.20%	20.20%	14.80%	8.80%	14.32%	121
2018	19.78%	20.99%	123	40.56%	27.05%	19.07%	13.99%	8.59%	15.30%	143
2019	20.83%	19.33%	132	37.37%	27.07%	17.66%	9.92%	4.28%	14.29%	164
2020	18.94%	20.97%	101	44.54%	23.70%	13.74%	8.02%	0.68%	21.28%	125
2021	9.07%	13.57%	162	39.00%	22.50%	8.75%	-1.01%	-11.62%	20.73%	179
2022	-1.94%	18.04%	91	56.16%	18.68%	-0.21%	-12.60%	-27.18%	55.66%	100

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private equity

IRRs by vintage



Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private equity

PMEs by vintage

Vintage year	S&P 500			Morningstar Global			Number of funds
	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	
1999	10.94%	7.08%	1.44	10.94%	6.57%	1.26	38
2000	15.09%	6.79%	1.45	15.09%	5.94%	1.28	51
2001	27.18%	7.57%	1.65	27.18%	6.85%	1.49	28
2002	20.41%	8.48%	1.46	20.41%	7.86%	1.34	29
2003	16.73%	10.30%	1.45	16.73%	9.39%	1.39	30
2004	10.37%	9.20%	1.30	10.37%	7.84%	1.27	43
2005	9.87%	9.31%	1.18	9.87%	7.59%	1.26	69
2006	8.26%	9.29%	1.03	8.26%	6.99%	1.15	100
2007	8.99%	9.06%	0.93	8.99%	6.35%	1.07	112
2008	13.19%	9.93%	0.99	13.19%	6.69%	1.15	99
2009	12.41%	14.52%	0.94	12.41%	11.45%	1.10	38
2010	11.35%	12.66%	0.95	11.35%	8.87%	1.12	45
2011	14.67%	12.22%	1.05	14.67%	8.14%	1.23	75
2012	15.69%	12.81%	1.10	15.69%	9.09%	1.26	90
2013	14.38%	12.62%	1.07	14.38%	8.68%	1.22	89
2014	19.37%	11.47%	1.28	19.37%	7.78%	1.46	82
2015	19.97%	11.08%	1.23	19.97%	7.90%	1.38	92
2016	19.68%	13.24%	1.23	19.68%	10.30%	1.38	107
2017	23.28%	11.93%	1.34	23.28%	8.83%	1.47	107
2018	19.78%	10.48%	1.21	19.78%	6.55%	1.29	123
2019	20.83%	12.70%	1.25	20.83%	9.12%	1.31	132
2020	18.94%	12.15%	1.20	18.94%	8.97%	1.24	101
2021	9.07%	5.45%	1.07	9.07%	1.01%	1.09	162
2022	-1.94%	-3.03%	0.95	-1.94%	-3.93%	0.96	91

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private equity

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
1999	1.63x	1.61x	0.02x	1.68x	1.65x	0.04x	38
2000	1.80x	1.78x	0.01x	1.73x	1.70x	0.03x	51
2001	2.10x	2.10x	0.01x	1.95x	1.94x	0.00x	28
2002	1.91x	1.91x	0.01x	1.82x	1.81x	0.01x	29
2003	1.86x	1.85x	0.01x	1.75x	1.73x	0.03x	30
2004	1.67x	1.66x	0.01x	1.64x	1.61x	0.03x	43
2005	1.62x	1.59x	0.03x	1.58x	1.53x	0.04x	69
2006	1.54x	1.51x	0.03x	1.52x	1.48x	0.04x	100
2007	1.54x	1.50x	0.04x	1.55x	1.49x	0.06x	112
2008	1.68x	1.63x	0.05x	1.60x	1.53x	0.07x	99
2009	1.64x	1.55x	0.09x	1.76x	1.63x	0.13x	38
2010	1.84x	1.59x	0.26x	1.78x	1.51x	0.27x	45
2011	1.87x	1.61x	0.26x	1.91x	1.62x	0.29x	75
2012	1.81x	1.39x	0.42x	1.75x	1.40x	0.35x	90
2013	1.74x	1.32x	0.43x	1.80x	1.34x	0.46x	89
2014	2.10x	1.36x	0.74x	2.09x	1.39x	0.70x	82
2015	1.94x	1.19x	0.74x	1.96x	1.16x	0.80x	92
2016	1.90x	0.92x	0.98x	1.91x	0.96x	0.95x	107
2017	1.85x	0.61x	1.23x	1.75x	0.68x	1.07x	107
2018	1.48x	0.34x	1.14x	1.58x	0.39x	1.19x	123
2019	1.42x	0.21x	1.22x	1.40x	0.23x	1.17x	132
2020	1.26x	0.13x	1.12x	1.31x	0.16x	1.16x	101
2021	1.10x	0.05x	1.05x	1.17x	0.09x	1.08x	162
2022	0.99x	0.03x	0.96x	1.14x	0.06x	1.08x	91

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private equity

Multiples by vintage

Vintage year	TVPI					DPI					Number of funds
	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	
1999	2.54x	2.11x	1.63x	1.18x	0.98x	2.45x	2.08x	1.63x	1.17x	0.98x	38
2000	2.70x	2.18x	1.70x	1.30x	0.83x	2.70x	2.18x	1.69x	1.24x	0.82x	51
2001	2.71x	2.35x	1.90x	1.52x	1.16x	2.71x	2.35x	1.90x	1.52x	1.16x	28
2002	2.58x	2.11x	1.76x	1.47x	1.20x	2.55x	2.11x	1.76x	1.47x	1.20x	29
2003	2.77x	1.93x	1.67x	1.40x	0.95x	2.77x	1.92x	1.63x	1.39x	0.92x	30
2004	2.55x	2.06x	1.63x	1.22x	0.84x	2.55x	2.05x	1.63x	1.17x	0.81x	43
2005	2.36x	1.86x	1.50x	1.18x	0.94x	2.22x	1.82x	1.43x	1.16x	0.92x	69
2006	2.09x	1.79x	1.47x	1.26x	0.90x	2.07x	1.77x	1.45x	1.16x	0.86x	100
2007	2.40x	1.96x	1.51x	1.18x	0.89x	2.31x	1.90x	1.44x	1.08x	0.82x	112
2008	2.21x	1.95x	1.58x	1.25x	0.82x	2.18x	1.90x	1.53x	1.18x	0.82x	99
2009	2.67x	2.17x	1.63x	1.36x	1.05x	2.47x	2.09x	1.51x	1.29x	0.85x	38
2010	2.82x	2.12x	1.57x	1.16x	0.77x	2.56x	1.72x	1.27x	0.97x	0.59x	45
2011	3.22x	2.30x	1.79x	1.46x	0.91x	2.94x	2.07x	1.46x	1.11x	0.59x	75
2012	2.59x	2.12x	1.69x	1.32x	1.03x	2.33x	1.78x	1.38x	0.96x	0.55x	90
2013	2.54x	2.09x	1.75x	1.38x	1.09x	1.97x	1.59x	1.22x	0.89x	0.62x	89
2014	3.58x	2.32x	1.91x	1.52x	1.21x	2.45x	1.67x	1.18x	0.83x	0.43x	82
2015	2.60x	2.16x	1.83x	1.66x	1.39x	1.68x	1.44x	1.13x	0.80x	0.52x	92
2016	2.51x	2.08x	1.83x	1.53x	1.37x	1.61x	1.13x	0.88x	0.55x	0.32x	107
2017	2.53x	1.99x	1.64x	1.38x	1.20x	1.23x	0.92x	0.54x	0.37x	0.24x	107
2018	2.15x	1.80x	1.54x	1.31x	1.18x	0.80x	0.56x	0.29x	0.12x	0.04x	123
2019	1.76x	1.54x	1.33x	1.19x	1.06x	0.57x	0.32x	0.13x	0.03x	0.00x	132
2020	1.74x	1.37x	1.23x	1.10x	1.02x	0.39x	0.21x	0.05x	0.00x	0.00x	101
2021	1.41x	1.23x	1.08x	0.97x	0.84x	0.16x	0.05x	0.01x	0.00x	0.00x	162
2022	1.29x	1.07x	0.96x	0.88x	0.76x	0.16x	0.02x	0.00x	0.00x	0.00x	91

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private equity

Quarterly return

Quarter end	1-quarter return
Q1 2001	-7.59%
Q2 2001	1.43%
Q3 2001	-6.23%
Q4 2001	-2.71%
Q1 2002	-0.35%
Q2 2002	-1.07%
Q3 2002	-4.37%
Q4 2002	-0.42%
Q1 2003	-0.13%
Q2 2003	6.46%
Q3 2003	4.03%
Q4 2003	9.88%
Q1 2004	3.55%
Q2 2004	4.81%
Q3 2004	3.02%
Q4 2004	14.04%
Q1 2005	1.65%
Q2 2005	8.86%
Q3 2005	6.49%
Q4 2005	10.64%
Q1 2006	4.18%
Q2 2006	5.45%
Q3 2006	4.09%
Q4 2006	15.24%

Quarter end	1-quarter return
Q1 2007	4.00%
Q2 2007	10.99%
Q3 2007	3.29%
Q4 2007	3.36%
Q1 2008	0.40%
Q2 2008	-2.02%
Q3 2008	-8.33%
Q4 2008	-12.95%
Q1 2009	-7.51%
Q2 2009	4.63%
Q3 2009	5.45%
Q4 2009	7.58%
Q1 2010	2.38%
Q2 2010	1.71%
Q3 2010	4.62%
Q4 2010	7.94%
Q1 2011	5.09%
Q2 2011	4.67%
Q3 2011	-3.30%
Q4 2011	1.65%
Q1 2012	6.03%
Q2 2012	0.73%
Q3 2012	3.78%
Q4 2012	3.10%

Quarter end	1-quarter return
Q1 2013	3.20%
Q2 2013	3.01%
Q3 2013	5.10%
Q4 2013	6.03%
Q1 2014	4.48%
Q2 2014	5.06%
Q3 2014	-0.32%
Q4 2014	3.15%
Q1 2015	3.93%
Q2 2015	5.80%
Q3 2015	0.66%
Q4 2015	2.05%
Q1 2016	1.44%
Q2 2016	4.45%
Q3 2016	4.31%
Q4 2016	1.18%
Q1 2017	4.69%
Q2 2017	5.16%
Q3 2017	4.64%
Q4 2017	3.81%
Q1 2018	3.93%
Q2 2018	3.94%
Q3 2018	4.30%
Q4 2018	-0.87%

Quarter end	1-quarter return
Q1 2019	4.43%
Q2 2019	2.95%
Q3 2019	2.78%
Q4 2019	5.23%
Q1 2020	-8.60%
Q2 2020	9.86%
Q3 2020	12.14%
Q4 2020	8.21%
Q1 2021	14.41%
Q2 2021	13.55%
Q3 2021	6.13%
Q4 2021	5.92%
Q1 2022	1.00%
Q2 2022	-2.82%
Q3 2022	-1.50%
Q4 2022	1.64%
Q1 2023	3.63%
Q2 2023	2.94%
Q3 2023*	0.27%

*Preliminary figure

Source: PitchBook | Geography: Global

Venture capital

Venture capital

IRRs by vintage

Pooled IRRs

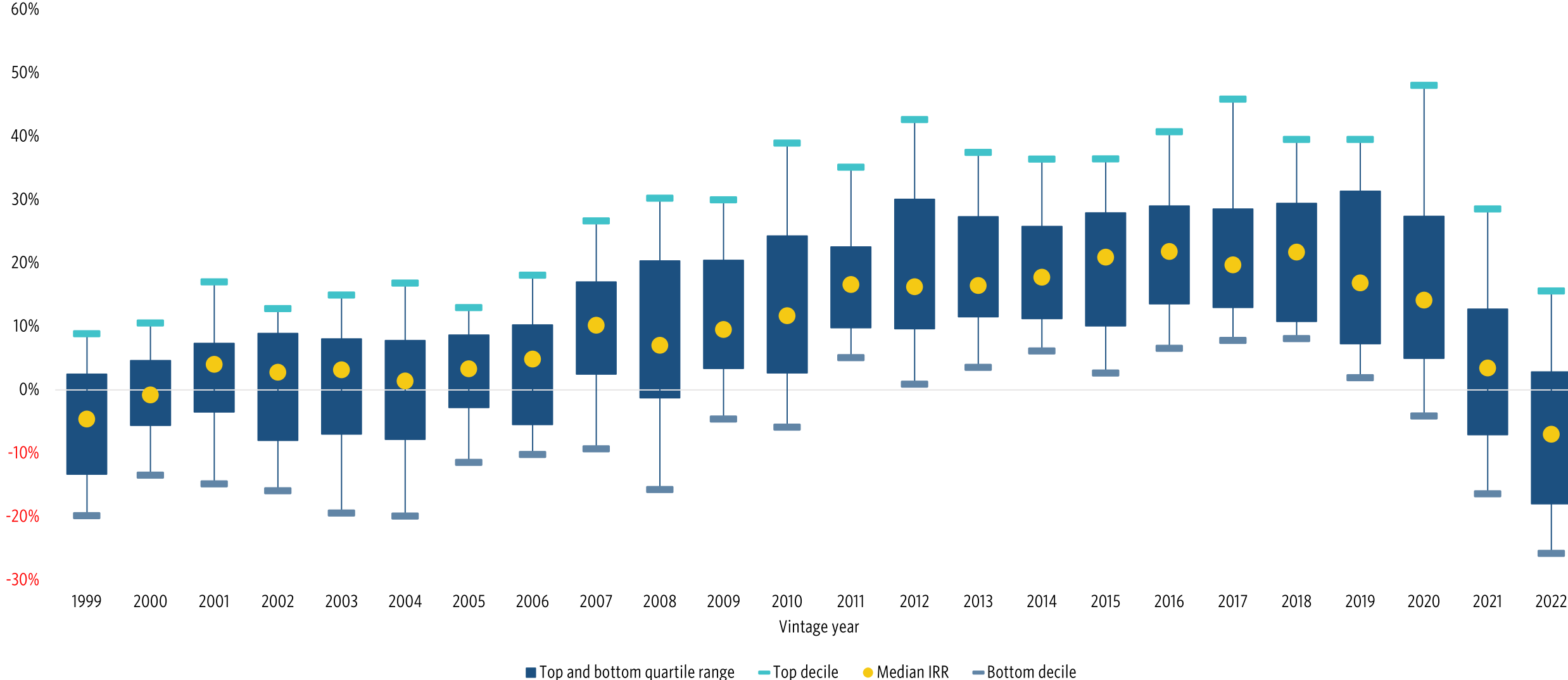
IRR quantiles

Vintage year	Pooled IRR	Equal-weighted pooled IRR	Number of funds	Top decile	Top quartile	Median IRR	Bottom quartile	Bottom decile	Standard deviation	Number of funds
1999	-2.23%	-3.40%	37	8.84%	2.48%	-4.60%	-13.30%	-19.85%	13.36%	73
2000	-0.57%	-1.83%	63	10.52%	4.63%	-0.80%	-5.60%	-13.46%	10.97%	118
2001	4.87%	3.33%	35	17.00%	7.33%	4.00%	-3.50%	-14.83%	19.04%	71
2002	1.96%	1.63%	19	12.80%	8.90%	2.78%	-7.98%	-15.92%	16.20%	45
2003	4.85%	0.78%	20	14.94%	8.03%	3.14%	-6.98%	-19.44%	24.74%	36
2004	5.14%	8.59%	21	16.83%	7.79%	1.38%	-7.80%	-19.92%	18.27%	40
2005	6.65%	6.46%	31	12.97%	8.65%	3.30%	-2.79%	-11.46%	17.13%	59
2006	5.21%	3.55%	44	18.08%	10.24%	4.83%	-5.47%	-10.21%	13.73%	80
2007	13.42%	15.44%	45	26.62%	17.00%	10.17%	2.47%	-9.30%	15.63%	85
2008	15.48%	10.11%	49	30.20%	20.35%	7.00%	-1.28%	-15.74%	22.37%	75
2009	12.31%	9.95%	22	29.96%	20.42%	9.50%	3.37%	-4.60%	15.89%	35
2010	14.22%	15.55%	24	38.90%	24.27%	11.67%	2.69%	-5.90%	18.48%	51
2011	21.12%	22.86%	20	35.09%	22.53%	16.61%	9.79%	5.07%	18.02%	58
2012	16.97%	18.65%	20	42.60%	30.04%	16.25%	9.65%	0.90%	16.20%	47
2013	17.60%	14.27%	21	37.43%	27.30%	16.44%	11.53%	3.54%	15.55%	48
2014	20.28%	18.95%	34	36.37%	25.78%	17.74%	11.22%	6.12%	13.45%	60
2015	17.01%	17.77%	31	36.42%	27.93%	20.93%	10.07%	2.65%	13.86%	56
2016	23.10%	25.27%	41	40.70%	28.99%	21.81%	13.55%	6.54%	26.03%	66
2017	22.42%	24.02%	33	45.84%	28.53%	19.71%	13.00%	7.79%	14.77%	54
2018	22.29%	21.98%	35	39.47%	29.40%	21.70%	10.80%	8.08%	24.53%	69
2019	19.68%	22.01%	38	39.48%	31.32%	16.86%	7.26%	1.91%	19.46%	82
2020	8.65%	17.68%	49	48.00%	27.37%	14.15%	4.98%	-4.13%	26.34%	80
2021	7.24%	14.19%	70	28.51%	12.72%	3.43%	-7.09%	-16.40%	20.51%	91
2022	-13.33%	-4.31%	60	15.58%	2.85%	-7.00%	-17.98%	-25.79%	16.71%	74

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Venture capital

IRRs by vintage



Source: PitchBook | Geography: Global | Data as of June 30, 2023

Venture capital

PMEs by vintage

Vintage year	S&P 500			MSCI World Small Cap Growth			Number of funds
	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	
1999	-2.23%	7.08%	0.77	-2.23%	8.07%	0.64	37
2000	-0.57%	6.79%	0.70	-0.57%	6.21%	0.55	63
2001	4.87%	7.57%	0.91	4.87%	8.01%	0.74	35
2002	1.96%	8.48%	0.79	1.96%	9.16%	0.66	19
2003	4.85%	10.30%	0.90	4.85%	10.84%	0.81	20
2004	5.14%	9.20%	0.87	5.14%	8.68%	0.83	21
2005	6.65%	9.31%	0.89	6.65%	8.31%	0.87	31
2006	5.21%	9.29%	0.76	5.21%	7.48%	0.78	44
2007	13.42%	9.06%	1.10	13.42%	7.09%	1.16	45
2008	15.48%	9.93%	1.10	15.48%	7.81%	1.19	49
2009	12.31%	14.52%	0.92	12.31%	12.83%	1.05	22
2010	14.22%	12.66%	1.02	14.22%	9.84%	1.18	24
2011	21.12%	12.22%	1.46	21.12%	8.30%	1.66	20
2012	16.97%	12.81%	1.26	16.97%	9.29%	1.50	20
2013	17.60%	12.62%	1.27	17.60%	9.00%	1.47	21
2014	20.28%	11.47%	1.47	20.28%	7.09%	1.73	34
2015	17.01%	11.08%	1.19	17.01%	7.70%	1.41	31
2016	23.10%	13.24%	1.46	23.10%	9.86%	1.75	41
2017	22.42%	11.93%	1.39	22.42%	8.08%	1.66	33
2018	22.29%	10.48%	1.37	22.29%	4.94%	1.65	35
2019	19.68%	12.70%	1.25	19.68%	7.12%	1.48	38
2020	8.65%	12.15%	1.06	8.65%	6.82%	1.27	49
2021	7.24%	5.45%	1.05	7.24%	-7.81%	1.19	70
2022	-13.33%	-3.03%	0.87	-13.33%	-8.14%	0.92	60

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Venture capital

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
1999	0.86x	0.82x	0.04x	0.80x	0.79x	0.01x	37
2000	0.96x	0.95x	0.01x	0.88x	0.87x	0.01x	63
2001	1.38x	1.34x	0.04x	1.26x	1.21x	0.05x	35
2002	1.13x	1.11x	0.02x	1.12x	0.98x	0.13x	19
2003	1.34x	1.32x	0.02x	1.05x	1.04x	0.01x	20
2004	1.43x	1.36x	0.07x	1.85x	1.59x	0.26x	21
2005	1.58x	1.49x	0.10x	1.61x	1.49x	0.12x	31
2006	1.40x	1.29x	0.11x	1.28x	1.17x	0.12x	44
2007	2.13x	1.89x	0.24x	2.18x	1.84x	0.35x	45
2008	2.28x	2.05x	0.22x	1.86x	1.52x	0.33x	49
2009	2.23x	1.65x	0.58x	2.00x	1.19x	0.81x	22
2010	2.09x	1.61x	0.48x	2.24x	1.73x	0.51x	24
2011	3.30x	2.54x	0.76x	3.73x	2.92x	0.81x	20
2012	2.74x	1.55x	1.19x	3.15x	1.85x	1.30x	20
2013	2.31x	1.35x	0.95x	2.09x	1.10x	0.99x	21
2014	2.90x	1.35x	1.55x	2.80x	1.32x	1.47x	34
2015	2.09x	0.82x	1.27x	2.16x	0.72x	1.45x	31
2016	2.36x	0.73x	1.64x	2.46x	0.83x	1.63x	41
2017	2.08x	0.49x	1.59x	2.20x	0.48x	1.72x	33
2018	1.84x	0.22x	1.62x	1.92x	0.30x	1.62x	35
2019	1.55x	0.11x	1.44x	1.59x	0.12x	1.47x	38
2020	1.16x	0.03x	1.13x	1.35x	0.06x	1.29x	49
2021	1.11x	0.01x	1.10x	1.21x	0.05x	1.16x	70
2022	0.87x	0.01x	0.87x	0.96x	0.02x	0.94x	60

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Venture capital

Multiples by vintage

Vintage year	TVPI					DPI					Number of funds
	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	
1999	1.46x	1.04x	0.73x	0.40x	0.21x	1.41x	1.04x	0.73x	0.40x	0.21x	37
2000	1.43x	1.14x	0.92x	0.59x	0.27x	1.43x	1.13x	0.91x	0.56x	0.23x	63
2001	2.00x	1.64x	1.26x	0.83x	0.42x	1.86x	1.60x	1.26x	0.75x	0.41x	35
2002	1.75x	1.52x	1.18x	0.66x	0.36x	1.63x	1.48x	1.05x	0.52x	0.26x	19
2003	1.55x	1.44x	1.11x	0.52x	0.40x	1.55x	1.41x	1.11x	0.52x	0.40x	20
2004	3.05x	1.85x	1.05x	0.72x	0.42x	1.87x	1.29x	1.02x	0.72x	0.42x	21
2005	2.44x	1.77x	1.30x	0.89x	0.46x	2.25x	1.70x	1.28x	0.82x	0.37x	31
2006	2.21x	1.67x	1.33x	0.67x	0.41x	2.19x	1.53x	1.12x	0.59x	0.30x	44
2007	2.88x	2.63x	1.86x	1.07x	0.60x	2.77x	2.42x	1.69x	0.97x	0.40x	45
2008	4.17x	2.43x	1.47x	0.63x	0.23x	3.31x	2.09x	1.09x	0.34x	0.21x	49
2009	2.91x	2.50x	1.83x	0.98x	0.69x	2.43x	1.64x	0.93x	0.52x	0.40x	22
2010	3.76x	2.89x	1.64x	1.22x	0.78x	3.24x	1.87x	1.40x	0.76x	0.50x	24
2011	4.67x	3.46x	2.04x	1.80x	1.37x	3.47x	2.82x	1.56x	1.30x	0.69x	20
2012	4.04x	2.65x	2.12x	1.27x	0.98x	2.56x	1.97x	1.24x	0.50x	0.29x	20
2013	3.67x	2.57x	2.07x	1.35x	0.67x	1.93x	1.45x	1.13x	0.45x	0.26x	21
2014	5.02x	3.13x	2.31x	1.97x	1.62x	2.27x	1.88x	1.18x	0.62x	0.21x	34
2015	3.59x	2.74x	1.89x	1.28x	1.11x	1.52x	0.98x	0.47x	0.25x	0.05x	31
2016	4.05x	2.97x	2.15x	1.69x	1.32x	1.83x	1.02x	0.60x	0.17x	0.10x	41
2017	3.23x	2.33x	1.92x	1.63x	1.39x	1.23x	0.70x	0.26x	0.08x	0.01x	33
2018	2.62x	2.28x	1.84x	1.40x	1.22x	1.04x	0.39x	0.05x	0.00x	0.00x	35
2019	2.44x	1.64x	1.39x	1.22x	1.04x	0.28x	0.05x	0.00x	0.00x	0.00x	38
2020	1.71x	1.50x	1.24x	1.04x	0.93x	0.17x	0.04x	0.00x	0.00x	0.00x	49
2021	1.36x	1.16x	1.04x	0.93x	0.85x	0.03x	0.00x	0.00x	0.00x	0.00x	70
2022	1.08x	1.01x	0.89x	0.84x	0.80x	0.02x	0.00x	0.00x	0.00x	0.00x	60

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Venture capital

Quarterly return

Quarter end	1-quarter return
Q1 2001	-11.93%
Q2 2001	-8.33%
Q3 2001	-14.61%
Q4 2001	-11.40%
Q1 2002	-6.63%
Q2 2002	-12.52%
Q3 2002	-8.06%
Q4 2002	-13.08%
Q1 2003	-5.84%
Q2 2003	-1.46%
Q3 2003	-2.37%
Q4 2003	2.68%
Q1 2004	0.19%
Q2 2004	1.28%
Q3 2004	-0.81%
Q4 2004	2.78%
Q1 2005	-1.90%
Q2 2005	0.99%
Q3 2005	4.88%
Q4 2005	1.99%
Q1 2006	3.10%
Q2 2006	1.08%
Q3 2006	1.69%
Q4 2006	7.16%

Quarter end	1-quarter return
Q1 2007	2.29%
Q2 2007	5.26%
Q3 2007	2.14%
Q4 2007	3.94%
Q1 2008	2.45%
Q2 2008	-2.24%
Q3 2008	-2.85%
Q4 2008	-9.17%
Q1 2009	-3.88%
Q2 2009	0.05%
Q3 2009	1.11%
Q4 2009	2.98%
Q1 2010	1.27%
Q2 2010	-0.22%
Q3 2010	4.25%
Q4 2010	6.92%
Q1 2011	4.71%
Q2 2011	4.44%
Q3 2011	-0.05%
Q4 2011	1.69%
Q1 2012	4.17%
Q2 2012	1.47%
Q3 2012	-0.21%
Q4 2012	2.06%

Quarter end	1-quarter return
Q1 2013	2.19%
Q2 2013	4.76%
Q3 2013	5.67%
Q4 2013	8.83%
Q1 2014	5.32%
Q2 2014	4.14%
Q3 2014	2.56%
Q4 2014	7.30%
Q1 2015	4.41%
Q2 2015	6.98%
Q3 2015	-0.78%
Q4 2015	2.20%
Q1 2016	-3.41%
Q2 2016	0.57%
Q3 2016	-0.01%
Q4 2016	3.48%
Q1 2017	1.89%
Q2 2017	2.40%
Q3 2017	3.86%
Q4 2017	1.87%
Q1 2018	6.57%
Q2 2018	5.73%
Q3 2018	4.34%
Q4 2018	1.05%

Quarter end	1-quarter return
Q1 2019	6.74%
Q2 2019	2.47%
Q3 2019	1.55%
Q4 2019	5.62%
Q1 2020	-1.87%
Q2 2020	8.82%
Q3 2020	11.73%
Q4 2020	14.64%
Q1 2021	21.88%
Q2 2021	13.54%
Q3 2021	6.42%
Q4 2021	6.52%
Q1 2022	-4.09%
Q2 2022	-8.65%
Q3 2022	-2.76%
Q4 2022	-5.29%
Q1 2023	-0.66%
Q2 2023	-0.04%
Q3 2023*	-0.66%

*Preliminary figure

Source: PitchBook | Geography: Global

Real estate

Real estate

IRRs by vintage

Pooled IRRs

IRR quantiles

Vintage year	Pooled IRR	Equal-weighted pooled IRR	Number of funds	Top decile	Top quartile	Median IRR	Bottom quartile	Bottom decile	Standard deviation	Number of funds
1999	11.24%	9.37%	4	17.85%	15.34%	10.33%	9.14%	2.79%	7.13%	22
2000	19.14%	16.86%	12	31.14%	24.99%	14.91%	10.60%	5.11%	10.51%	24
2001	28.05%	24.31%	2	27.72%	22.99%	15.87%	10.11%	2.67%	9.37%	20
2002	27.32%	21.65%	4	29.07%	26.50%	13.73%	8.08%	0.41%	16.30%	21
2003	10.51%	9.98%	5	40.98%	20.89%	14.47%	5.42%	0.86%	41.23%	32
2004	5.36%	7.25%	8	40.14%	13.73%	6.30%	-0.16%	-5.41%	19.74%	39
2005	-0.18%	-0.99%	27	10.66%	3.43%	-1.81%	-8.68%	-18.15%	21.90%	60
2006	-4.11%	-2.67%	34	8.01%	5.03%	-0.70%	-9.55%	-16.66%	13.56%	75
2007	3.77%	1.88%	55	13.04%	9.30%	5.59%	-1.02%	-14.67%	13.64%	89
2008	7.75%	5.93%	35	18.26%	10.40%	7.48%	1.06%	-9.53%	12.60%	69
2009	8.56%	8.11%	19	23.94%	15.20%	10.31%	7.00%	1.86%	15.66%	33
2010	19.43%	13.93%	22	23.24%	19.50%	12.30%	7.32%	1.06%	10.10%	40
2011	14.06%	12.28%	40	24.09%	19.11%	13.63%	9.70%	3.90%	8.79%	56
2012	12.82%	10.79%	41	22.64%	15.09%	11.59%	7.60%	4.16%	7.73%	57
2013	9.28%	8.65%	50	20.63%	15.55%	11.10%	4.41%	0.11%	10.38%	56
2014	9.63%	10.05%	54	18.14%	14.65%	10.22%	5.15%	-1.24%	12.13%	59
2015	12.01%	11.75%	68	22.92%	15.40%	11.20%	6.83%	3.14%	7.70%	75
2016	12.16%	11.01%	50	21.44%	13.60%	10.17%	5.66%	1.00%	8.86%	61
2017	11.18%	10.98%	72	28.10%	16.63%	10.56%	5.65%	1.64%	10.73%	67
2018	10.82%	12.82%	69	23.10%	15.57%	10.78%	6.96%	0.01%	10.44%	75
2019	16.82%	12.86%	56	24.51%	17.85%	10.90%	6.59%	0.92%	16.15%	59
2020	9.35%	13.15%	42	24.07%	19.40%	10.52%	6.50%	1.98%	9.09%	37
2021	8.44%	10.39%	77	25.67%	16.50%	6.26%	-3.45%	-16.46%	35.71%	82
2022	1.11%	5.11%	49	17.70%	11.15%	-2.44%	-14.34%	-31.92%	27.01%	46

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real estate

IRRs by vintage



Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real estate

PMEs by vintage

Vintage year	S&P 500			Morningstar Global Real Estate			
	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1999	11.24%	7.08%	1.44	11.24%	7.22%	1.02	4
2000	19.14%	6.79%	1.63	19.14%	7.13%	1.11	12
2001	28.05%	7.57%	1.54	28.05%	6.99%	1.12	2
2002	27.32%	8.48%	1.57	27.32%	7.41%	1.33	4
2003	10.51%	10.30%	1.08	10.51%	7.93%	0.92	5
2004	5.36%	9.20%	0.95	5.36%	5.96%	0.98	8
2005	-0.18%	9.31%	0.67	-0.18%	5.14%	0.78	27
2006	-4.11%	9.29%	0.43	-4.11%	3.90%	0.51	34
2007	3.77%	9.06%	0.72	3.77%	2.15%	0.83	55
2008	7.75%	9.93%	0.81	7.75%	3.47%	0.93	35
2009	8.56%	14.52%	0.80	8.56%	9.53%	0.93	19
2010	19.43%	12.66%	1.10	19.43%	5.98%	1.20	22
2011	14.06%	12.22%	1.01	14.06%	4.64%	1.21	40
2012	12.82%	12.81%	1.00	12.82%	5.11%	1.23	41
2013	9.28%	12.62%	0.93	9.28%	3.39%	1.14	50
2014	9.63%	11.47%	0.90	9.63%	3.67%	1.19	54
2015	12.01%	11.08%	0.97	12.01%	2.07%	1.32	68
2016	12.16%	13.24%	0.98	12.16%	3.52%	1.35	50
2017	11.18%	11.93%	0.94	11.18%	2.30%	1.29	72
2018	10.82%	10.48%	1.00	10.82%	0.71%	1.31	69
2019	16.82%	12.70%	1.13	16.82%	-0.05%	1.40	56
2020	9.35%	12.15%	1.06	9.35%	-2.20%	1.24	42
2021	8.44%	5.45%	1.07	8.44%	-4.45%	1.25	77
2022	1.11%	-3.03%	0.96	1.11%	-15.70%	1.06	49

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real estate

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
1999	1.44x	1.43x	0.00x	1.44x	1.44x	0.00x	4
2000	1.77x	1.77x	0.00x	1.73x	1.72x	0.00x	12
2001	1.88x	1.88x	0.00x	1.77x	1.77x	0.00x	2
2002	2.36x	1.93x	0.43x	2.14x	1.54x	0.60x	4
2003	1.34x	1.33x	0.00x	1.32x	1.32x	0.01x	5
2004	1.28x	1.22x	0.06x	1.47x	1.33x	0.14x	8
2005	0.99x	0.98x	0.01x	0.94x	0.93x	0.01x	27
2006	0.75x	0.73x	0.02x	0.83x	0.81x	0.03x	34
2007	1.19x	1.16x	0.03x	1.10x	1.06x	0.04x	55
2008	1.41x	1.36x	0.06x	1.30x	1.26x	0.04x	35
2009	1.40x	1.33x	0.07x	1.39x	1.33x	0.06x	19
2010	1.56x	1.53x	0.03x	1.59x	1.48x	0.12x	22
2011	1.58x	1.45x	0.13x	1.59x	1.37x	0.21x	40
2012	1.51x	1.36x	0.15x	1.41x	1.29x	0.12x	41
2013	1.35x	1.17x	0.18x	1.36x	1.12x	0.24x	50
2014	1.42x	1.05x	0.38x	1.49x	1.03x	0.46x	54
2015	1.49x	0.95x	0.54x	1.46x	1.02x	0.43x	68
2016	1.47x	0.86x	0.60x	1.42x	0.90x	0.53x	50
2017	1.39x	0.68x	0.72x	1.41x	0.69x	0.72x	72
2018	1.26x	0.38x	0.88x	1.32x	0.52x	0.80x	69
2019	1.32x	0.34x	0.97x	1.26x	0.36x	0.90x	56
2020	1.12x	0.17x	0.95x	1.20x	0.20x	1.00x	42
2021	1.10x	0.13x	0.97x	1.12x	0.16x	0.96x	77
2022	1.01x	0.11x	0.89x	1.04x	0.23x	0.81x	49

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real estate

Multiples by vintage

Vintage year	TVPI					DPI					Number of funds
	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	
1999		1.55x	1.28x	1.20x			1.55x	1.28x	1.20x		4
2000	2.34x	1.91x	1.52x	1.35x	1.21x	2.34x	1.91x	1.52x	1.35x	1.21x	12
2001			1.75x					1.75x			2
2002		2.57x	2.23x	1.77x			1.80x	1.48x	1.22x		4
2003		1.31x	1.25x	1.11x			1.31x	1.24x	1.10x		5
2004		1.95x	1.42x	1.07x			1.65x	1.42x	1.03x		8
2005	1.37x	1.09x	0.98x	0.71x	0.42x	1.37x	1.09x	0.93x	0.71x	0.41x	27
2006	1.53x	1.12x	0.72x	0.47x	0.29x	1.50x	1.09x	0.71x	0.40x	0.24x	34
2007	1.68x	1.39x	1.19x	0.84x	0.42x	1.67x	1.36x	1.15x	0.78x	0.42x	55
2008	1.77x	1.61x	1.40x	1.06x	0.60x	1.69x	1.59x	1.39x	1.06x	0.60x	35
2009	1.94x	1.57x	1.39x	1.20x	0.90x	1.87x	1.57x	1.37x	1.15x	0.61x	19
2010	2.01x	1.72x	1.62x	1.38x	1.12x	1.73x	1.67x	1.57x	1.24x	0.96x	22
2011	2.19x	1.85x	1.55x	1.33x	1.11x	1.92x	1.70x	1.43x	1.16x	0.73x	40
2012	1.87x	1.53x	1.39x	1.30x	1.13x	1.84x	1.48x	1.36x	1.05x	0.89x	41
2013	1.78x	1.61x	1.39x	1.14x	1.00x	1.61x	1.48x	1.27x	0.82x	0.45x	50
2014	1.81x	1.68x	1.47x	1.25x	1.13x	1.52x	1.34x	1.04x	0.75x	0.38x	54
2015	1.82x	1.68x	1.37x	1.21x	1.10x	1.66x	1.44x	1.03x	0.60x	0.25x	68
2016	1.74x	1.57x	1.35x	1.21x	1.03x	1.61x	1.22x	0.79x	0.54x	0.18x	50
2017	1.95x	1.62x	1.35x	1.19x	1.06x	1.40x	1.01x	0.55x	0.28x	0.13x	72
2018	1.66x	1.43x	1.28x	1.14x	1.01x	0.99x	0.67x	0.39x	0.17x	0.07x	69
2019	1.65x	1.35x	1.21x	1.09x	0.87x	0.71x	0.47x	0.18x	0.12x	0.06x	56
2020	1.44x	1.26x	1.16x	1.06x	0.95x	0.59x	0.28x	0.12x	0.05x	0.01x	42
2021	1.30x	1.17x	1.06x	0.95x	0.79x	0.30x	0.16x	0.05x	0.00x	0.00x	77
2022	1.17x	1.09x	0.93x	0.86x	0.59x	0.63x	0.10x	0.00x	0.00x	0.00x	49

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real estate

Quarterly return

Quarter end	1-quarter return
Q1 2001	4.40%
Q2 2001	1.59%
Q3 2001	0.30%
Q4 2001	2.79%
Q1 2002	1.92%
Q2 2002	1.70%
Q3 2002	1.82%
Q4 2002	-0.87%
Q1 2003	-0.80%
Q2 2003	2.03%
Q3 2003	5.05%
Q4 2003	9.90%
Q1 2004	-2.08%
Q2 2004	4.54%
Q3 2004	2.95%
Q4 2004	15.41%
Q1 2005	1.60%
Q2 2005	6.87%
Q3 2005	13.03%
Q4 2005	16.03%
Q1 2006	4.53%
Q2 2006	7.44%
Q3 2006	9.20%
Q4 2006	18.05%

Quarter end	1-quarter return
Q1 2007	-1.42%
Q2 2007	8.97%
Q3 2007	2.17%
Q4 2007	6.13%
Q1 2008	-2.54%
Q2 2008	-4.27%
Q3 2008	-8.64%
Q4 2008	-14.92%
Q1 2009	-20.01%
Q2 2009	-11.83%
Q3 2009	-5.80%
Q4 2009	-4.10%
Q1 2010	-5.76%
Q2 2010	5.29%
Q3 2010	3.57%
Q4 2010	8.11%
Q1 2011	4.63%
Q2 2011	3.40%
Q3 2011	0.06%
Q4 2011	0.14%
Q1 2012	3.95%
Q2 2012	0.28%
Q3 2012	4.88%
Q4 2012	2.56%

Quarter end	1-quarter return
Q1 2013	3.27%
Q2 2013	4.78%
Q3 2013	1.31%
Q4 2013	8.36%
Q1 2014	3.10%
Q2 2014	3.38%
Q3 2014	3.44%
Q4 2014	4.08%
Q1 2015	1.52%
Q2 2015	4.79%
Q3 2015	2.56%
Q4 2015	2.01%
Q1 2016	1.91%
Q2 2016	2.02%
Q3 2016	3.22%
Q4 2016	1.29%
Q1 2017	3.88%
Q2 2017	2.73%
Q3 2017	4.26%
Q4 2017	1.19%
Q1 2018	2.89%
Q2 2018	2.35%
Q3 2018	1.68%
Q4 2018	-0.65%

Quarter end	1-quarter return
Q1 2019	1.96%
Q2 2019	1.63%
Q3 2019	3.19%
Q4 2019	2.14%
Q1 2020	-3.36%
Q2 2020	-0.32%
Q3 2020	4.72%
Q4 2020	1.19%
Q1 2021	5.61%
Q2 2021	5.10%
Q3 2021	8.96%
Q4 2021	7.09%
Q1 2022	6.88%
Q2 2022	1.42%
Q3 2022	-0.95%
Q4 2022	-0.56%
Q1 2023	-0.16%
Q2 2023	0.25%
Q3 2023*	2.34%

*Preliminary figure

Source: PitchBook | Geography: Global

Real assets

Real assets

IRRs by vintage

Pooled IRRs

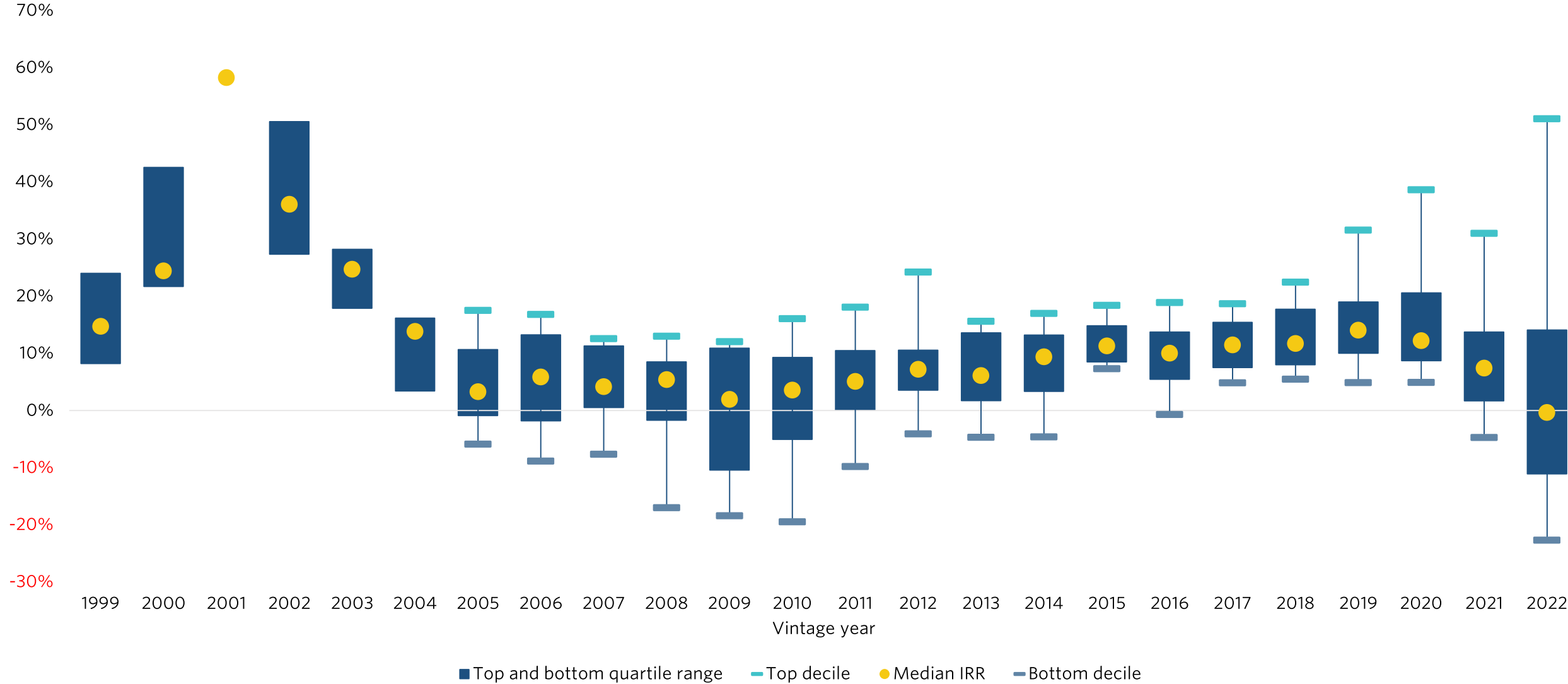
IRR quantiles

Vintage year	Pooled IRR	Equal-weighted pooled IRR	Number of funds	Top decile	Top quartile	Median IRR	Bottom quartile	Bottom decile	Standard deviation	Number of funds
1999	25.38%	25.38%	1		24.00%	14.70%	8.20%		12.95%	5
2000					42.51%	24.43%	21.70%		22.64%	6
2001	49.72%	49.72%	1			58.25%			15.63%	2
2002	35.13%	40.16%	4		50.53%	36.05%	27.35%		13.65%	5
2003	28.03%	28.76%	2		28.20%	24.70%	17.90%		23.99%	9
2004	19.86%	14.49%	5		16.16%	13.83%	3.40%		9.51%	9
2005	8.17%	8.61%	11	17.50%	10.64%	3.29%	-0.90%	-5.92%	9.33%	18
2006	5.49%	3.57%	14	16.80%	13.23%	5.84%	-1.83%	-8.87%	13.02%	22
2007	4.23%	4.43%	19	12.54%	11.29%	4.16%	0.52%	-7.66%	11.98%	32
2008	3.53%	4.59%	23	12.96%	8.51%	5.40%	-1.72%	-17.02%	12.24%	32
2009	0.13%	1.16%	11	12.01%	10.91%	1.94%	-10.41%	-18.44%	13.04%	15
2010	4.46%	4.54%	22	16.04%	9.28%	3.56%	-5.08%	-19.49%	15.54%	27
2011	4.59%	3.54%	20	18.07%	10.47%	5.06%	0.06%	-9.83%	11.87%	30
2012	5.97%	6.85%	26	24.22%	10.55%	7.20%	3.55%	-4.12%	52.28%	32
2013	8.93%	7.02%	28	15.60%	13.57%	6.10%	1.70%	-4.70%	8.51%	31
2014	8.42%	6.42%	40	16.98%	13.20%	9.39%	3.35%	-4.62%	12.67%	42
2015	10.60%	9.68%	38	18.39%	14.80%	11.28%	8.50%	7.30%	35.09%	29
2016	11.28%	13.57%	32	18.89%	13.72%	10.02%	5.47%	-0.72%	8.86%	40
2017	12.42%	10.18%	41	18.67%	15.40%	11.47%	7.51%	4.83%	7.06%	42
2018	11.12%	11.55%	39	22.45%	17.70%	11.70%	7.99%	5.47%	7.42%	33
2019	10.59%	16.34%	34	31.53%	18.99%	14.03%	10.00%	4.87%	15.84%	36
2020	17.84%	13.72%	27	38.61%	20.56%	12.20%	8.70%	4.89%	25.98%	40
2021	8.18%	17.42%	31	31.00%	13.73%	7.41%	1.69%	-4.73%	19.63%	38
2022	3.52%	8.21%	23	51.02%	14.07%	-0.37%	-11.11%	-22.70%	39.58%	28

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real assets

IRRs by vintage



Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real assets

PMEs by vintage

Vintage year	S&P 500			Morningstar Real Assets			Number of funds
	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	
1999	25.38%	7.08%	1.82	25.38%			1
2000							
2001	49.72%	7.57%	2.35	49.72%	6.26%	2.09	1
2002	35.13%	8.48%	1.58	35.13%	6.20%	1.53	4
2003	28.03%	10.30%	1.57	28.03%	5.92%	1.52	2
2004	19.86%	9.20%	1.43	19.86%	5.28%	1.33	5
2005	8.17%	9.31%	1.13	8.17%	4.84%	1.10	11
2006	5.49%	9.29%	0.89	5.49%	4.53%	1.03	14
2007	4.23%	9.06%	0.79	4.23%	4.33%	0.97	19
2008	3.53%	9.93%	0.63	3.53%	3.68%	0.97	23
2009	0.13%	14.52%	0.55	0.13%	5.00%	0.85	11
2010	4.46%	12.66%	0.65	4.46%	3.91%	1.07	22
2011	4.59%	12.22%	0.68	4.59%	2.91%	1.11	20
2012	5.97%	12.81%	0.76	5.97%	2.56%	1.14	26
2013	8.93%	12.62%	0.87	8.93%	2.58%	1.31	28
2014	8.42%	11.47%	0.87	8.42%	2.98%	1.21	40
2015	10.60%	11.08%	0.94	10.60%	2.89%	1.28	38
2016	11.28%	13.24%	0.96	11.28%	4.15%	1.25	32
2017	12.42%	11.93%	1.03	12.42%	3.87%	1.27	41
2018	11.12%	10.48%	1.03	11.12%	4.13%	1.17	39
2019	10.59%	12.70%	1.01	10.59%	4.64%	1.14	34
2020	17.84%	12.15%	1.19	17.84%	5.51%	1.23	27
2021	8.18%	5.45%	1.03	8.18%	3.82%	1.07	31
2022	3.52%	-3.03%	0.97	3.52%	-4.22%	1.01	23

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real assets

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
1999	2.59x	2.47x	0.12x	2.59x	2.47x	0.12x	1
2000							
2001	2.84x	2.84x	0.00x	2.84x	2.84x	0.00x	1
2002	2.09x	2.09x	0.00x	2.25x	2.25x	0.00x	4
2003	1.96x	1.95x	0.01x	2.11x	2.09x	0.02x	2
2004	1.70x	1.62x	0.07x	1.67x	1.48x	0.19x	5
2005	1.45x	1.34x	0.11x	1.42x	1.35x	0.07x	11
2006	1.32x	1.27x	0.05x	1.23x	1.18x	0.05x	14
2007	1.22x	1.21x	0.01x	1.25x	1.23x	0.02x	19
2008	1.21x	1.14x	0.07x	1.29x	1.11x	0.18x	23
2009	1.01x	0.81x	0.20x	1.07x	0.72x	0.35x	11
2010	1.25x	1.12x	0.14x	1.31x	0.99x	0.33x	22
2011	1.27x	0.91x	0.36x	1.24x	0.81x	0.42x	20
2012	1.29x	0.95x	0.33x	1.35x	0.92x	0.43x	26
2013	1.52x	0.92x	0.60x	1.39x	0.85x	0.53x	28
2014	1.40x	0.84x	0.56x	1.31x	0.76x	0.55x	40
2015	1.49x	0.82x	0.67x	1.45x	0.79x	0.66x	38
2016	1.46x	0.67x	0.79x	1.60x	0.81x	0.79x	32
2017	1.43x	0.40x	1.03x	1.36x	0.43x	0.93x	41
2018	1.26x	0.22x	1.04x	1.32x	0.27x	1.05x	39
2019	1.23x	0.22x	1.02x	1.40x	0.34x	1.06x	34
2020	1.24x	0.12x	1.11x	1.23x	0.22x	1.01x	27
2021	1.07x	0.06x	1.01x	1.20x	0.14x	1.06x	31
2022	1.01x	0.06x	0.96x	1.06x	0.09x	0.98x	23

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real assets

Multiples by vintage

Vintage year	TVPI					DPI					Number of funds
	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	
1999			2.59x					2.47x			1
2000											
2001			2.84x					2.84x			1
2002		2.37x	2.08x	2.00x			2.37x	2.08x	2.00x		4
2003			2.19x					2.17x			2
2004		1.84x	1.64x	1.46x			1.84x	1.64x	1.46x		5
2005	2.22x	1.66x	1.29x	1.00x	0.96x	2.11x	1.66x	1.29x	1.00x	0.95x	11
2006	2.11x	1.48x	1.06x	0.72x	0.63x	2.06x	1.41x	1.06x	0.65x	0.56x	14
2007	1.63x	1.41x	1.15x	1.04x	0.91x	1.62x	1.41x	1.14x	1.04x	0.91x	19
2008	2.02x	1.67x	1.01x	0.74x	0.52x	1.81x	1.46x	0.85x	0.62x	0.21x	23
2009	1.82x	1.42x	1.10x	0.67x	0.33x	1.31x	1.07x	0.58x	0.43x	0.27x	11
2010	2.27x	1.74x	1.22x	0.85x	0.61x	1.58x	1.29x	0.94x	0.69x	0.37x	22
2011	1.99x	1.62x	1.35x	0.84x	0.35x	1.42x	1.20x	0.72x	0.50x	0.34x	20
2012	1.97x	1.58x	1.38x	1.04x	0.92x	1.43x	1.20x	0.90x	0.64x	0.28x	26
2013	2.01x	1.70x	1.35x	1.06x	0.78x	1.59x	1.32x	0.69x	0.40x	0.30x	28
2014	1.81x	1.61x	1.41x	1.10x	0.71x	1.29x	1.02x	0.77x	0.44x	0.24x	40
2015	1.85x	1.71x	1.48x	1.19x	1.02x	1.38x	1.10x	0.75x	0.46x	0.13x	38
2016	2.14x	1.61x	1.31x	1.24x	1.09x	1.32x	1.01x	0.51x	0.24x	0.19x	32
2017	1.69x	1.53x	1.32x	1.20x	0.99x	1.02x	0.58x	0.30x	0.13x	0.05x	41
2018	1.62x	1.46x	1.32x	1.18x	1.09x	0.46x	0.35x	0.22x	0.10x	0.04x	39
2019	1.92x	1.40x	1.25x	1.15x	1.06x	0.69x	0.56x	0.16x	0.05x	0.01x	34
2020	1.59x	1.38x	1.18x	1.11x	1.05x	0.65x	0.32x	0.08x	0.01x	0.00x	27
2021	1.54x	1.25x	1.12x	1.00x	0.89x	0.27x	0.06x	0.03x	0.00x	0.00x	31
2022	1.24x	1.04x	0.96x	0.88x	0.84x	0.15x	0.04x	0.01x	0.00x	0.00x	23

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Real assets

Quarterly return

Quarter end	1-quarter return
Q1 2001	5.02%
Q2 2001	1.16%
Q3 2001	-7.17%
Q4 2001	11.36%
Q1 2002	0.21%
Q2 2002	3.94%
Q3 2002	-4.07%
Q4 2002	0.22%
Q1 2003	-1.73%
Q2 2003	7.83%
Q3 2003	0.42%
Q4 2003	13.09%
Q1 2004	3.32%
Q2 2004	0.46%
Q3 2004	10.27%
Q4 2004	19.31%
Q1 2005	20.64%
Q2 2005	31.71%
Q3 2005	13.45%
Q4 2005	3.14%
Q1 2006	9.15%
Q2 2006	9.70%
Q3 2006	4.12%
Q4 2006	7.40%

Quarter end	1-quarter return
Q1 2007	3.97%
Q2 2007	5.98%
Q3 2007	6.52%
Q4 2007	9.14%
Q1 2008	1.89%
Q2 2008	3.48%
Q3 2008	2.50%
Q4 2008	-6.27%
Q1 2009	-3.92%
Q2 2009	-0.13%
Q3 2009	4.20%
Q4 2009	3.49%
Q1 2010	-0.39%
Q2 2010	0.21%
Q3 2010	3.99%
Q4 2010	8.75%
Q1 2011	4.86%
Q2 2011	4.21%
Q3 2011	-1.64%
Q4 2011	4.45%
Q1 2012	2.12%
Q2 2012	-1.87%
Q3 2012	0.53%
Q4 2012	3.74%

Quarter end	1-quarter return
Q1 2013	3.47%
Q2 2013	-0.45%
Q3 2013	2.46%
Q4 2013	2.00%
Q1 2014	3.13%
Q2 2014	6.83%
Q3 2014	2.84%
Q4 2014	-4.68%
Q1 2015	-0.47%
Q2 2015	1.85%
Q3 2015	-2.61%
Q4 2015	-2.17%
Q1 2016	-0.78%
Q2 2016	5.83%
Q3 2016	2.25%
Q4 2016	5.13%
Q1 2017	3.16%
Q2 2017	2.32%
Q3 2017	1.53%
Q4 2017	0.40%
Q1 2018	2.99%
Q2 2018	2.61%
Q3 2018	4.93%
Q4 2018	-1.69%

Quarter end	1-quarter return
Q1 2019	1.27%
Q2 2019	-1.19%
Q3 2019	0.16%
Q4 2019	-0.08%
Q1 2020	-10.21%
Q2 2020	1.96%
Q3 2020	2.42%
Q4 2020	4.47%
Q1 2021	4.14%
Q2 2021	7.09%
Q3 2021	2.29%
Q4 2021	6.76%
Q1 2022	6.45%
Q2 2022	2.99%
Q3 2022	2.58%
Q4 2022	1.19%
Q1 2023	2.83%
Q2 2023	2.35%
Q3 2023*	-2.45%

*Preliminary figure

Source: PitchBook | Geography: Global

Private debt

Private debt

IRRs by vintage

Pooled IRRs

IRR quantiles

Vintage year	Pooled IRR	Equal-weighted pooled IRR	Number of funds	Top decile	Top quartile	Median IRR	Bottom quartile	Bottom decile	Standard deviation	Number of funds
1999	11.74%	13.07%	4	18.60%	17.11%	13.40%	11.50%	8.02%	5.45%	13
2000	11.85%	6.43%	9	18.67%	15.81%	8.95%	7.50%	2.29%	9.47%	17
2001	25.79%	22.23%	7	27.46%	21.47%	13.10%	9.69%	1.50%	10.84%	17
2002	16.11%	18.39%	10	29.19%	23.60%	15.60%	10.01%	7.42%	18.10%	15
2003	12.86%	12.13%	9	19.10%	17.52%	10.59%	8.05%	7.50%	6.34%	18
2004	5.08%	6.23%	10	14.24%	11.23%	8.60%	5.08%	-2.31%	9.19%	20
2005	9.77%	9.69%	14	13.45%	9.93%	6.45%	3.86%	0.88%	5.89%	24
2006	7.11%	6.40%	29	14.36%	9.13%	7.40%	4.19%	1.26%	6.99%	43
2007	6.04%	6.14%	28	16.11%	10.33%	7.34%	1.65%	-4.99%	7.90%	31
2008	12.99%	10.93%	31	19.20%	13.81%	9.20%	6.60%	2.13%	16.15%	55
2009	10.25%	10.64%	23	20.05%	15.20%	10.40%	8.20%	4.34%	6.35%	29
2010	10.49%	11.54%	31	21.00%	13.95%	10.20%	7.69%	6.30%	6.52%	41
2011	7.19%	6.68%	24	13.12%	10.68%	8.64%	6.77%	5.48%	5.81%	34
2012	5.73%	5.62%	34	12.65%	9.87%	8.00%	4.00%	1.44%	4.77%	43
2013	7.19%	7.15%	38	13.07%	11.01%	8.10%	5.67%	4.68%	3.81%	55
2014	6.56%	8.07%	50	11.73%	9.83%	7.27%	5.47%	2.36%	5.40%	55
2015	6.23%	6.31%	63	12.41%	10.36%	8.73%	5.65%	1.74%	4.98%	60
2016	9.66%	8.75%	53	13.92%	12.01%	10.07%	7.27%	5.70%	5.07%	57
2017	6.66%	7.43%	64	14.69%	11.31%	8.97%	6.73%	1.44%	5.72%	64
2018	9.47%	9.79%	75	19.09%	14.19%	10.05%	7.79%	6.08%	8.04%	84
2019	10.91%	10.23%	60	16.95%	13.42%	10.30%	7.98%	5.70%	5.52%	76
2020	10.82%	11.74%	55	18.31%	14.09%	9.50%	7.71%	5.40%	7.19%	77
2021	9.53%	10.61%	83	18.60%	13.23%	9.59%	6.90%	3.52%	12.79%	97
2022	9.35%	9.35%	61	21.59%	12.55%	8.39%	3.07%	-1.51%	15.51%	56

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private debt

IRRs by vintage



Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private debt

PMEs by vintage

Vintage year	S&P 500			Morningstar Global High Yield			Number of funds
	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	
1999	11.74%	7.08%	1.52	11.74%			4
2000	11.85%	6.79%	1.23	11.85%	6.09%	1.04	9
2001	25.79%	7.57%	1.62	25.79%	6.35%	1.42	7
2002	16.11%	8.48%	1.32	16.11%	6.73%	1.20	10
2003	12.86%	10.30%	1.26	12.86%	6.87%	1.18	9
2004	5.08%	9.20%	0.99	5.08%	5.93%	0.91	10
2005	9.77%	9.31%	1.31	9.77%	5.71%	1.08	14
2006	7.11%	9.29%	1.02	7.11%	5.86%	0.92	29
2007	6.04%	9.06%	0.95	6.04%	5.49%	0.86	28
2008	12.99%	9.93%	1.03	12.99%	5.93%	0.99	31
2009	10.25%	14.52%	0.88	10.25%	8.13%	1.05	23
2010	10.49%	12.66%	0.89	10.49%	5.27%	1.14	31
2011	7.19%	12.22%	0.80	7.19%	4.52%	1.06	24
2012	5.73%	12.81%	0.77	5.73%	4.48%	1.02	34
2013	7.19%	12.62%	0.86	7.19%	3.58%	1.09	38
2014	6.56%	11.47%	0.81	6.56%	3.02%	1.08	50
2015	6.23%	11.08%	0.84	6.23%	3.51%	1.06	63
2016	9.66%	13.24%	0.91	9.66%	4.89%	1.21	53
2017	6.66%	11.93%	0.86	6.66%	3.02%	1.11	64
2018	9.47%	10.48%	0.95	9.47%	2.06%	1.21	75
2019	10.91%	12.70%	1.00	10.91%	2.45%	1.20	60
2020	10.82%	12.15%	1.08	10.82%	1.80%	1.19	55
2021	9.53%	5.45%	1.06	9.53%	-2.68%	1.13	83
2022	9.35%	-3.03%	1.04	9.35%	-4.07%	1.08	61

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private debt

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
1999	1.43x	1.43x	0.00x	1.52x	1.52x	0.00x	4
2000	1.41x	1.40x	0.01x	1.27x	1.25x	0.01x	9
2001	2.06x	2.06x	0.00x	2.08x	2.08x	0.00x	7
2002	1.74x	1.71x	0.02x	1.70x	1.68x	0.02x	10
2003	1.71x	1.70x	0.00x	1.70x	1.70x	0.00x	9
2004	1.23x	1.22x	0.01x	1.31x	1.30x	0.01x	10
2005	1.56x	1.52x	0.04x	1.80x	1.70x	0.10x	14
2006	1.39x	1.37x	0.02x	1.36x	1.34x	0.02x	29
2007	1.23x	1.22x	0.01x	1.27x	1.26x	0.01x	28
2008	1.59x	1.56x	0.03x	1.47x	1.43x	0.04x	31
2009	1.44x	1.42x	0.03x	1.41x	1.38x	0.03x	23
2010	1.42x	1.38x	0.04x	1.47x	1.40x	0.06x	31
2011	1.30x	1.18x	0.12x	1.25x	1.12x	0.13x	24
2012	1.24x	1.13x	0.11x	1.25x	1.08x	0.17x	34
2013	1.26x	1.14x	0.12x	1.28x	1.07x	0.21x	38
2014	1.28x	1.00x	0.28x	1.33x	1.09x	0.24x	50
2015	1.20x	0.85x	0.35x	1.21x	0.88x	0.34x	63
2016	1.34x	0.80x	0.55x	1.29x	0.86x	0.43x	53
2017	1.21x	0.65x	0.56x	1.22x	0.69x	0.54x	64
2018	1.27x	0.47x	0.80x	1.25x	0.59x	0.66x	75
2019	1.22x	0.44x	0.78x	1.20x	0.44x	0.76x	60
2020	1.17x	0.24x	0.92x	1.18x	0.28x	0.89x	55
2021	1.11x	0.20x	0.91x	1.12x	0.24x	0.87x	83
2022	1.08x	0.16x	0.93x	1.08x	0.15x	0.93x	61

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private debt

Multiples by vintage

Vintage year	TVPI					DPI					Number of funds
	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	
1999		1.62x	1.46x	1.36x			1.62x	1.46x	1.36x		4
2000		1.51x	1.47x	1.27x			1.51x	1.39x	1.24x		9
2001		2.47x	1.88x	1.63x			2.47x	1.88x	1.63x		7
2002	2.37x	1.97x	1.61x	1.39x	1.30x	2.23x	1.97x	1.61x	1.39x	1.30x	10
2003		1.72x	1.58x	1.49x			1.72x	1.58x	1.49x		9
2004	1.92x	1.65x	1.37x	1.16x	0.61x	1.91x	1.65x	1.35x	1.16x	0.61x	10
2005	1.58x	1.57x	1.41x	1.21x	0.81x	1.58x	1.51x	1.32x	1.18x	0.77x	14
2006	1.82x	1.41x	1.31x	1.12x	0.88x	1.82x	1.37x	1.27x	1.12x	0.70x	29
2007	1.67x	1.49x	1.24x	1.09x	0.82x	1.67x	1.48x	1.24x	1.06x	0.81x	28
2008	1.73x	1.55x	1.37x	1.19x	1.04x	1.73x	1.54x	1.32x	1.18x	1.04x	31
2009	1.80x	1.59x	1.42x	1.18x	1.08x	1.80x	1.57x	1.40x	1.17x	1.00x	23
2010	1.76x	1.62x	1.39x	1.31x	1.17x	1.72x	1.52x	1.35x	1.24x	1.17x	31
2011	1.69x	1.46x	1.25x	1.11x	0.79x	1.50x	1.28x	1.14x	1.00x	0.70x	24
2012	1.66x	1.37x	1.20x	1.05x	0.97x	1.50x	1.27x	1.11x	0.99x	0.77x	34
2013	1.57x	1.36x	1.27x	1.17x	1.05x	1.36x	1.28x	1.14x	1.00x	0.78x	38
2014	1.59x	1.43x	1.27x	1.13x	1.03x	1.39x	1.20x	1.11x	0.95x	0.75x	50
2015	1.47x	1.34x	1.20x	1.13x	0.94x	1.14x	1.01x	0.91x	0.72x	0.54x	63
2016	1.49x	1.40x	1.26x	1.16x	1.10x	1.22x	1.09x	0.83x	0.65x	0.37x	53
2017	1.53x	1.37x	1.24x	1.16x	0.87x	1.05x	0.84x	0.64x	0.46x	0.35x	64
2018	1.56x	1.36x	1.23x	1.14x	1.04x	0.97x	0.78x	0.54x	0.31x	0.21x	75
2019	1.48x	1.30x	1.20x	1.11x	1.05x	0.76x	0.58x	0.39x	0.21x	0.09x	60
2020	1.37x	1.20x	1.14x	1.09x	1.07x	0.59x	0.34x	0.16x	0.08x	0.04x	55
2021	1.27x	1.16x	1.10x	1.05x	0.95x	0.47x	0.31x	0.17x	0.04x	0.00x	83
2022	1.24x	1.12x	1.06x	1.02x	0.90x	0.33x	0.17x	0.05x	0.00x	0.00x	61

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Private debt

Quarterly return

Quarter end	1-quarter return
Q1 2001	2.43%
Q2 2001	1.95%
Q3 2001	-0.30%
Q4 2001	1.07%
Q1 2002	2.54%
Q2 2002	-2.96%
Q3 2002	-0.55%
Q4 2002	1.37%
Q1 2003	3.08%
Q2 2003	5.95%
Q3 2003	-0.18%
Q4 2003	9.11%
Q1 2004	5.13%
Q2 2004	7.02%
Q3 2004	3.39%
Q4 2004	14.50%
Q1 2005	3.57%
Q2 2005	-1.06%
Q3 2005	5.90%
Q4 2005	3.84%
Q1 2006	4.07%
Q2 2006	4.37%
Q3 2006	3.00%
Q4 2006	8.31%

Quarter end	1-quarter return
Q1 2007	1.76%
Q2 2007	8.29%
Q3 2007	2.24%
Q4 2007	1.19%
Q1 2008	-2.41%
Q2 2008	-0.05%
Q3 2008	-9.06%
Q4 2008	-14.35%
Q1 2009	-4.17%
Q2 2009	10.77%
Q3 2009	11.36%
Q4 2009	5.29%
Q1 2010	6.23%
Q2 2010	2.17%
Q3 2010	4.51%
Q4 2010	8.01%
Q1 2011	4.44%
Q2 2011	3.07%
Q3 2011	-5.09%
Q4 2011	0.59%
Q1 2012	5.86%
Q2 2012	-0.50%
Q3 2012	7.60%
Q4 2012	0.48%

Quarter end	1-quarter return
Q1 2013	4.88%
Q2 2013	1.27%
Q3 2013	3.26%
Q4 2013	1.32%
Q1 2014	5.11%
Q2 2014	2.31%
Q3 2014	1.73%
Q4 2014	1.81%
Q1 2015	5.34%
Q2 2015	-0.34%
Q3 2015	-0.10%
Q4 2015	-0.14%
Q1 2016	2.09%
Q2 2016	0.76%
Q3 2016	3.83%
Q4 2016	2.10%
Q1 2017	1.97%
Q2 2017	3.07%
Q3 2017	1.94%
Q4 2017	3.08%
Q1 2018	3.74%
Q2 2018	0.47%
Q3 2018	-0.28%
Q4 2018	0.53%

Quarter end	1-quarter return
Q1 2019	1.76%
Q2 2019	1.65%
Q3 2019	2.09%
Q4 2019	2.24%
Q1 2020	-6.94%
Q2 2020	2.85%
Q3 2020	3.18%
Q4 2020	3.31%
Q1 2021	5.31%
Q2 2021	8.00%
Q3 2021	0.58%
Q4 2021	2.06%
Q1 2022	2.28%
Q2 2022	-0.36%
Q3 2022	-0.29%
Q4 2022	2.72%
Q1 2023	2.53%
Q2 2023	1.59%
Q3 2023*	0.25%

*Preliminary figure

Source: PitchBook | Geography: Global

Funds of funds

Funds of funds

IRRs by vintage

Pooled IRRs

IRR quantiles

Vintage year	Pooled IRR	Equal-weighted pooled IRR	Number of funds	Top decile	Top quartile	Median IRR	Bottom quartile	Bottom decile	Standard deviation	Number of funds
1999	5.48%	5.28%	9	12.32%	9.28%	4.56%	2.17%	-0.55%	5.50%	34
2000	7.83%	7.85%	8	14.12%	10.59%	6.75%	3.75%	1.42%	5.58%	39
2001	12.36%	9.53%	8	19.25%	14.77%	10.77%	6.55%	1.76%	9.32%	35
2002	8.07%	7.71%	3	15.90%	11.28%	9.20%	6.58%	4.36%	5.76%	25
2003	7.28%	6.46%	6	12.66%	9.94%	7.90%	6.50%	2.70%	5.25%	31
2004	8.26%	8.01%	9	11.76%	10.50%	7.15%	5.43%	1.21%	8.02%	43
2005	6.75%	6.71%	19	10.40%	8.46%	6.89%	5.28%	2.49%	11.13%	64
2006	8.02%	7.72%	35	11.47%	9.10%	7.03%	5.02%	2.90%	3.78%	74
2007	10.28%	9.26%	40	15.15%	12.21%	8.84%	6.08%	2.37%	5.95%	96
2008	5.03%	11.50%	40	17.34%	14.69%	10.87%	8.01%	4.16%	5.87%	87
2009	11.26%	11.75%	29	18.47%	16.20%	13.87%	8.44%	5.64%	5.91%	47
2010	12.74%	12.98%	37	19.62%	15.78%	12.56%	8.04%	0.14%	7.84%	60
2011	15.68%	16.66%	38	22.39%	18.09%	14.48%	11.10%	7.65%	7.18%	57
2012	16.02%	15.62%	39	25.15%	20.15%	16.77%	10.13%	7.61%	9.08%	48
2013	15.28%	15.85%	42	24.64%	19.99%	15.70%	12.05%	6.60%	6.94%	47
2014	14.94%	17.16%	40	24.71%	21.86%	18.45%	14.53%	12.42%	34.97%	60
2015	19.04%	19.08%	39	25.17%	22.10%	19.36%	15.00%	11.16%	5.58%	49
2016	18.21%	17.56%	34	24.61%	22.08%	18.73%	14.45%	10.01%	7.25%	38
2017	22.52%	22.17%	31	30.01%	25.19%	21.85%	18.00%	14.22%	6.54%	44
2018	20.49%	18.33%	28	30.00%	24.47%	20.37%	13.99%	9.65%	8.71%	39
2019	21.38%	18.28%	26	27.68%	21.33%	17.75%	13.76%	8.70%	9.13%	36
2020	8.09%	7.07%	27	20.30%	17.70%	11.67%	6.10%	0.33%	14.85%	33
2021	8.49%	10.34%	29	21.85%	17.13%	10.64%	6.53%	1.58%	10.73%	44
2022	13.21%	11.88%	19	37.97%	22.69%	0.21%	-12.48%	-17.19%	25.96%	14

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Funds of funds

IRRs by vintage



Source: PitchBook | Geography: Global | Data as of June 30, 2023

Funds of funds

PMEs by vintage

Vintage year	S&P 500			Morningstar Global			Number of funds
	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	
1999	5.48%	7.08%	1.05	5.48%	6.57%	0.92	9
2000	7.83%	6.79%	1.07	7.83%	5.94%	0.97	8
2001	12.36%	7.57%	1.16	12.36%	6.85%	1.08	8
2002	8.07%	8.48%	1.06	8.07%	7.86%	1.02	3
2003	7.28%	10.30%	1.01	7.28%	9.39%	1.07	6
2004	8.26%	9.20%	1.02	8.26%	7.84%	1.09	9
2005	6.75%	9.31%	0.92	6.75%	7.59%	1.03	19
2006	8.02%	9.29%	0.87	8.02%	6.99%	1.02	35
2007	10.28%	9.06%	0.91	10.28%	6.35%	1.10	40
2008	5.03%	9.93%	0.61	5.03%	6.69%	0.76	40
2009	11.26%	14.52%	0.88	11.26%	11.45%	1.08	29
2010	12.74%	12.66%	0.97	12.74%	8.87%	1.19	37
2011	15.68%	12.22%	1.11	15.68%	8.14%	1.34	38
2012	16.02%	12.81%	1.18	16.02%	9.09%	1.43	39
2013	15.28%	12.62%	1.14	15.28%	8.68%	1.35	42
2014	14.94%	11.47%	1.10	14.94%	7.78%	1.28	40
2015	19.04%	11.08%	1.28	19.04%	7.90%	1.47	39
2016	18.21%	13.24%	1.23	18.21%	10.30%	1.39	34
2017	22.52%	11.93%	1.34	22.52%	8.83%	1.47	31
2018	20.49%	10.48%	1.24	20.49%	6.55%	1.33	28
2019	21.38%	12.70%	1.24	21.38%	9.12%	1.31	26
2020	8.09%	12.15%	1.04	8.09%	8.97%	1.09	27
2021	8.49%	5.45%	1.04	8.49%	1.01%	1.07	29
2022	13.21%	-3.03%	1.05	13.21%	-3.93%	1.06	19

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Funds of funds

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
1999	1.33x	1.31x	0.02x	1.34x	1.31x	0.03x	9
2000	1.46x	1.45x	0.01x	1.47x	1.46x	0.01x	8
2001	1.63x	1.62x	0.01x	1.50x	1.48x	0.02x	8
2002	1.46x	1.45x	0.00x	1.45x	1.45x	0.00x	3
2003	1.56x	1.55x	0.01x	1.47x	1.46x	0.01x	6
2004	1.59x	1.54x	0.05x	1.61x	1.53x	0.08x	9
2005	1.47x	1.42x	0.05x	1.51x	1.39x	0.12x	19
2006	1.65x	1.53x	0.11x	1.63x	1.53x	0.10x	35
2007	1.89x	1.61x	0.27x	1.73x	1.54x	0.19x	40
2008	1.37x	1.14x	0.23x	1.96x	1.57x	0.39x	40
2009	1.87x	1.44x	0.44x	1.89x	1.51x	0.38x	29
2010	2.00x	1.49x	0.51x	2.11x	1.48x	0.63x	37
2011	2.25x	1.52x	0.73x	2.43x	1.63x	0.80x	38
2012	2.36x	1.30x	1.06x	2.25x	1.29x	0.96x	39
2013	2.12x	1.06x	1.06x	2.18x	1.14x	1.04x	42
2014	1.93x	0.87x	1.06x	2.19x	0.95x	1.23x	40
2015	2.11x	0.66x	1.45x	2.14x	0.73x	1.41x	39
2016	1.90x	0.53x	1.36x	1.86x	0.56x	1.30x	34
2017	1.80x	0.34x	1.46x	1.82x	0.39x	1.43x	31
2018	1.55x	0.27x	1.28x	1.56x	0.27x	1.29x	28
2019	1.46x	0.27x	1.19x	1.41x	0.17x	1.24x	26
2020	1.13x	0.07x	1.06x	1.12x	0.10x	1.02x	27
2021	1.12x	0.07x	1.04x	1.14x	0.18x	0.96x	29
2022	1.09x	0.04x	1.05x	1.10x	0.04x	1.06x	19

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Funds of funds

Multiples by vintage

Vintage year	TVPI					DPI					Number of funds
	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	
1999		1.52x	1.18x	1.14x			1.51x	1.18x	1.14x		9
2000		1.65x	1.53x	1.25x			1.64x	1.53x	1.24x		8
2001		1.73x	1.54x	1.37x			1.71x	1.50x	1.37x		8
2002			1.41x					1.41x			3
2003		1.61x	1.55x	1.43x			1.59x	1.53x	1.43x		6
2004		1.60x	1.59x	1.43x			1.59x	1.56x	1.38x		9
2005	1.99x	1.66x	1.42x	1.34x	1.23x	1.69x	1.57x	1.41x	1.32x	0.97x	19
2006	2.00x	1.86x	1.61x	1.42x	1.26x	1.87x	1.73x	1.57x	1.31x	1.23x	35
2007	2.41x	1.99x	1.60x	1.40x	1.10x	2.04x	1.79x	1.49x	1.29x	0.91x	40
2008	2.85x	2.40x	1.91x	1.44x	1.07x	2.09x	1.86x	1.58x	1.20x	0.83x	40
2009	2.47x	2.21x	1.94x	1.46x	1.21x	2.15x	1.82x	1.54x	1.20x	0.84x	29
2010	3.53x	2.40x	1.76x	1.54x	1.35x	2.40x	1.60x	1.43x	1.13x	0.95x	37
2011	4.18x	2.51x	2.19x	1.70x	1.34x	2.66x	1.78x	1.41x	1.18x	0.73x	38
2012	3.33x	2.97x	2.10x	1.52x	1.40x	2.01x	1.58x	1.16x	0.94x	0.77x	39
2013	3.19x	2.55x	2.11x	1.64x	1.37x	1.73x	1.50x	1.05x	0.93x	0.43x	42
2014	3.31x	2.44x	1.99x	1.76x	1.55x	1.38x	1.17x	0.92x	0.73x	0.53x	40
2015	3.02x	2.54x	2.04x	1.80x	1.50x	1.17x	0.84x	0.70x	0.50x	0.36x	39
2016	2.31x	2.13x	1.90x	1.64x	1.33x	0.84x	0.73x	0.53x	0.32x	0.25x	34
2017	2.29x	2.13x	1.87x	1.54x	1.31x	0.83x	0.56x	0.28x	0.15x	0.11x	31
2018	1.97x	1.75x	1.55x	1.39x	1.22x	0.41x	0.34x	0.22x	0.11x	0.05x	28
2019	1.62x	1.57x	1.44x	1.29x	1.12x	0.27x	0.21x	0.11x	0.03x	0.00x	26
2020	1.38x	1.21x	1.10x	1.05x	0.86x	0.21x	0.16x	0.05x	0.00x	0.00x	27
2021	1.49x	1.22x	1.14x	1.07x	0.90x	0.18x	0.04x	0.02x	0.00x	0.00x	29
2022	1.32x	1.14x	1.08x	0.91x	0.86x	0.11x	0.02x	0.00x	0.00x	0.00x	19

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Funds of funds

Quarterly return

Quarter end	1-quarter return
Q1 2001	-8.44%
Q2 2001	-7.16%
Q3 2001	-9.65%
Q4 2001	-4.33%
Q1 2002	-10.46%
Q2 2002	-5.31%
Q3 2002	-6.93%
Q4 2002	-3.87%
Q1 2003	-7.61%
Q2 2003	3.77%
Q3 2003	0.18%
Q4 2003	-0.61%
Q1 2004	5.31%
Q2 2004	0.78%
Q3 2004	4.89%
Q4 2004	6.92%
Q1 2005	1.97%
Q2 2005	6.03%
Q3 2005	5.60%
Q4 2005	7.69%
Q1 2006	4.92%
Q2 2006	6.55%
Q3 2006	4.64%
Q4 2006	8.45%

Quarter end	1-quarter return
Q1 2007	1.79%
Q2 2007	10.83%
Q3 2007	4.21%
Q4 2007	4.01%
Q1 2008	8.66%
Q2 2008	-2.17%
Q3 2008	-6.38%
Q4 2008	-10.69%
Q1 2009	-2.84%
Q2 2009	-4.85%
Q3 2009	5.43%
Q4 2009	3.20%
Q1 2010	4.90%
Q2 2010	-0.66%
Q3 2010	4.63%
Q4 2010	2.20%
Q1 2011	4.04%
Q2 2011	5.65%
Q3 2011	-1.82%
Q4 2011	0.44%
Q1 2012	5.06%
Q2 2012	1.08%
Q3 2012	-0.51%
Q4 2012	3.26%

Quarter end	1-quarter return
Q1 2013	2.45%
Q2 2013	3.01%
Q3 2013	2.56%
Q4 2013	4.09%
Q1 2014	2.33%
Q2 2014	6.44%
Q3 2014	1.89%
Q4 2014	1.65%
Q1 2015	4.13%
Q2 2015	5.27%
Q3 2015	2.40%
Q4 2015	-0.05%
Q1 2016	1.44%
Q2 2016	1.51%
Q3 2016	4.16%
Q4 2016	0.40%
Q1 2017	3.39%
Q2 2017	3.77%
Q3 2017	3.63%
Q4 2017	1.18%
Q1 2018	5.33%
Q2 2018	5.58%
Q3 2018	3.10%
Q4 2018	2.09%

Quarter end	1-quarter return
Q1 2019	2.36%
Q2 2019	3.87%
Q3 2019	2.07%
Q4 2019	2.55%
Q1 2020	-0.56%
Q2 2020	3.65%
Q3 2020	7.03%
Q4 2020	12.88%
Q1 2021	11.74%
Q2 2021	16.45%
Q3 2021	7.01%
Q4 2021	3.99%
Q1 2022	0.40%
Q2 2022	-1.77%
Q3 2022	-1.02%
Q4 2022	-4.18%
Q1 2023	0.62%
Q2 2023	1.17%
Q3 2023*	3.18%

*Preliminary figure

Source: PitchBook | Geography: Global

Secondaries

Secondaries

IRRs by vintage

Pooled IRRs

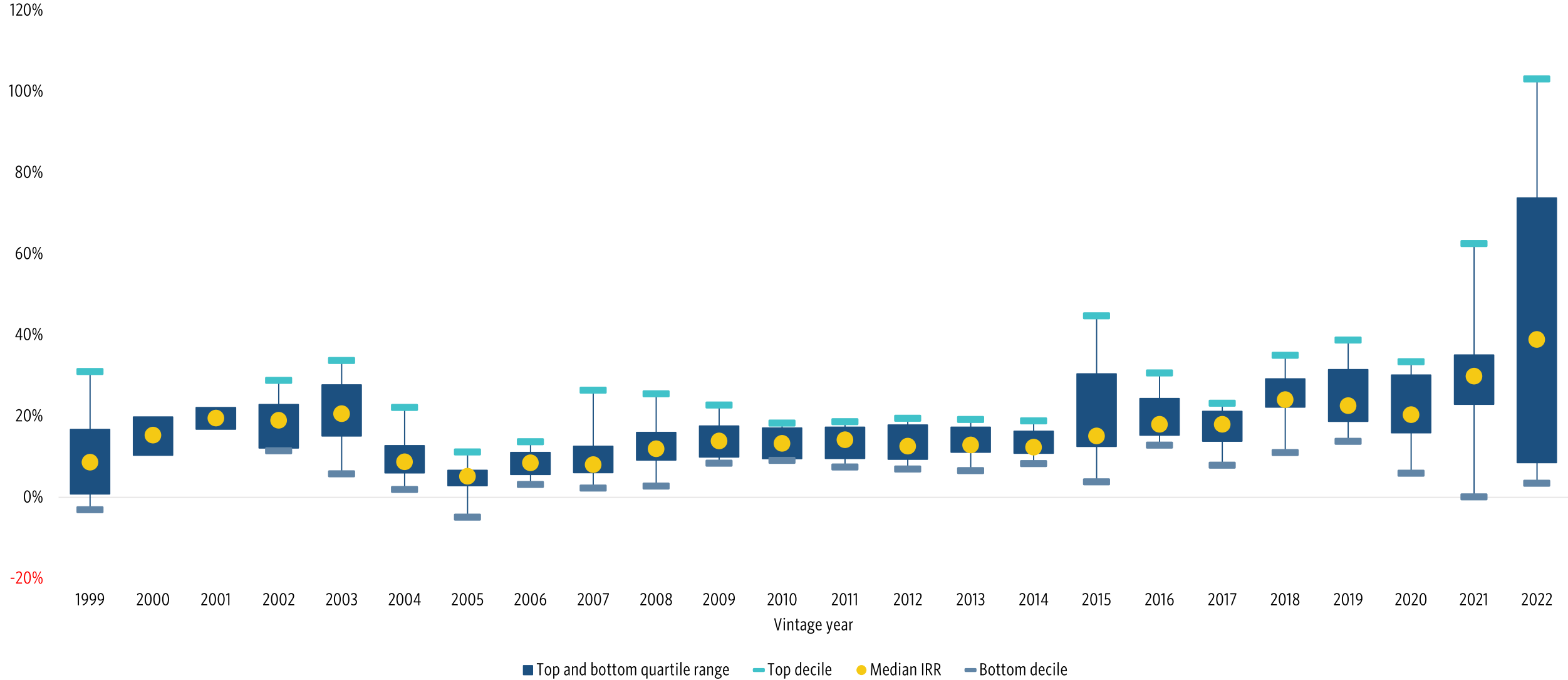
IRR quantiles

Vintage year	Pooled IRR	Equal-weighted pooled IRR	Number of funds	Top decile	Top quartile	Median IRR	Bottom quartile	Bottom decile	Standard deviation	Number of funds
1999	7.32%	5.51%	3	31.00%	16.75%	8.63%	0.85%	-3.09%	14.81%	11
2000	15.09%	14.35%	3		19.80%	15.30%	10.35%		7.05%	6
2001	14.09%	16.01%	2		22.11%	19.52%	16.80%		5.51%	5
2002	16.08%	18.07%	4	28.82%	22.88%	18.97%	12.17%	11.43%	13.03%	10
2003	37.92%	37.92%	1	33.69%	27.73%	20.58%	15.09%	5.75%	16.44%	12
2004	9.15%	7.82%	7	22.14%	12.74%	8.75%	6.02%	1.93%	12.25%	14
2005	6.65%	6.09%	11	11.15%	6.68%	5.20%	2.88%	-4.91%	6.37%	12
2006	7.15%	8.52%	8	13.68%	11.08%	8.49%	5.61%	3.18%	3.98%	16
2007	5.70%	9.44%	10	26.40%	12.58%	8.03%	6.05%	2.25%	21.28%	15
2008	11.59%	12.74%	14	25.48%	16.02%	11.95%	9.17%	2.78%	10.03%	14
2009	12.13%	11.19%	11	22.70%	17.60%	13.90%	9.90%	8.38%	7.43%	13
2010	12.17%	12.74%	6	18.28%	17.08%	13.27%	9.53%	9.09%	3.94%	14
2011	14.82%	13.44%	12	18.62%	17.28%	14.19%	9.56%	7.46%	7.54%	15
2012	10.78%	9.86%	11	19.46%	17.85%	12.57%	9.40%	6.95%	7.94%	19
2013	10.61%	10.85%	13	19.14%	17.30%	12.90%	11.11%	6.58%	7.57%	19
2014	13.98%	11.55%	13	18.81%	16.30%	12.36%	10.87%	8.28%	5.04%	17
2015	13.12%	14.99%	7	44.74%	30.45%	15.13%	12.54%	3.80%	15.86%	11
2016	18.19%	20.22%	21	30.63%	24.37%	17.99%	15.30%	12.84%	8.25%	27
2017	17.93%	17.21%	11	23.17%	21.19%	17.99%	13.85%	7.88%	6.00%	14
2018	22.86%	17.83%	13	34.97%	29.22%	24.05%	22.21%	11.00%	8.78%	18
2019	28.21%	25.40%	14	38.76%	31.45%	22.58%	18.73%	13.79%	12.21%	15
2020	23.91%	19.89%	17	33.38%	30.13%	20.35%	15.91%	5.93%	11.63%	20
2021	23.88%	26.75%	23	62.53%	35.10%	29.83%	22.92%	0.10%	41.15%	31
2022	24.53%	26.71%	15	103.08%	73.80%	38.90%	8.56%	3.43%	50.94%	22

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Secondaries

IRRs by vintage



Source: PitchBook | Geography: Global | Data as of June 30, 2023

Secondaries

PMEs by vintage

Vintage year	S&P 500			Morningstar Global			Number of funds
	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	
1999	7.32%	7.08%	1.23	7.32%	6.57%	1.13	3
2000	15.09%	6.79%	1.38	15.09%	5.94%	1.22	3
2001	14.09%	7.57%	1.19	14.09%	6.85%	1.08	2
2002	16.08%	8.48%	1.23	16.08%	7.86%	1.14	4
2003	37.92%	10.30%	1.56	37.92%	9.39%	1.44	1
2004	9.15%	9.20%	1.10	9.15%	7.84%	1.13	7
2005	6.65%	9.31%	0.95	6.65%	7.59%	1.04	11
2006	7.15%	9.29%	0.95	7.15%	6.99%	1.04	8
2007	5.70%	9.06%	0.81	5.70%	6.35%	0.89	10
2008	11.59%	9.93%	0.93	11.59%	6.69%	1.05	14
2009	12.13%	14.52%	0.93	12.13%	11.45%	1.07	11
2010	12.17%	12.66%	0.95	12.17%	8.87%	1.09	6
2011	14.82%	12.22%	1.02	14.82%	8.14%	1.17	12
2012	10.78%	12.81%	0.91	10.78%	9.09%	1.03	11
2013	10.61%	12.62%	0.94	10.61%	8.68%	1.08	13
2014	13.98%	11.47%	1.04	13.98%	7.78%	1.14	13
2015	13.12%	11.08%	1.01	13.12%	7.90%	1.14	7
2016	18.19%	13.24%	1.15	18.19%	10.30%	1.26	21
2017	17.93%	11.93%	1.17	17.93%	8.83%	1.29	11
2018	22.86%	10.48%	1.28	22.86%	6.55%	1.36	13
2019	28.21%	12.70%	1.33	28.21%	9.12%	1.42	14
2020	23.91%	12.15%	1.24	23.91%	8.97%	1.29	17
2021	23.88%	5.45%	1.22	23.88%	1.01%	1.25	23
2022	24.53%	-3.03%	1.18	24.53%	-3.93%	1.19	15

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Secondaries

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
1999	1.24x	1.24x	0.00x	1.19x	1.19x	0.00x	3
2000	1.64x	1.64x	0.00x	1.62x	1.62x	0.00x	3
2001	1.55x	1.54x	0.01x	1.62x	1.61x	0.00x	2
2002	1.50x	1.50x	0.00x	1.53x	1.53x	0.00x	4
2003	1.79x	1.79x	0.00x	1.79x	1.79x	0.00x	1
2004	1.45x	1.40x	0.05x	1.37x	1.32x	0.06x	7
2005	1.43x	1.30x	0.14x	1.41x	1.23x	0.18x	11
2006	1.42x	1.39x	0.03x	1.57x	1.41x	0.16x	8
2007	1.27x	1.21x	0.06x	1.45x	1.39x	0.06x	10
2008	1.59x	1.53x	0.06x	1.72x	1.54x	0.17x	14
2009	1.57x	1.47x	0.10x	1.54x	1.41x	0.13x	11
2010	1.50x	1.44x	0.06x	1.51x	1.41x	0.10x	6
2011	1.67x	1.52x	0.15x	1.66x	1.46x	0.20x	12
2012	1.44x	1.30x	0.14x	1.39x	1.21x	0.18x	11
2013	1.51x	1.20x	0.31x	1.57x	1.17x	0.40x	13
2014	1.53x	1.05x	0.48x	1.44x	1.06x	0.39x	13
2015	1.43x	0.81x	0.61x	1.35x	1.05x	0.30x	7
2016	1.60x	0.83x	0.77x	1.74x	0.91x	0.83x	21
2017	1.64x	0.61x	1.03x	1.66x	0.68x	0.99x	11
2018	1.52x	0.31x	1.22x	1.52x	0.34x	1.18x	13
2019	1.57x	0.68x	0.89x	1.49x	0.62x	0.87x	14
2020	1.35x	0.26x	1.09x	1.32x	0.29x	1.03x	17
2021	1.27x	0.16x	1.11x	1.28x	0.13x	1.15x	23
2022	1.21x	0.06x	1.16x	1.22x	0.04x	1.18x	15

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Secondaries

Multiples by vintage

Vintage year	TVPI					DPI					Number of funds
	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	
1999			1.26x					1.25x			3
2000			1.74x					1.74x			3
2001			1.62x					1.62x			2
2002		1.58x	1.54x	1.49x			1.58x	1.54x	1.49x		4
2003			1.79x					1.79x			1
2004		1.58x	1.39x	1.31x			1.56x	1.35x	1.15x		7
2005	2.06x	1.55x	1.30x	1.20x	0.73x	1.67x	1.36x	1.27x	1.05x	0.73x	11
2006		1.64x	1.45x	1.32x			1.48x	1.32x	1.28x		8
2007	2.05x	1.41x	1.38x	1.35x	1.02x	1.86x	1.38x	1.37x	1.25x	0.95x	10
2008	1.85x	1.68x	1.52x	1.41x	1.23x	1.71x	1.63x	1.49x	1.39x	1.22x	14
2009	1.84x	1.73x	1.37x	1.18x	0.96x	1.74x	1.62x	1.37x	1.07x	0.78x	11
2010		1.66x	1.54x	1.38x			1.56x	1.48x	1.31x		6
2011	2.16x	1.72x	1.64x	1.43x	1.28x	1.64x	1.57x	1.51x	1.27x	1.10x	12
2012	1.70x	1.57x	1.36x	1.29x	1.20x	1.58x	1.43x	1.24x	1.04x	0.87x	11
2013	1.89x	1.77x	1.55x	1.43x	1.35x	1.31x	1.27x	1.22x	1.11x	0.93x	13
2014	1.67x	1.62x	1.51x	1.41x	1.17x	1.25x	1.18x	1.05x	0.95x	0.82x	13
2015		1.41x	1.39x	1.35x			1.34x	1.10x	0.78x		7
2016	2.19x	1.86x	1.66x	1.44x	1.39x	1.41x	1.05x	0.81x	0.60x	0.49x	21
2017	2.05x	1.84x	1.67x	1.46x	1.45x	1.05x	0.84x	0.68x	0.39x	0.35x	11
2018	1.74x	1.72x	1.52x	1.42x	1.33x	0.68x	0.33x	0.26x	0.20x	0.13x	13
2019	1.70x	1.65x	1.56x	1.28x	1.24x	0.88x	0.82x	0.60x	0.32x	0.22x	14
2020	1.58x	1.47x	1.25x	1.20x	1.14x	0.75x	0.38x	0.12x	0.09x	0.01x	17
2021	1.65x	1.47x	1.32x	1.14x	0.99x	0.30x	0.22x	0.08x	0.00x	0.00x	23
2022	1.78x	1.38x	1.16x	1.05x	1.02x	0.18x	0.11x	0.01x	0.00x	0.00x	15

Source: PitchBook | Geography: Global | Data as of June 30, 2023

Secondaries

Quarterly return

Quarter end	1-quarter return
Q1 2001	-3.10%
Q2 2001	-4.16%
Q3 2001	1.67%
Q4 2001	-3.01%
Q1 2002	4.25%
Q2 2002	1.64%
Q3 2002	-6.28%
Q4 2002	-4.62%
Q1 2003	-2.99%
Q2 2003	1.33%
Q3 2003	1.58%
Q4 2003	2.42%
Q1 2004	8.84%
Q2 2004	4.87%
Q3 2004	6.67%
Q4 2004	6.16%
Q1 2005	6.94%
Q2 2005	2.09%
Q3 2005	4.88%
Q4 2005	1.98%
Q1 2006	7.87%
Q2 2006	4.70%
Q3 2006	3.71%
Q4 2006	6.49%

Quarter end	1-quarter return
Q1 2007	3.70%
Q2 2007	11.15%
Q3 2007	7.30%
Q4 2007	3.71%
Q1 2008	1.15%
Q2 2008	-2.52%
Q3 2008	2.03%
Q4 2008	-6.08%
Q1 2009	-7.92%
Q2 2009	-3.07%
Q3 2009	0.42%
Q4 2009	1.81%
Q1 2010	1.42%
Q2 2010	6.43%
Q3 2010	6.63%
Q4 2010	5.22%
Q1 2011	7.25%
Q2 2011	5.78%
Q3 2011	4.28%
Q4 2011	-3.54%
Q1 2012	3.95%
Q2 2012	2.93%
Q3 2012	4.14%
Q4 2012	2.85%

Quarter end	1-quarter return
Q1 2013	3.03%
Q2 2013	3.77%
Q3 2013	2.19%
Q4 2013	4.66%
Q1 2014	3.61%
Q2 2014	2.77%
Q3 2014	3.23%
Q4 2014	2.43%
Q1 2015	1.29%
Q2 2015	7.15%
Q3 2015	1.56%
Q4 2015	0.06%
Q1 2016	-0.15%
Q2 2016	3.25%
Q3 2016	1.12%
Q4 2016	2.76%
Q1 2017	3.38%
Q2 2017	4.21%
Q3 2017	3.81%
Q4 2017	3.50%
Q1 2018	2.41%
Q2 2018	8.24%
Q3 2018	2.19%
Q4 2018	0.69%

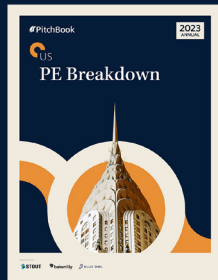
Quarter end	1-quarter return
Q1 2019	2.36%
Q2 2019	4.92%
Q3 2019	0.09%
Q4 2019	2.36%
Q1 2020	-4.02%
Q2 2020	-0.36%
Q3 2020	3.42%
Q4 2020	12.27%
Q1 2021	8.69%
Q2 2021	14.20%
Q3 2021	8.48%
Q4 2021	8.39%
Q1 2022	1.32%
Q2 2022	4.22%
Q3 2022	-2.42%
Q4 2022	0.49%
Q1 2023	0.24%
Q2 2023	1.58%
Q3 2023*	0.62%

*Preliminary figure

Source: PitchBook | Geography: Global

Additional research

Market updates



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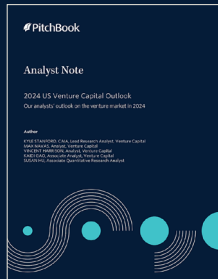
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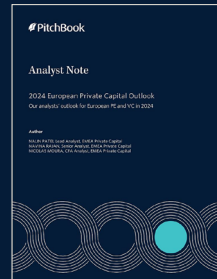
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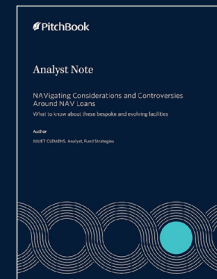
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