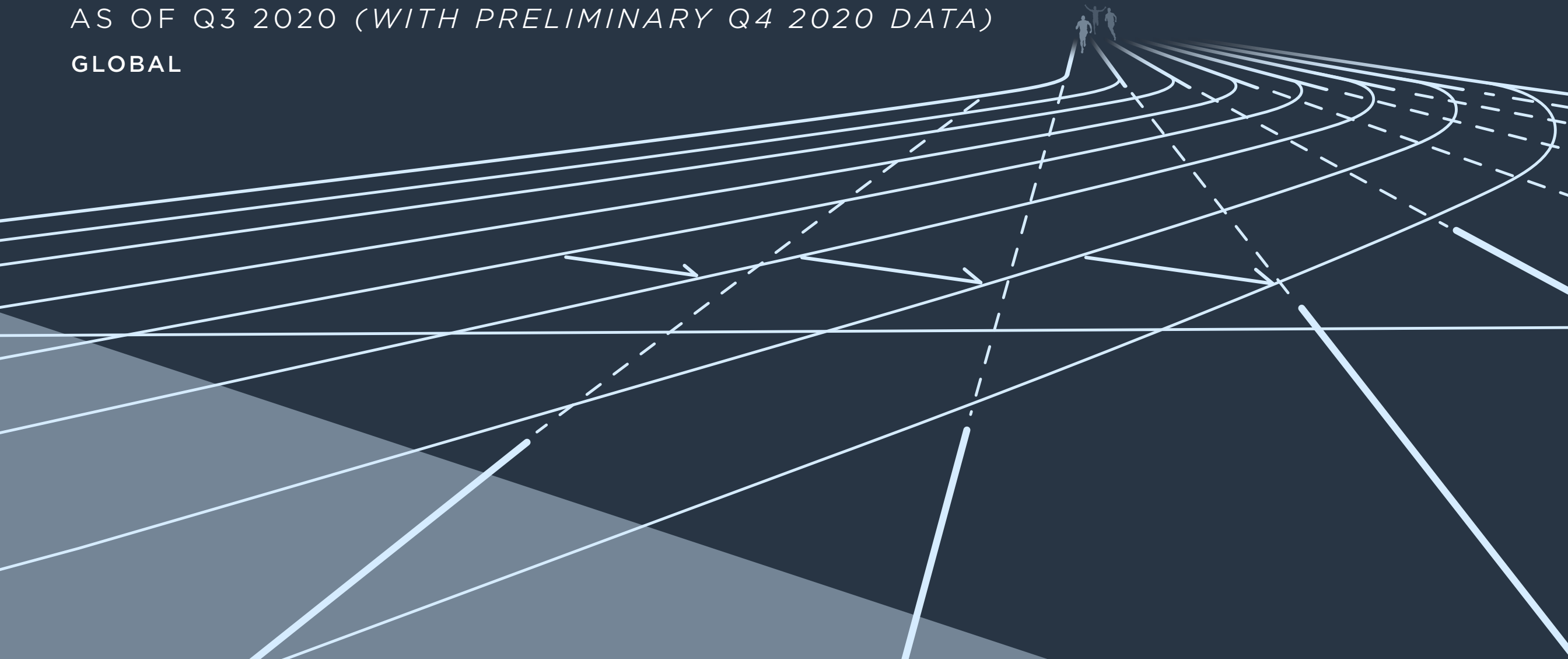




PitchBook Benchmarks

AS OF Q3 2020 (WITH PRELIMINARY Q4 2020 DATA)

GLOBAL





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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 are expanding PitchBook Benchmarks to include additional slices based on fund strategy and geography, enabling performance comparisons with more representative peer groups. This quarter we are introducing dedicated PitchBook Benchmarks for North America, Europe, private equity, venture capital, funds of funds, and secondaries, with more to be released in the future. To easily access the supporting data in this PDF, be sure to download the four accompanying Excel data packs. Links for those packs and the other Benchmark reports are below:

Excel data packs:

- [Global](#)
- [Europe](#)
- [North America](#)
- [Private equity](#)
- [Venture capital](#)
- [Funds of funds](#)
- [Secondaries](#)

PitchBook Benchmark PDFs:

- [Global](#)
- [Europe](#)
- [North America](#)
- [Private equity](#)
- [Venture capital](#)
- [Funds of funds](#)
- [Secondaries](#)

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

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.

Commitment pacing and cash flow models, as well as custom benchmarking analysis, can be made available upon request for PitchBook clients.



Methodology

Fund classifications

Private equity

Buyout
Growth/expansion
Mezzanine
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
Energy
Timber
Metals/mining
Agriculture

Private debt

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

Funds of funds

Secondaries

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.

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: The vintage year is based on the year that a fund makes its first capital call. If the year of the initial call is unknown, the year of the final close is used as the vintage year. However, if a firm publicly declares via press release or a notice on their website a fund to be of a particular vintage different than either of the first conditions, the firm's classification takes precedence.

Quarterly return: The percentage change in aggregate NAV is calculated 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.

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 IRR: Calculated as the aggregate percentage change in aggregate NAV for each group of funds in a sample, considering contributions and distributions during the quarter. Interpolated and extended data are not used in this calculation. Preliminary data is only available for global benchmarks and will be published when 60% or more of NAV is captured for all private capital funds. Note that individual fund strategies may vary from that 60% threshold.

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

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](https://pitchbook.com/resources/whitepapers/pme-benchmarks). [PitchBook News & Analysis](#) also contains several articles with PME benchmarks and analysis. All PME figures are calculated using the Kaplan-Schoar PME method:

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

When using a KS-PME, a value greater than 1.0 implies outperformance of the fund over the public index (net of all fees).

$$PME_{KS-TVPI} = \frac{NAV_T + \sum_{t=0}^T \left(\frac{\text{distribution}_t}{I_T} \right)}{\sum_{t=0}^T \left(\frac{\text{contribution}_t}{I_T} \right)}$$

PitchBook introduces new commitment pacing and cash flow models

Greater transparency.
More flexibility.
Differentiated data.



PitchBook has leveraged our massive private fund database to develop several models to help limited partners (LPs) better navigate private markets. These new models offer foresight into planning for commitment pacing and preparing for capital calls, allowing the user to customize for their specific allocations and assumptions.

All the models introduced in this series are available to PitchBook clients. We welcome any questions, comments, or inquiries at benchmarks@pitchbook.com.

Download the full Basics of Cash Flow Management series.



Private capital



Private capital

Horizon IRRs

Strategy	Q4 2020*	Q3 2020	1-year	3-year	5-year	10-year	15-year	20-year
Private capital	5.54%	9.27%	10.22%	10.78%	11.24%	12.34%	10.40%	9.94%
Private equity	6.43%	13.34%	17.01%	14.32%	14.55%	14.41%	12.37%	11.95%
Venture capital	11.48%	12.45%	21.27%	17.65%	12.07%	13.68%	10.38%	6.26%
Real estate	2.43%	2.19%	1.59%	5.71%	8.28%	11.72%	6.56%	6.82%
Real assets	2.21%	1.74%	-4.86%	1.46%	4.15%	5.09%	4.90%	5.35%
Private debt	4.01%	4.15%	1.86%	5.54%	6.10%	8.39%	7.91%	8.54%
Funds of funds	7.05%	9.54%	12.65%	12.64%	11.04%	11.05%	9.63%	8.70%
Secondaries	6.59%	1.97%	-2.44%	8.01%	8.63%	11.19%	10.23%	10.38%
S&P 500	12.15%	8.93%	15.15%	12.28%	14.15%	13.74%	9.19%	6.42%
MSCI All Country World Index	14.79%	8.25%	11.00%	7.68%	10.90%	9.13%	7.02%	5.57%
MSCI World Small Cap Growth	21.36%	10.19%	17.49%	9.30%	12.37%	11.45%	8.91%	7.44%
Morningstar Global Real Estate	10.51%	3.39%	-10.69%	1.16%	5.08%	6.34%	5.25%	7.82%
Morningstar US Real Asset	6.20%	-0.15%	-3.58%	1.50%	2.22%	2.70%	3.97%	6.43%
Bloomberg Barclays Global High Yield Corporate	7.19%	4.87%	4.34%	3.69%	6.43%	5.98%	7.00%	

*For private fund strategies these are preliminary quarterly returns
Source: PitchBook | Geography: Global | Data as of September 30, 2020
Note: all public index values are total return CAGRs



Private capital

Equal-weighted horizon IRRs

Strategy	Q4 2020*	Q3 2020	1-year	3-year	5-year	10-year	15-year	20-year
Private capital	7.71%	7.67%	8.90%	11.11%	10.50%	11.50%	9.91%	8.27%
Private equity	9.63%	11.50%	11.83%	12.96%	13.47%	12.94%	12.14%	10.79%
Venture capital	16.19%	10.33%	15.60%	15.86%	10.50%	12.48%	9.35%	4.98%
Real estate	2.05%	1.64%	3.45%	7.01%	8.40%	10.59%	6.55%	6.89%
Real assets	0.77%	1.86%	-1.36%	2.90%	4.87%	5.55%	6.11%	6.80%
Private debt	4.48%	2.38%	0.73%	6.03%	6.49%	8.37%	7.80%	8.93%
Funds of funds	8.13%	8.83%	11.67%	13.62%	11.87%	12.16%	10.63%	9.82%
Secondaries	3.87%	3.76%	3.12%	9.12%	8.65%	11.53%	10.60%	10.16%
S&P 500	12.15%	8.93%	15.15%	12.28%	14.15%	13.74%	9.19%	6.42%
MSCI All Country World Index	14.79%	8.25%	11.00%	7.68%	10.90%	9.13%	7.02%	5.57%
MSCI World Small Cap Growth	21.36%	10.19%	17.49%	9.30%	12.37%	11.45%	8.91%	7.44%
Morningstar Global Real Estate	10.51%	3.39%	-10.69%	1.16%	5.08%	6.34%	5.25%	7.82%
Morningstar US Real Asset	6.20%	-0.15%	-3.58%	1.50%	2.22%	2.70%	3.97%	6.43%
Bloomberg Barclays Global High Yield Corporate	7.19%	4.87%	4.34%	3.69%	6.43%	5.98%	7.00%	

*For private fund strategies these are preliminary quarterly returns
Source: PitchBook | Geography: Global | Data as of September 30, 2020
Note: all public index values are total return CAGRs



Private capital

One-year horizon IRRs by select strategies

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	15-year horizon IRR	Standard deviation**
Oil & gas 90.8%	Real estate 55.3%	Infrastructure 45.6%	Oil & gas 2.0%	Private debt 24.7%	Secondaries 20.3%	Oil & gas 18.5%	Other PE 15.6%	Venture capital 20.0%	Other PE 22.0%	Infrastructure 15.1%	Oil & gas 20.5%	Buyout 20.8%	Venture capital 17.5%	Venture capital 16.7%	PE growth 24.5%	PE growth 13.3%	Infrastructure 20.5%
Infrastructure 83.8%	PE growth 39.9%	Secondaries 32.3%	Secondaries -8.2%	PE growth 8.4%	PE growth 19.2%	Secondaries 12.8%	Secondaries 14.8%	Buyout 17.8%	Venture capital 19.3%	Venture capital 14.0%	Other PE 13.4%	PE growth 16.6%	PE growth 17.4%	Buyout 15.8%	Venture capital 21.3%	Buyout 12.5%	Oil & gas 20.3%
PE growth 36.0%	Oil & gas 31.5%	Buyout 25.2%	Infrastructure -10.2%	Buyout 7.9%	Oil & gas 17.9%	Venture capital 11.4%	Buyout 14.4%	Real estate 17.1%	Real estate 16.2%	Other PE 13.7%	Buyout 12.9%	Secondaries 15.7%	Funds of funds 15.3%	PE growth 15.7%	Buyout 17.2%	Venture capital 10.4%	Real estate 20.0%
Buyout 31.4%	Buyout 29.2%	Other PE 18.4%	Other PE -10.3%	Oil & gas 3.8%	Buyout 17.5%	Private debt 10.6%	PE growth 11.5%	Other PE 15.4%	Infrastructure 15.8%	Buyout 12.6%	PE growth 10.1%	Real estate 14.3%	Secondaries 14.9%	Secondaries 11.5%	Funds of funds 12.7%	Secondaries 10.2%	PE growth 13.0%
Other PE 23.7%	Secondaries 28.9%	Funds of funds 17.5%	Venture capital -11.9%	Other PE 1.7%	Private debt 16.5%	Real estate 10.5%	Real estate 11.4%	Private debt 13.8%	Secondaries 14.5%	Funds of funds 12.4%	Real estate 10.1%	Funds of funds 12.9%	Infrastructure 11.2%	Funds of funds 10.8%	Infrastructure 5.5%	Funds of funds 9.6%	Buyout 12.3%
Funds of funds 22.4%	Funds of funds 25.4%	Oil & gas 14.5%	Funds of funds -12.6%	Funds of funds 0.6%	Other PE 15.6%	Buyout 8.3%	Funds of funds 8.4%	Funds of funds 12.5%	Buyout 13.6%	Real estate 12.3%	Private debt 8.0%	Private debt 11.0%	Buyout 10.2%	Other PE 8.3%	Private debt 1.9%	Other PE 9.3%	Private debt 11.8%
Real estate 21.6%	Private debt 25.3%	Private debt 13.8%	PE growth -16.0%	Venture capital -0.2%	Real estate 12.4%	Other PE 7.2%	Private debt 8.0%	PE growth 12.4%	Funds of funds 13.4%	PE growth 11.7%	Secondaries 7.8%	Infrastructure 11.0%	Private debt 6.5%	Real estate 7.5%	Real estate 1.6%	Private debt 7.9%	Secondaries 11.6%
Secondaries 15.8%	Infrastructure 20.4%	Venture capital 13.6%	Buyout -21.7%	Infrastructure -4.8%	Venture capital 11.6%	Infrastructure 7.2%	Venture capital 7.0%	Secondaries 8.5%	PE growth 11.4%	Secondaries 11.3%	Funds of funds 7.5%	Oil & gas 10.9%	Real estate 6.5%	Private debt 7.4%	Other PE 1.4%	Infrastructure 7.6%	Funds of funds 9.5%
Private debt 14.1%	Other PE 16.0%	Real estate 11.6%	Private debt -31.2%	Secondaries -10.6%	Funds of funds 5.9%	PE growth 6.3%	Oil & gas 6.5%	Oil & gas 7.5%	Private debt 7.6%	Private debt 3.7%	Infrastructure 5.5%	Venture capital 10.5%	Oil & gas 4.2%	Infrastructure 5.4%	Secondaries -2.4%	Real estate 6.6%	Other PE 9.0%
Venture capital 7.8%	Venture capital 13.7%	PE growth 7.2%	Real estate -31.2%	Real estate -39.6%	Infrastructure 3.1%	Funds of funds 6.1%	Infrastructure 4.1%	Infrastructure 2.3%	Oil & gas -0.7%	Oil & gas -22.0%	Venture capital 0.0%	Other PE 10.3%	Other PE -1.9%	Oil & gas -11.0%	Oil & gas -25.6%	Oil & gas 0.7%	Venture capital 8.9%

*From Q3 2019 to Q3 2020

**Standard deviation of 1-year horizon IRRs calculated quarterly from Q4 2005 to Q3 2020

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Private equity



Private equity

IRR by vintage

Pooled IRRs

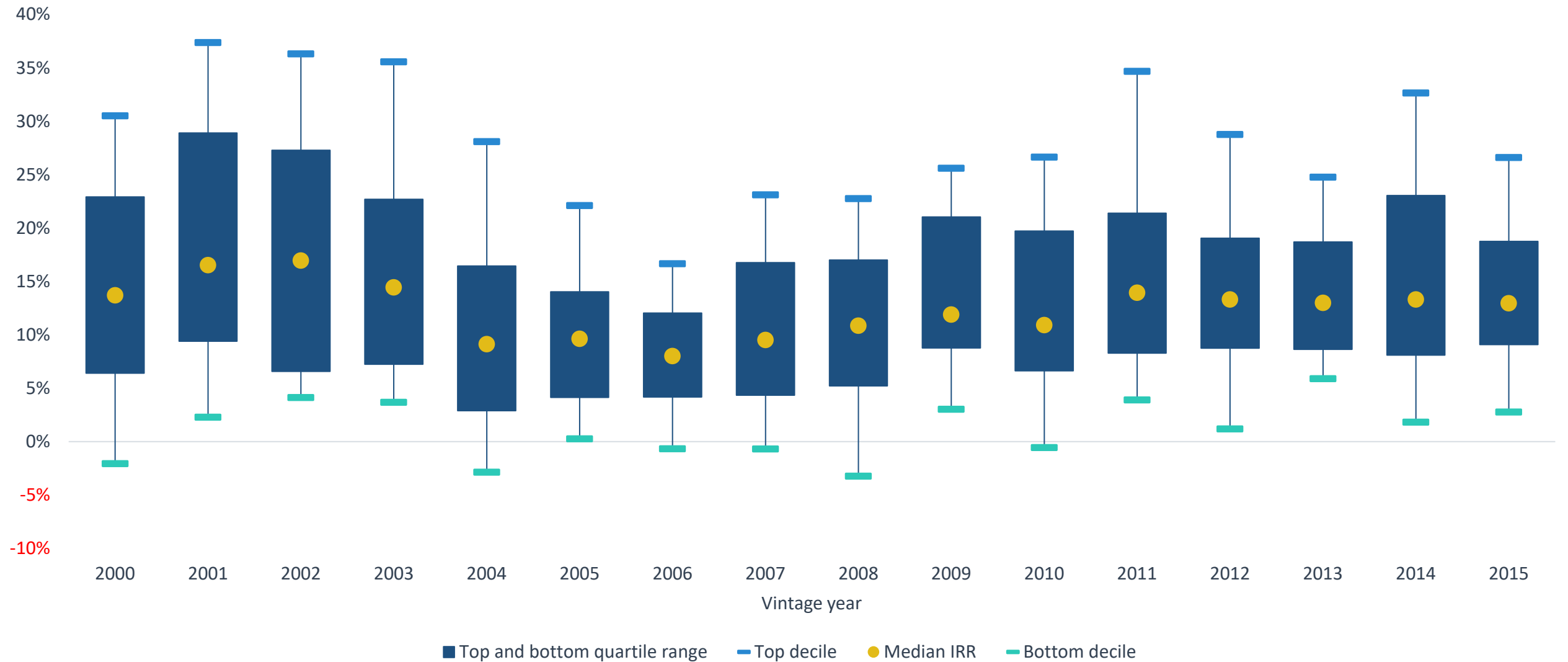
IRR hurdle rates

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
Pre-1996	21.19%	12.89%	5	34.00%	28.02%	15.31%	9.37%	-2.76%	17.48%	88
1996	11.33%	7.79%	25	23.42%	15.55%	6.01%	0.40%	-6.50%	13.46%	37
1997	9.82%	7.53%	25	18.47%	12.64%	7.27%	-1.06%	-3.93%	15.68%	34
1998	6.59%	5.26%	42	19.94%	13.09%	8.19%	0.80%	-8.41%	10.69%	58
1999	9.79%	11.20%	39	24.58%	17.75%	11.50%	4.85%	-0.56%	11.63%	57
2000	16.11%	12.71%	51	30.51%	22.93%	13.69%	6.41%	-2.07%	12.47%	69
2001	23.84%	19.89%	36	37.37%	28.92%	16.53%	9.40%	2.28%	17.38%	45
2002	20.63%	17.43%	37	36.31%	27.30%	16.95%	6.58%	4.12%	19.25%	49
2003	17.93%	14.16%	26	35.57%	22.70%	14.44%	7.24%	3.67%	12.52%	40
2004	11.65%	9.77%	48	28.09%	16.46%	9.12%	2.89%	-2.86%	17.05%	60
2005	9.48%	9.84%	81	22.11%	14.03%	9.62%	4.13%	0.25%	13.66%	94
2006	7.54%	7.59%	113	16.65%	12.05%	8.02%	4.17%	-0.67%	8.37%	145
2007	9.27%	9.48%	113	23.12%	16.77%	9.52%	4.34%	-0.70%	14.80%	147
2008	12.68%	10.61%	115	22.76%	17.00%	10.85%	5.22%	-3.24%	20.61%	139
2009	13.04%	13.62%	50	25.60%	21.05%	11.90%	8.77%	3.03%	10.99%	61
2010	11.50%	10.15%	61	26.65%	19.73%	10.90%	6.63%	-0.56%	12.85%	66
2011	14.88%	15.07%	82	34.68%	21.41%	13.95%	8.28%	3.90%	17.92%	93
2012	15.16%	12.56%	109	28.77%	19.05%	13.30%	8.76%	1.18%	12.09%	114
2013	13.79%	13.23%	95	24.76%	18.70%	13.00%	8.64%	5.90%	8.96%	100
2014	17.46%	15.63%	102	32.64%	23.05%	13.30%	8.10%	1.82%	15.32%	105
2015	17.85%	15.48%	117	26.61%	18.76%	12.95%	9.09%	2.77%	10.55%	124
2016	18.05%	17.07%	123	33.09%	22.98%	13.60%	7.88%	1.79%	15.00%	129
2017	18.43%	14.76%	123	32.29%	21.77%	12.40%	7.74%	-6.00%	21.08%	117
2018	15.05%	10.26%	130	43.60%	19.69%	8.16%	-2.46%	-18.25%	26.62%	122

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Private equity

IRRs by vintage





Private equity

PMEs by vintage

S&P 500 index

MSCI All Country World Index

Vintage year	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1996	11.33%	9.02%	1.38	11.33%	7.02%	1.38	25
1997	9.82%	8.35%	1.39	9.82%	6.81%	1.34	25
1998	6.59%	7.38%	1.31	6.59%	6.17%	1.22	42
1999	9.79%	6.62%	1.36	9.79%	5.79%	1.25	39
2000	16.11%	6.27%	1.50	16.11%	5.12%	1.36	51
2001	23.84%	7.14%	1.68	23.84%	6.25%	1.53	36
2002	20.63%	8.15%	1.48	20.63%	7.45%	1.39	37
2003	17.93%	10.24%	1.46	17.93%	9.26%	1.41	26
2004	11.65%	8.94%	1.31	11.65%	7.56%	1.32	48
2005	9.48%	9.07%	1.16	9.48%	7.27%	1.27	81
2006	7.54%	9.02%	1.01	7.54%	6.62%	1.15	113
2007	9.27%	8.73%	0.95	9.27%	5.85%	1.10	113
2008	12.68%	9.76%	0.99	12.68%	6.19%	1.15	115
2009	13.04%	15.45%	0.96	13.04%	12.08%	1.12	50
2010	11.50%	13.18%	0.92	11.50%	9.03%	1.10	61
2011	14.88%	12.65%	1.06	14.88%	8.25%	1.23	82
2012	15.16%	13.50%	1.08	15.16%	9.51%	1.22	109
2013	13.79%	13.32%	1.05	13.79%	9.05%	1.17	95
2014	17.46%	11.79%	1.17	17.46%	7.91%	1.29	102
2015	17.85%	11.26%	1.12	17.85%	8.06%	1.21	117
2016	18.05%	14.81%	1.10	18.05%	12.03%	1.18	123
2017	18.43%	12.89%	1.07	18.43%	9.94%	1.13	123
2018	15.05%	10.22%	1.00	15.05%	5.55%	1.03	130



Private equity

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
Pre-1996	1.83x	1.64x	0.19x	1.57x	1.46x	0.11x	5
1996	1.57x	1.56x	0.00x	1.39x	1.38x	0.02x	25
1997	1.59x	1.59x	0.00x	1.39x	1.39x	0.00x	25
1998	1.39x	1.39x	0.00x	1.28x	1.28x	0.00x	42
1999	1.52x	1.52x	0.00x	1.64x	1.64x	0.00x	39
2000	1.84x	1.83x	0.01x	1.73x	1.71x	0.02x	51
2001	2.16x	2.15x	0.01x	1.99x	1.97x	0.02x	36
2002	1.99x	1.98x	0.01x	1.83x	1.82x	0.01x	37
2003	1.87x	1.84x	0.03x	1.76x	1.72x	0.04x	26
2004	1.69x	1.64x	0.05x	1.56x	1.49x	0.06x	48
2005	1.61x	1.55x	0.06x	1.65x	1.54x	0.11x	81
2006	1.49x	1.43x	0.06x	1.47x	1.38x	0.09x	113
2007	1.53x	1.39x	0.14x	1.54x	1.42x	0.12x	113
2008	1.66x	1.53x	0.13x	1.56x	1.41x	0.16x	115
2009	1.61x	1.46x	0.16x	1.65x	1.45x	0.21x	50
2010	1.62x	1.21x	0.41x	1.53x	1.15x	0.38x	61
2011	1.78x	1.19x	0.60x	1.80x	1.20x	0.60x	82
2012	1.68x	1.02x	0.65x	1.54x	0.95x	0.59x	109
2013	1.51x	0.80x	0.71x	1.53x	0.78x	0.75x	95
2014	1.67x	0.73x	0.94x	1.61x	0.64x	0.97x	102
2015	1.50x	0.49x	1.02x	1.46x	0.42x	1.04x	117
2016	1.43x	0.27x	1.16x	1.40x	0.29x	1.11x	123
2017	1.29x	0.14x	1.15x	1.25x	0.18x	1.07x	123
2018	1.14x	0.07x	1.06x	1.12x	0.10x	1.02x	130

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Private equity

Multiples by vintage

TVPI

DPI

Vintage year	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	Number of funds
Pre-1996		1.91x	1.54x	0.86x			1.91x	1.54x	0.86x		5
1996	2.30x	1.82x	1.26x	1.01x	0.57x	2.30x	1.82x	1.26x	0.78x	0.55x	25
1997	2.03x	1.75x	1.46x	1.02x	0.76x	2.03x	1.75x	1.46x	1.02x	0.76x	25
1998	1.88x	1.57x	1.32x	0.93x	0.58x	1.88x	1.57x	1.30x	0.93x	0.58x	42
1999	2.39x	1.99x	1.59x	1.23x	0.98x	2.39x	1.98x	1.59x	1.21x	0.98x	39
2000	2.42x	2.18x	1.69x	1.34x	0.95x	2.42x	2.13x	1.67x	1.34x	0.83x	51
2001	2.93x	2.39x	1.97x	1.55x	1.29x	2.93x	2.39x	1.91x	1.55x	1.29x	36
2002	2.74x	2.18x	1.80x	1.35x	1.21x	2.67x	2.17x	1.80x	1.35x	1.21x	37
2003	2.98x	1.88x	1.68x	1.41x	0.83x	2.89x	1.88x	1.68x	1.37x	0.80x	26
2004	2.54x	1.96x	1.54x	1.16x	0.59x	2.51x	1.96x	1.49x	1.09x	0.58x	48
2005	2.37x	1.87x	1.48x	1.21x	0.98x	2.32x	1.79x	1.43x	1.16x	0.88x	81
2006	2.09x	1.68x	1.41x	1.18x	0.93x	2.04x	1.63x	1.37x	1.13x	0.76x	113
2007	2.27x	1.96x	1.48x	1.16x	0.91x	2.17x	1.85x	1.38x	1.00x	0.75x	113
2008	2.18x	1.92x	1.56x	1.27x	0.87x	2.01x	1.73x	1.37x	1.02x	0.68x	115
2009	2.43x	1.99x	1.56x	1.30x	0.91x	2.33x	1.82x	1.35x	1.07x	0.77x	50
2010	2.25x	1.81x	1.44x	1.17x	0.79x	1.96x	1.50x	1.17x	0.89x	0.45x	61
2011	3.08x	2.12x	1.65x	1.30x	0.99x	1.97x	1.53x	1.10x	0.65x	0.35x	82
2012	2.13x	1.86x	1.51x	1.23x	0.93x	1.53x	1.25x	0.91x	0.58x	0.41x	109
2013	2.00x	1.68x	1.46x	1.28x	1.11x	1.25x	1.05x	0.76x	0.44x	0.15x	95
2014	2.32x	1.75x	1.44x	1.20x	0.99x	1.31x	0.80x	0.53x	0.23x	0.04x	102
2015	2.00x	1.53x	1.36x	1.19x	1.00x	0.79x	0.60x	0.33x	0.15x	0.03x	117
2016	1.86x	1.53x	1.29x	1.15x	1.02x	0.67x	0.45x	0.19x	0.06x	0.00x	123
2017	1.54x	1.39x	1.17x	1.04x	0.89x	0.39x	0.22x	0.07x	0.00x	0.00x	123
2018	1.36x	1.21x	1.07x	0.92x	0.82x	0.27x	0.07x	0.01x	0.00x	0.00x	130

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Private equity

Quarterly return

Quarter end	1-quarter return
Q1 2001	-6.34%
Q2 2001	0.46%
Q3 2001	-3.51%
Q4 2001	-3.98%
Q1 2002	-0.64%
Q2 2002	-2.78%
Q3 2002	-2.75%
Q4 2002	-0.32%
Q1 2003	0.13%
Q2 2003	5.95%
Q3 2003	3.98%
Q4 2003	9.61%
Q1 2004	9.13%
Q2 2004	0.24%
Q3 2004	2.72%
Q4 2004	13.55%
Q1 2005	2.15%
Q2 2005	8.28%
Q3 2005	7.65%
Q4 2005	10.35%
Q1 2006	4.14%
Q2 2006	5.74%
Q3 2006	4.37%
Q4 2006	12.72%

Quarter end	1-quarter return
Q1 2007	4.76%
Q2 2007	9.64%
Q3 2007	4.44%
Q4 2007	3.12%
Q1 2008	-0.16%
Q2 2008	-1.10%
Q3 2008	-8.39%
Q4 2008	-11.85%
Q1 2009	-7.58%
Q2 2009	4.28%
Q3 2009	5.08%
Q4 2009	7.76%
Q1 2010	2.85%
Q2 2010	1.53%
Q3 2010	4.63%
Q4 2010	7.65%
Q1 2011	5.31%
Q2 2011	4.57%
Q3 2011	-2.92%
Q4 2011	1.10%
Q1 2012	5.97%
Q2 2012	0.73%
Q3 2012	3.76%
Q4 2012	3.20%

Quarter end	1-quarter return
Q1 2013	3.17%
Q2 2013	2.89%
Q3 2013	4.78%
Q4 2013	5.80%
Q1 2014	4.72%
Q2 2014	4.97%
Q3 2014	0.12%
Q4 2014	3.39%
Q1 2015	3.37%
Q2 2015	5.59%
Q3 2015	0.58%
Q4 2015	2.00%
Q1 2016	1.74%
Q2 2016	4.24%
Q3 2016	4.34%
Q4 2016	1.46%
Q1 2017	4.66%
Q2 2017	5.37%
Q3 2017	4.46%
Q4 2017	4.61%
Q1 2018	4.11%
Q2 2018	3.25%
Q3 2018	3.33%
Q4 2018	-0.70%

Quarter end	1-quarter return
Q1 2019	4.65%
Q2 2019	3.09%
Q3 2019	3.32%
Q4 2019	4.41%
Q1 2020	-8.00%
Q2 2020	9.11%
Q3 2020	13.34%
Q4 2020*	6.43%

*Preliminary data

Venture capital

Venture capital

IRRs by vintage

Pooled IRRs

IRR hurdle rates

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
Pre-1996	61.44%	74.32%	3	75.62%	34.21%	14.28%	6.05%	-0.47%	66.02%	66
1996	91.71%	143.96%	8	123.51%	78.64%	26.23%	8.91%	0.19%	57.51%	15
1997	5.93%	13.06%	15	126.18%	54.35%	17.63%	0.13%	-5.00%	119.23%	23
1998	5.89%	4.71%	20	50.23%	13.89%	8.65%	-7.80%	-10.95%	37.27%	22
1999	-2.95%	-4.10%	38	10.76%	5.64%	-4.40%	-12.50%	-18.04%	13.29%	47
2000	0.36%	-0.90%	60	6.89%	3.56%	0.11%	-5.41%	-14.83%	10.99%	74
2001	4.35%	2.50%	34	14.12%	6.78%	2.08%	-3.60%	-14.98%	11.21%	49
2002	3.13%	2.75%	19	10.46%	7.70%	4.00%	-4.48%	-12.04%	10.62%	29
2003	5.67%	1.35%	20	14.28%	6.45%	0.78%	-8.68%	-33.10%	39.24%	28
2004	4.43%	6.69%	23	10.91%	6.26%	-1.25%	-11.75%	-22.69%	19.05%	36
2005	8.26%	6.86%	29	14.57%	10.65%	4.10%	0.76%	-8.34%	18.86%	42
2006	5.52%	3.34%	42	19.23%	9.82%	4.97%	-3.75%	-10.36%	14.08%	52
2007	11.71%	11.58%	48	26.65%	17.07%	9.55%	2.96%	-9.10%	21.72%	69
2008	12.24%	9.33%	53	28.66%	21.50%	9.84%	-0.50%	-16.50%	23.89%	63
2009	10.74%	8.84%	22	30.00%	21.60%	10.95%	5.83%	-3.27%	15.72%	32
2010	16.92%	18.57%	21	37.93%	22.62%	11.12%	4.43%	-5.42%	24.28%	34
2011	17.54%	16.30%	19	35.64%	23.79%	17.57%	10.28%	-1.56%	19.03%	48
2012	16.44%	15.70%	21	38.30%	28.80%	18.20%	11.50%	1.86%	21.53%	33
2013	21.80%	16.66%	23	35.96%	29.60%	15.00%	7.07%	-1.96%	27.95%	46
2014	21.26%	21.28%	39	34.28%	24.10%	16.50%	8.00%	3.29%	57.75%	49
2015	18.12%	16.31%	45	35.46%	25.02%	16.40%	9.47%	3.60%	12.17%	63
2016	25.13%	25.16%	51	44.28%	34.19%	21.75%	15.92%	7.95%	22.38%	58
2017	24.70%	25.04%	37	45.89%	34.90%	22.40%	9.78%	6.99%	19.34%	51
2018	26.72%	15.71%	44	70.78%	35.28%	17.50%	4.94%	-6.88%	34.59%	56

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Venture capital

IRRs by vintage





Venture capital

PMEs by vintage

S&P 500 index

MSCI World Small Cap Growth Index

Vintage year	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1996	91.71%	9.02%	2.65	91.71%	7.89%	2.56	8
1997	5.93%	8.35%	1.08	5.93%	8.19%	0.94	15
1998	5.89%	7.38%	1.15	5.89%	8.27%	0.96	20
1999	-2.95%	6.62%	0.73	-2.95%	8.66%	0.61	38
2000	0.36%	6.27%	0.73	0.36%	6.56%	0.57	60
2001	4.35%	7.14%	0.89	4.35%	8.64%	0.73	34
2002	3.13%	8.15%	0.87	3.13%	10.01%	0.72	19
2003	5.67%	10.24%	0.91	5.67%	12.01%	0.83	20
2004	4.43%	8.94%	0.83	4.43%	9.55%	0.79	23
2005	8.26%	9.07%	0.97	8.26%	9.16%	0.98	29
2006	5.52%	9.02%	0.79	5.52%	8.23%	0.81	42
2007	11.71%	8.73%	1.03	11.71%	7.81%	1.07	48
2008	12.24%	9.76%	0.95	12.24%	8.76%	1.01	53
2009	10.74%	15.45%	0.85	10.74%	15.14%	0.94	22
2010	16.92%	13.18%	1.14	16.92%	11.53%	1.27	21
2011	17.54%	12.65%	1.22	17.54%	9.69%	1.36	19
2012	16.44%	13.50%	1.19	16.44%	11.19%	1.32	21
2013	21.80%	13.32%	1.41	21.80%	11.04%	1.53	23
2014	21.26%	11.79%	1.36	21.26%	8.58%	1.45	39
2015	18.12%	11.26%	1.15	18.12%	9.79%	1.22	45
2016	25.13%	14.81%	1.28	25.13%	13.85%	1.34	51
2017	24.70%	12.89%	1.21	24.70%	11.70%	1.26	37
2018	26.72%	10.22%	1.16	26.72%	6.41%	1.19	44



Venture capital

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
Pre-1996	2.68x	2.68x	0.00x	2.98x	2.98x	0.00x	3
1996	3.44x	3.42x	0.01x	4.46x	4.46x	0.01x	8
1997	1.23x	1.23x	0.00x	1.41x	1.41x	0.00x	15
1998	1.26x	1.25x	0.01x	1.19x	1.18x	0.01x	20
1999	0.82x	0.78x	0.04x	0.76x	0.75x	0.01x	38
2000	1.03x	0.96x	0.07x	0.94x	0.89x	0.04x	60
2001	1.32x	1.27x	0.05x	1.18x	1.12x	0.06x	34
2002	1.20x	1.18x	0.01x	1.19x	1.07x	0.12x	19
2003	1.41x	1.35x	0.05x	1.08x	1.05x	0.03x	20
2004	1.35x	1.24x	0.11x	1.56x	1.40x	0.16x	23
2005	1.74x	1.50x	0.24x	1.61x	1.38x	0.23x	29
2006	1.40x	1.15x	0.25x	1.25x	0.99x	0.27x	42
2007	1.93x	1.52x	0.41x	1.93x	1.53x	0.41x	48
2008	1.81x	1.46x	0.35x	1.66x	1.25x	0.41x	53
2009	1.87x	1.20x	0.66x	1.65x	0.99x	0.66x	22
2010	2.16x	1.35x	0.81x	2.34x	1.60x	0.74x	21
2011	2.27x	1.13x	1.14x	2.23x	0.97x	1.26x	19
2012	2.19x	0.86x	1.33x	2.15x	0.69x	1.46x	21
2013	2.25x	0.68x	1.57x	1.92x	0.53x	1.38x	23
2014	2.14x	0.40x	1.74x	2.05x	0.38x	1.67x	39
2015	1.64x	0.24x	1.40x	1.57x	0.24x	1.33x	45
2016	1.68x	0.12x	1.56x	1.73x	0.17x	1.56x	51
2017	1.50x	0.09x	1.41x	1.57x	0.11x	1.45x	37
2018	1.37x	0.05x	1.31x	1.26x	0.14x	1.12x	44

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Venture capital

Multiples by vintage

TVPI

DPI

Vintage year	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	Number of funds
Pre-1996			2.13x					2.13x			3
1996		4.15x	1.87x	1.41x			4.15x	1.87x	1.40x		8
1997	2.43x	1.71x	1.14x	0.87x	0.64x	2.43x	1.71x	1.14x	0.87x	0.64x	15
1998	1.80x	1.67x	1.21x	0.68x	0.47x	1.80x	1.63x	1.20x	0.68x	0.46x	20
1999	1.43x	1.00x	0.69x	0.39x	0.20x	1.39x	0.99x	0.69x	0.36x	0.20x	38
2000	1.44x	1.19x	0.97x	0.65x	0.37x	1.43x	1.13x	0.92x	0.56x	0.32x	60
2001	1.84x	1.53x	1.19x	0.75x	0.29x	1.84x	1.42x	1.09x	0.70x	0.25x	34
2002	1.77x	1.66x	1.18x	0.74x	0.53x	1.74x	1.60x	1.18x	0.57x	0.36x	19
2003	1.68x	1.47x	1.11x	0.52x	0.40x	1.68x	1.43x	1.10x	0.52x	0.40x	20
2004	1.87x	1.54x	1.02x	0.59x	0.39x	1.83x	1.39x	0.79x	0.42x	0.17x	23
2005	2.49x	1.75x	1.29x	1.07x	0.54x	2.08x	1.62x	1.22x	0.80x	0.49x	29
2006	2.24x	1.66x	1.18x	0.67x	0.41x	1.89x	1.36x	0.98x	0.53x	0.24x	42
2007	2.89x	2.31x	1.78x	1.00x	0.44x	2.60x	1.92x	1.44x	0.52x	0.25x	48
2008	2.86x	2.16x	1.41x	0.79x	0.24x	2.61x	1.73x	0.77x	0.38x	0.20x	53
2009	2.43x	1.97x	1.59x	1.18x	0.86x	1.54x	1.36x	0.93x	0.49x	0.34x	22
2010	3.49x	2.99x	1.76x	1.56x	0.76x	2.84x	1.78x	1.16x	0.59x	0.46x	21
2011	3.68x	2.68x	1.99x	1.57x	0.96x	1.56x	1.32x	1.00x	0.57x	0.28x	19
2012	3.10x	2.21x	1.97x	1.23x	0.98x	1.08x	0.94x	0.57x	0.23x	0.00x	21
2013	3.00x	2.24x	1.78x	1.41x	0.90x	1.35x	0.73x	0.33x	0.20x	0.02x	23
2014	3.21x	2.26x	1.90x	1.38x	1.14x	1.01x	0.55x	0.18x	0.05x	0.00x	39
2015	1.93x	1.76x	1.45x	1.26x	1.09x	0.65x	0.32x	0.13x	0.00x	0.00x	45
2016	2.28x	1.78x	1.50x	1.30x	1.08x	0.49x	0.18x	0.04x	0.00x	0.00x	51
2017	2.27x	1.72x	1.24x	1.12x	0.97x	0.38x	0.13x	0.03x	0.00x	0.00x	37
2018	1.74x	1.33x	1.11x	0.96x	0.91x	0.42x	0.02x	0.00x	0.00x	0.00x	44

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Venture capital

Quarterly return

Quarter end	1-quarter return
Q1 2001	-10.87%
Q2 2001	-9.68%
Q3 2001	-13.50%
Q4 2001	-11.66%
Q1 2002	-7.84%
Q2 2002	-12.22%
Q3 2002	-9.59%
Q4 2002	-10.55%
Q1 2003	-7.67%
Q2 2003	-1.71%
Q3 2003	-2.56%
Q4 2003	2.50%
Q1 2004	0.60%
Q2 2004	0.78%
Q3 2004	-0.93%
Q4 2004	3.06%
Q1 2005	-1.84%
Q2 2005	0.51%
Q3 2005	4.91%
Q4 2005	2.69%
Q1 2006	3.09%
Q2 2006	0.96%
Q3 2006	1.81%
Q4 2006	6.90%

Quarter end	1-quarter return
Q1 2007	2.56%
Q2 2007	5.28%
Q3 2007	2.53%
Q4 2007	4.10%
Q1 2008	2.73%
Q2 2008	-2.14%
Q3 2008	-3.27%
Q4 2008	-8.88%
Q1 2009	-3.51%
Q2 2009	-0.33%
Q3 2009	0.69%
Q4 2009	3.44%
Q1 2010	1.54%
Q2 2010	-0.41%
Q3 2010	3.95%
Q4 2010	6.34%
Q1 2011	4.62%
Q2 2011	5.09%
Q3 2011	-0.13%
Q4 2011	1.73%
Q1 2012	4.34%
Q2 2012	0.93%
Q3 2012	-0.12%
Q4 2012	2.07%

Quarter end	1-quarter return
Q1 2013	2.20%
Q2 2013	4.63%
Q3 2013	5.20%
Q4 2013	7.73%
Q1 2014	6.00%
Q2 2014	2.98%
Q3 2014	2.81%
Q4 2014	6.37%
Q1 2015	5.00%
Q2 2015	6.58%
Q3 2015	0.31%
Q4 2015	2.14%
Q1 2016	-3.40%
Q2 2016	0.04%
Q3 2016	3.27%
Q4 2016	1.00%
Q1 2017	2.38%
Q2 2017	2.03%
Q3 2017	3.72%
Q4 2017	2.98%
Q1 2018	6.53%
Q2 2018	5.68%
Q3 2018	3.61%
Q4 2018	1.62%

Quarter end	1-quarter return
Q1 2019	6.36%
Q2 2019	2.86%
Q3 2019	2.05%
Q4 2019	5.29%
Q1 2020	-1.70%
Q2 2020	8.90%
Q3 2020	12.45%
Q4 2020*	11.48%

*Preliminary data

Real estate



Real estate

IRR by vintage

Pooled IRRs

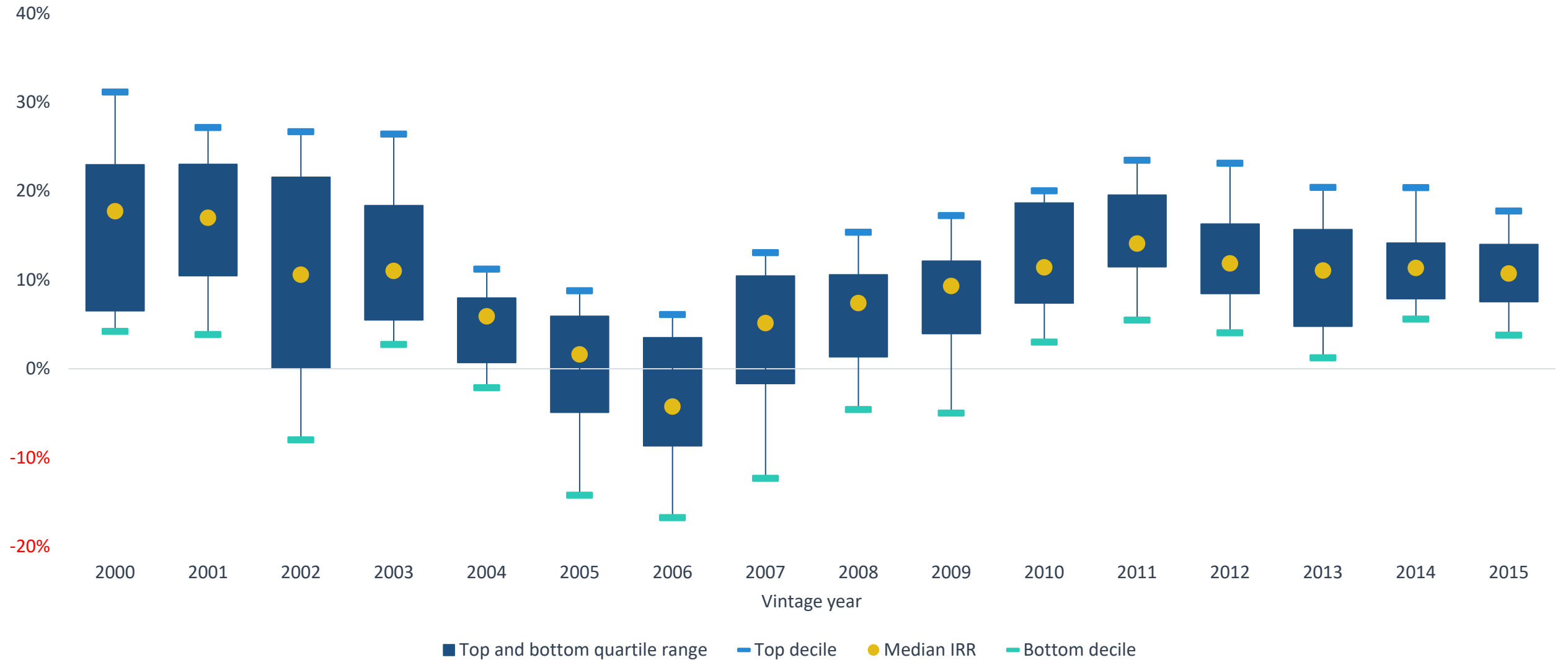
IRR hurdle rates

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
Pre-1996				25.64%	20.05%	9.09%	7.00%	6.06%	14.01%	13
1996	10.02%	7.45%	5		11.07%	8.94%	6.06%		4.77%	7
1997	13.89%	11.45%	5		16.47%	13.42%	6.35%		6.65%	7
1998	4.86%	5.49%	8	14.17%	9.86%	7.24%	3.76%	-1.01%	6.05%	12
1999	11.81%	9.15%	2		20.87%	18.00%	10.72%		9.12%	7
2000	16.27%	15.07%	12	31.15%	22.97%	17.73%	6.51%	4.20%	11.27%	14
2001	26.46%	17.46%	3	27.14%	23.00%	16.99%	10.47%	3.85%	9.30%	12
2002	8.54%	15.85%	3	26.67%	21.55%	10.58%	0.04%	-8.00%	20.50%	11
2003	7.64%	8.48%	4	26.39%	18.38%	11.00%	5.50%	2.73%	27.87%	17
2004	4.34%	5.74%	8	11.22%	7.97%	5.90%	0.70%	-2.15%	15.98%	22
2005	0.29%	-0.49%	26	8.76%	5.91%	1.60%	-4.90%	-14.24%	23.92%	43
2006	-1.33%	-1.86%	32	6.09%	3.50%	-4.26%	-8.67%	-16.76%	16.31%	54
2007	1.55%	1.40%	54	13.05%	10.45%	5.14%	-1.66%	-12.35%	11.75%	69
2008	6.24%	5.96%	32	15.35%	10.58%	7.39%	1.35%	-4.60%	10.34%	59
2009	8.68%	6.56%	21	17.24%	12.11%	9.30%	3.96%	-5.00%	9.09%	27
2010	15.70%	11.01%	23	20.02%	18.67%	11.40%	7.39%	2.99%	7.78%	37
2011	14.72%	14.77%	35	23.46%	19.55%	14.08%	11.46%	5.48%	8.35%	44
2012	14.10%	12.84%	45	23.12%	16.29%	11.86%	8.46%	4.04%	8.21%	55
2013	12.33%	10.37%	50	20.41%	15.67%	11.05%	4.77%	1.24%	13.50%	46
2014	9.56%	10.66%	51	20.38%	14.14%	11.34%	7.87%	5.59%	6.74%	46
2015	12.08%	10.32%	71	17.74%	14.00%	10.71%	7.55%	3.77%	5.94%	62
2016	13.40%	10.70%	57	16.80%	12.94%	9.22%	4.55%	-2.22%	9.14%	60
2017	8.99%	8.71%	58	16.29%	14.12%	9.65%	5.79%	-3.32%	10.41%	56
2018	4.76%	4.50%	66	13.54%	9.33%	4.20%	-5.63%	-23.18%	20.28%	59

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Real estate

IRRs by vintage





Real estate

PMEs by vintage

S&P 500 index

Morningstar Global Real Estate Index

Vintage year	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1996	10.02%	9.02%	1.14	10.02%			5
1997	13.89%	8.35%	1.42	13.89%			5
1998	4.86%	7.38%	1.23	4.86%			8
1999	11.81%	6.62%	1.72	11.81%	8.12%	1.02	2
2000	16.27%	6.27%	1.56	16.27%	8.06%	1.02	12
2001	26.46%	7.14%	1.51	26.46%	7.94%	1.10	3
2002	8.54%	8.15%	0.97	8.54%	8.49%	0.86	3
2003	7.64%	10.24%	1.02	7.64%	9.15%	0.90	4
2004	4.34%	8.94%	0.91	4.34%	6.91%	0.93	8
2005	0.29%	9.07%	0.69	0.29%	6.00%	0.80	26
2006	-1.33%	9.02%	0.53	-1.33%	4.57%	0.66	32
2007	1.55%	8.73%	0.64	1.55%	2.50%	0.72	54
2008	6.24%	9.76%	0.76	6.24%	4.15%	0.86	32
2009	8.68%	15.45%	0.80	8.68%	11.82%	0.92	21
2010	15.70%	13.18%	1.03	15.70%	7.48%	1.14	23
2011	14.72%	12.65%	1.03	14.72%	5.89%	1.22	35
2012	14.10%	13.50%	1.04	14.10%	6.66%	1.26	45
2013	12.33%	13.32%	1.01	12.33%	4.50%	1.20	50
2014	9.56%	11.79%	0.91	9.56%	5.07%	1.14	51
2015	12.08%	11.26%	0.98	12.08%	2.89%	1.20	71
2016	13.40%	14.81%	1.01	13.40%	5.45%	1.24	57
2017	8.99%	12.89%	0.94	8.99%	3.80%	1.14	58
2018	4.76%	10.22%	0.91	4.76%	1.01%	1.07	66



Real estate

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
Pre-1996							
1996	1.47x	1.47x	0.00x	1.49x	1.49x	0.00x	5
1997	1.71x	1.71x	0.00x	1.58x	1.58x	0.00x	5
1998	1.21x	1.21x	0.00x	1.25x	1.25x	0.00x	8
1999	1.91x	1.91x	0.00x	1.65x	1.65x	0.00x	2
2000	1.77x	1.77x	0.00x	1.73x	1.72x	0.01x	12
2001	1.83x	1.83x	0.00x	1.55x	1.55x	0.00x	3
2002	1.23x	1.21x	0.02x	1.51x	1.37x	0.14x	3
2003	1.25x	1.25x	0.00x	1.27x	1.27x	0.00x	4
2004	1.25x	1.18x	0.06x	1.39x	1.27x	0.12x	8
2005	1.02x	0.99x	0.02x	0.97x	0.95x	0.02x	26
2006	0.91x	0.83x	0.08x	0.87x	0.79x	0.08x	32
2007	1.08x	1.04x	0.04x	1.07x	1.03x	0.04x	54
2008	1.27x	1.19x	0.08x	1.28x	1.21x	0.06x	32
2009	1.40x	1.28x	0.11x	1.31x	1.21x	0.10x	21
2010	1.48x	1.41x	0.07x	1.48x	1.29x	0.19x	23
2011	1.59x	1.35x	0.24x	1.66x	1.42x	0.25x	35
2012	1.56x	1.28x	0.27x	1.48x	1.22x	0.26x	45
2013	1.40x	1.03x	0.37x	1.37x	0.94x	0.43x	50
2014	1.36x	0.81x	0.56x	1.41x	0.76x	0.64x	51
2015	1.32x	0.57x	0.75x	1.31x	0.61x	0.70x	71
2016	1.31x	0.40x	0.91x	1.29x	0.42x	0.86x	57
2017	1.18x	0.24x	0.93x	1.18x	0.24x	0.95x	58
2018	1.05x	0.16x	0.89x	1.05x	0.20x	0.86x	66

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Real estate

Multiples by vintage

TVPI

DPI

Vintage year	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	Number of funds
Pre-1996											
1996		1.58x	1.46x	1.13x			1.58x	1.46x	1.13x		5
1997		1.50x	1.42x	1.27x			1.50x	1.41x	1.27x		5
1998		1.39x	1.31x	1.21x			1.39x	1.31x	1.18x		8
1999			1.66x					1.66x			2
2000	2.66x	1.71x	1.48x	1.31x	1.20x	2.66x	1.71x	1.48x	1.30x	1.12x	12
2001			1.52x					1.51x			3
2002			1.38x					1.38x			3
2003		1.36x	1.28x	1.19x			1.36x	1.27x	1.18x		4
2004		1.94x	1.25x	1.05x			1.64x	1.22x	0.91x		8
2005	1.39x	1.13x	0.99x	0.74x	0.49x	1.39x	1.10x	0.96x	0.71x	0.48x	26
2006	1.56x	1.08x	0.74x	0.48x	0.29x	1.30x	1.03x	0.69x	0.38x	0.23x	32
2007	1.66x	1.38x	1.16x	0.76x	0.31x	1.64x	1.34x	1.11x	0.74x	0.30x	54
2008	1.66x	1.52x	1.39x	1.07x	0.68x	1.64x	1.47x	1.27x	1.03x	0.60x	32
2009	1.86x	1.51x	1.35x	1.18x	0.54x	1.85x	1.50x	1.33x	0.98x	0.50x	21
2010	1.76x	1.65x	1.53x	1.30x	1.18x	1.68x	1.58x	1.44x	1.06x	0.74x	23
2011	2.18x	1.88x	1.56x	1.43x	1.22x	2.02x	1.76x	1.30x	1.06x	0.93x	35
2012	1.90x	1.52x	1.43x	1.35x	1.20x	1.80x	1.49x	1.30x	0.96x	0.70x	45
2013	1.62x	1.56x	1.44x	1.18x	1.09x	1.55x	1.28x	0.99x	0.49x	0.35x	50
2014	1.67x	1.54x	1.35x	1.21x	1.13x	1.22x	1.09x	0.78x	0.43x	0.18x	51
2015	1.55x	1.42x	1.32x	1.18x	1.10x	1.26x	0.92x	0.44x	0.23x	0.09x	71
2016	1.63x	1.35x	1.20x	1.09x	0.95x	0.81x	0.53x	0.41x	0.14x	0.05x	57
2017	1.34x	1.29x	1.14x	1.05x	0.92x	0.46x	0.31x	0.13x	0.05x	0.00x	58
2018	1.20x	1.12x	1.03x	0.92x	0.73x	0.47x	0.19x	0.07x	0.00x	0.00x	66

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Real estate

Quarterly return

Quarter end	1-quarter return
Q1 2001	4.40%
Q2 2001	1.41%
Q3 2001	0.28%
Q4 2001	1.33%
Q1 2002	2.10%
Q2 2002	1.30%
Q3 2002	0.36%
Q4 2002	-0.90%
Q1 2003	-2.17%
Q2 2003	0.92%
Q3 2003	4.90%
Q4 2003	9.72%
Q1 2004	-4.22%
Q2 2004	4.74%
Q3 2004	0.76%
Q4 2004	19.10%
Q1 2005	-3.53%
Q2 2005	5.24%
Q3 2005	9.64%
Q4 2005	13.70%
Q1 2006	2.52%
Q2 2006	6.85%
Q3 2006	9.32%
Q4 2006	20.91%

Quarter end	1-quarter return
Q1 2007	-2.96%
Q2 2007	7.26%
Q3 2007	1.56%
Q4 2007	6.21%
Q1 2008	-2.72%
Q2 2008	-4.44%
Q3 2008	-8.56%
Q4 2008	-18.06%
Q1 2009	-24.96%
Q2 2009	-13.81%
Q3 2009	-7.41%
Q4 2009	-6.45%
Q1 2010	-7.13%
Q2 2010	7.04%
Q3 2010	4.56%
Q4 2010	8.34%
Q1 2011	5.86%
Q2 2011	4.15%
Q3 2011	0.24%
Q4 2011	0.14%
Q1 2012	4.50%
Q2 2012	0.24%
Q3 2012	5.35%
Q4 2012	2.06%

Quarter end	1-quarter return
Q1 2013	3.23%
Q2 2013	4.43%
Q3 2013	1.11%
Q4 2013	7.23%
Q1 2014	3.29%
Q2 2014	3.46%
Q3 2014	2.84%
Q4 2014	4.27%
Q1 2015	1.83%
Q2 2015	4.60%
Q3 2015	2.48%
Q4 2015	1.53%
Q1 2016	2.86%
Q2 2016	1.75%
Q3 2016	3.16%
Q4 2016	1.41%
Q1 2017	3.95%
Q2 2017	2.97%
Q3 2017	3.98%
Q4 2017	2.71%
Q1 2018	2.13%
Q2 2018	2.93%
Q3 2018	1.54%
Q4 2018	-0.72%

Quarter end	1-quarter return
Q1 2019	1.79%
Q2 2019	1.89%
Q3 2019	2.76%
Q4 2019	1.52%
Q1 2020	-0.21%
Q2 2020	-2.02%
Q3 2020	2.19%
Q4 2020*	2.43%

*Preliminary data

Real assets



Real assets

IRR by vintage

Pooled IRRs

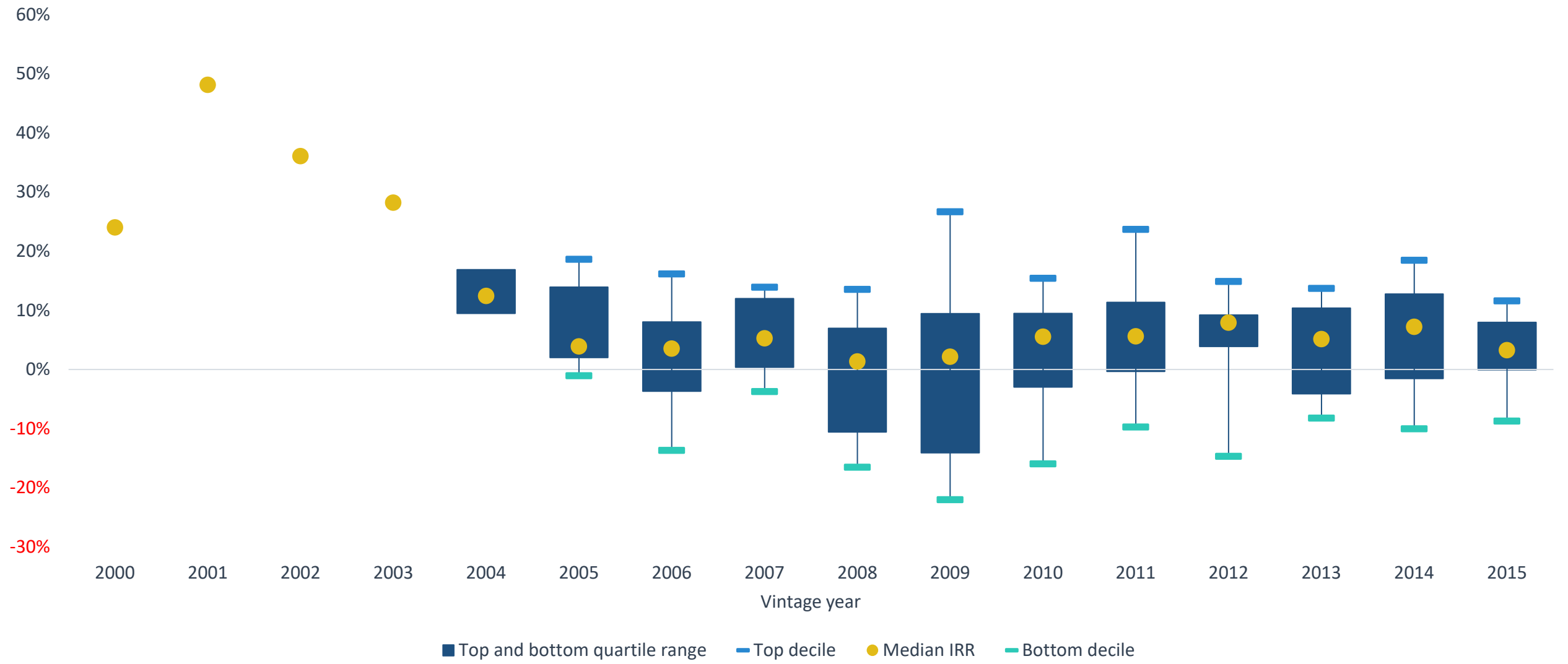
IRR hurdle rates

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
Pre-1996	18.01%	18.01%	1	20.00%	16.93%	8.37%	4.71%	-5.03%	10.58%	12
1996					24.03%	17.33%	10.53%		7.89%	4
1997	17.97%		3		28.02%	20.25%	10.69%		17.06%	6
1998	16.47%	18.18%	3		30.52%	24.63%	15.83%		13.59%	5
1999	25.41%	25.41%	1		14.70%	8.20%	8.00%		11.60%	5
2000						24.00%			0.00%	2
2001	49.72%	49.72%	1			48.12%				1
2002	31.17%	34.54%	3			36.05%			16.02%	3
2003	28.93%	29.44%	2			28.20%			4.11%	3
2004	23.01%	20.61%	4		16.87%	12.42%	9.47%		8.65%	8
2005	7.31%	7.73%	10	18.63%	13.94%	3.90%	2.01%	-1.06%	9.14%	15
2006	4.26%	1.54%	13	16.14%	8.04%	3.52%	-3.69%	-13.69%	14.81%	13
2007	4.99%	5.30%	18	13.90%	12.00%	5.27%	0.36%	-3.73%	10.35%	24
2008	1.68%	3.20%	21	13.52%	6.96%	1.35%	-10.57%	-16.54%	11.99%	20
2009	1.86%	2.74%	12	26.66%	9.45%	2.15%	-14.10%	-22.03%	76.04%	16
2010	4.95%	5.07%	24	15.40%	9.47%	5.52%	-2.98%	-15.97%	24.12%	24
2011	4.60%	3.56%	21	23.67%	11.34%	5.61%	-0.32%	-9.74%	34.03%	23
2012	3.83%	4.97%	27	14.86%	9.20%	7.90%	3.88%	-14.68%	22.24%	27
2013	7.47%	6.04%	28	13.69%	10.38%	5.13%	-4.11%	-8.24%	8.34%	24
2014	5.28%	4.40%	45	18.46%	12.75%	7.21%	-1.53%	-10.04%	12.36%	46
2015	2.96%	6.41%	36	11.59%	7.96%	3.25%	-0.05%	-8.74%	10.79%	28
2016	7.55%	12.92%	47	15.30%	12.43%	7.97%	0.42%	-8.14%	37.35%	36
2017	4.61%	3.72%	37	13.58%	7.00%	0.68%	-9.57%	-31.35%	18.21%	29
2018	4.27%	2.87%	45	18.69%	10.14%	3.91%	-12.18%	-26.93%	18.65%	32

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Real assets

IRRs by vintage



Real assets

PMEs by vintage

S&P 500 index

Morningstar US Real Assets Index

Vintage year	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1996							
1997	17.97%	8.35%	2.11	17.97%			3
1998	16.47%	7.38%	1.87	16.47%			3
1999	25.41%	6.62%	1.75	25.41%			1
2000							
2001	49.72%	7.14%	2.35	49.72%	6.24%	2.09	1
2002	31.17%	8.15%	1.46	31.17%	6.17%	1.42	3
2003	28.93%	10.24%	1.74	28.93%	5.85%	1.69	2
2004	23.01%	8.94%	1.52	23.01%	5.10%	1.39	4
2005	7.31%	9.07%	1.09	7.31%	4.57%	1.06	10
2006	4.26%	9.02%	0.83	4.26%	4.18%	0.98	13
2007	4.99%	8.73%	0.82	4.99%	3.92%	1.00	18
2008	1.68%	9.76%	0.59	1.68%	3.09%	0.90	21
2009	1.86%	15.45%	0.61	1.86%	4.68%	0.94	12
2010	4.95%	13.18%	0.68	4.95%	3.27%	1.13	24
2011	4.60%	12.65%	0.72	4.60%	1.93%	1.13	21
2012	3.83%	13.50%	0.72	3.83%	1.35%	1.09	27
2013	7.47%	13.32%	0.85	7.47%	1.23%	1.24	28
2014	5.28%	11.79%	0.84	5.28%	1.58%	1.10	45
2015	2.96%	11.26%	0.80	2.96%	1.19%	1.03	36
2016	7.55%	14.81%	0.89	7.55%	2.82%	1.13	47
2017	4.61%	12.89%	0.88	4.61%	1.94%	1.06	37
2018	4.27%	10.22%	0.89	4.27%	1.72%	1.04	45

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Real assets

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
Pre-1996	2.47x	2.47x	0.00x	2.47x	2.47x	0.00x	1
1996							
1997	2.61x	2.18x	0.44x	4.39x	3.77x	0.62x	3
1998	1.97x	1.95x	0.02x	2.13x	2.12x	0.02x	3
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	1.91x	1.91x	0.00x	1.98x	1.98x	0.00x	3
2003	2.30x	2.30x	0.00x	2.39x	2.39x	0.00x	2
2004	1.75x	1.75x	0.00x	1.77x	1.77x	0.00x	4
2005	1.43x	1.38x	0.05x	1.46x	1.41x	0.05x	10
2006	1.25x	1.18x	0.08x	1.08x	1.01x	0.07x	13
2007	1.23x	1.18x	0.05x	1.31x	1.17x	0.14x	18
2008	1.09x	0.93x	0.16x	1.19x	0.88x	0.30x	21
2009	1.09x	0.85x	0.24x	1.14x	0.78x	0.36x	12
2010	1.27x	0.84x	0.44x	1.31x	0.72x	0.59x	24
2011	1.21x	0.78x	0.43x	1.18x	0.69x	0.49x	21
2012	1.15x	0.68x	0.47x	1.21x	0.70x	0.52x	27
2013	1.31x	0.54x	0.77x	1.24x	0.55x	0.69x	28
2014	1.15x	0.45x	0.70x	1.14x	0.43x	0.71x	45
2015	1.07x	0.30x	0.77x	1.18x	0.36x	0.82x	36
2016	1.17x	0.27x	0.90x	1.34x	0.57x	0.77x	47
2017	1.08x	0.17x	0.91x	1.07x	0.16x	0.91x	37
2018	1.06x	0.12x	0.94x	1.04x	0.14x	0.91x	45

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Real assets

Multiples by vintage

TVPI

DPI

Vintage year	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	Number of funds
Pre-1996			2.47x					2.47x			1
1996											
1997			3.54x					2.20x			3
1998			1.92x					1.92x			3
1999			2.59x					2.47x			1
2000											
2001			2.84x					2.84x			1
2002			2.07x					2.07x			3
2003			2.39x					2.39x			2
2004		1.91x	1.74x	1.60x			1.91x	1.74x	1.60x		4
2005	2.28x	1.70x	1.31x	1.05x	0.92x	2.19x	1.70x	1.29x	1.05x	0.90x	10
2006	1.81x	1.17x	0.96x	0.76x	0.61x	1.81x	1.16x	0.91x	0.56x	0.54x	13
2007	1.93x	1.50x	1.17x	1.01x	0.91x	1.77x	1.40x	1.09x	0.96x	0.74x	18
2008	1.90x	1.68x	1.00x	0.63x	0.52x	1.84x	1.00x	0.64x	0.52x	0.14x	21
2009	2.14x	1.43x	1.16x	0.62x	0.42x	1.17x	1.10x	0.64x	0.32x	0.21x	12
2010	1.99x	1.73x	1.29x	0.92x	0.68x	1.33x	1.01x	0.62x	0.34x	0.27x	24
2011	1.84x	1.42x	1.24x	0.90x	0.40x	1.40x	0.96x	0.55x	0.35x	0.13x	21
2012	1.72x	1.49x	1.29x	1.06x	0.62x	1.32x	0.96x	0.70x	0.27x	0.11x	27
2013	1.60x	1.51x	1.26x	0.98x	0.74x	1.04x	0.77x	0.43x	0.31x	0.18x	28
2014	1.54x	1.38x	1.18x	0.94x	0.69x	0.79x	0.55x	0.37x	0.19x	0.03x	45
2015	1.52x	1.32x	1.09x	0.96x	0.83x	0.69x	0.46x	0.24x	0.11x	0.06x	36
2016	1.59x	1.31x	1.20x	1.01x	0.82x	0.91x	0.44x	0.28x	0.16x	0.05x	47
2017	1.37x	1.22x	0.97x	0.84x	0.70x	0.35x	0.18x	0.08x	0.01x	0.00x	37
2018	1.34x	1.12x	1.00x	0.87x	0.65x	0.34x	0.16x	0.06x	0.00x	0.00x	45

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Real assets

Quarterly return

Quarter end	1-quarter return
Q1 2001	-2.91%
Q2 2001	6.09%
Q3 2001	-3.58%
Q4 2001	-3.70%
Q1 2002	11.35%
Q2 2002	-0.30%
Q3 2002	-1.87%
Q4 2002	1.14%
Q1 2003	-3.03%
Q2 2003	5.01%
Q3 2003	1.34%
Q4 2003	10.98%
Q1 2004	4.82%
Q2 2004	3.72%
Q3 2004	0.98%
Q4 2004	27.04%
Q1 2005	17.43%
Q2 2005	34.76%
Q3 2005	11.52%
Q4 2005	2.35%
Q1 2006	2.67%
Q2 2006	12.39%
Q3 2006	6.50%
Q4 2006	7.26%

Quarter end	1-quarter return
Q1 2007	3.71%
Q2 2007	3.77%
Q3 2007	9.53%
Q4 2007	9.87%
Q1 2008	1.43%
Q2 2008	2.66%
Q3 2008	6.36%
Q4 2008	-8.64%
Q1 2009	-3.09%
Q2 2009	-0.81%
Q3 2009	3.42%
Q4 2009	3.36%
Q1 2010	-0.45%
Q2 2010	0.24%
Q3 2010	3.93%
Q4 2010	8.27%
Q1 2011	5.04%
Q2 2011	3.86%
Q3 2011	-1.68%
Q4 2011	4.33%
Q1 2012	2.02%
Q2 2012	-1.49%
Q3 2012	0.37%
Q4 2012	2.18%

Quarter end	1-quarter return
Q1 2013	3.63%
Q2 2013	-0.53%
Q3 2013	2.73%
Q4 2013	1.48%
Q1 2014	3.66%
Q2 2014	6.53%
Q3 2014	3.38%
Q4 2014	-4.18%
Q1 2015	-1.22%
Q2 2015	2.32%
Q3 2015	-3.16%
Q4 2015	0.43%
Q1 2016	-2.59%
Q2 2016	5.19%
Q3 2016	2.85%
Q4 2016	4.40%
Q1 2017	3.73%
Q2 2017	2.44%
Q3 2017	1.70%
Q4 2017	2.16%
Q1 2018	2.89%
Q2 2018	2.74%
Q3 2018	4.96%
Q4 2018	-1.80%

Quarter end	1-quarter return
Q1 2019	1.41%
Q2 2019	-0.85%
Q3 2019	-0.30%
Q4 2019	-0.82%
Q1 2020	-9.56%
Q2 2020	2.48%
Q3 2020	1.74%
Q4 2020*	2.21%

*Preliminary data

Private debt

Private debt

IRRs by vintage

Pooled IRRs

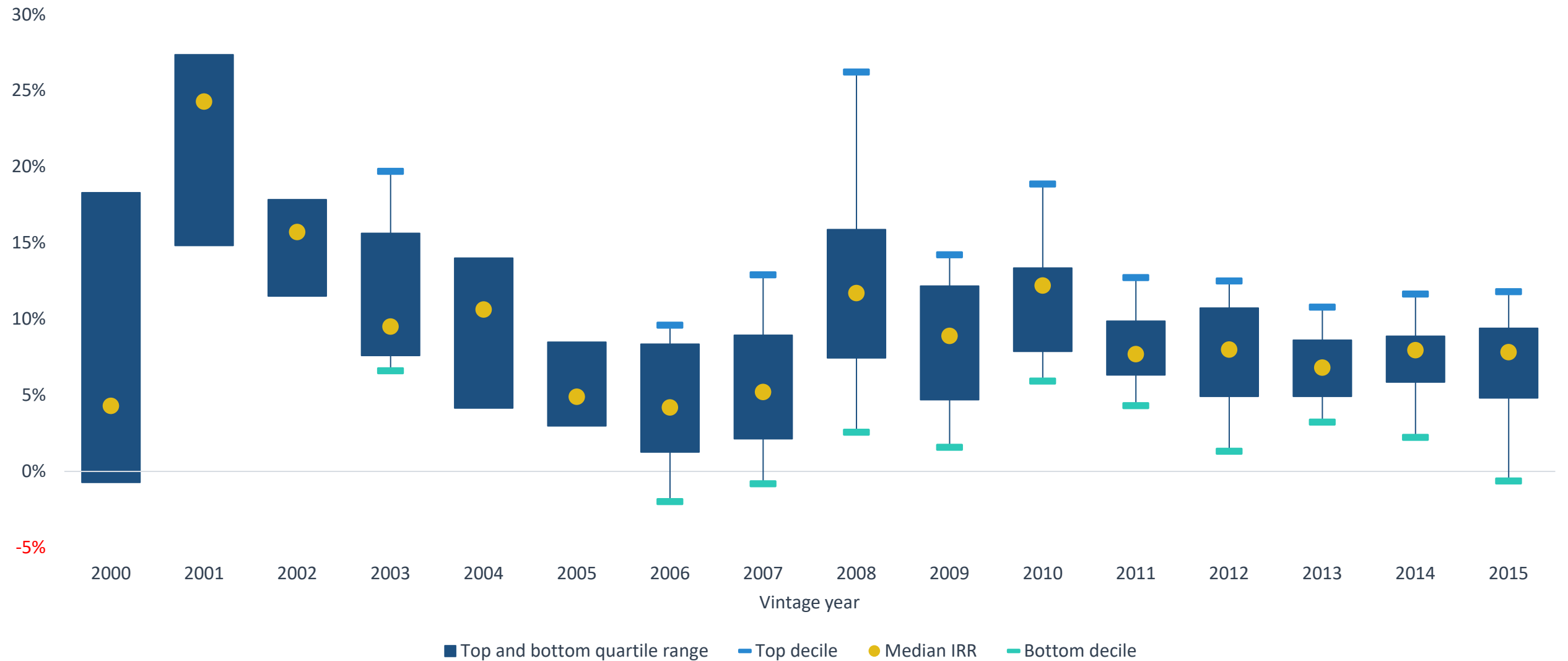
IRR hurdle rates

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
Pre-1996					17.50%	11.29%	6.76%		19.68%	9
1996	6.01%	6.01%	1			5.40%				1
1997	10.83%	16.51%	3		35.20%	21.68%	8.45%		23.10%	5
1998						10.66%			6.56%	2
1999	11.58%	10.99%	2			10.52%			2.00%	2
2000	8.05%	0.96%	4		18.30%	4.30%	-0.72%		15.59%	5
2001	27.60%	29.93%	3		27.36%	24.28%	14.83%		15.62%	4
2002	17.99%	22.75%	5		17.85%	15.71%	11.51%		26.80%	6
2003	13.40%	13.56%	8	19.70%	15.63%	9.50%	7.61%	6.60%	7.54%	11
2004	6.44%	8.96%	5		14.01%	10.63%	4.16%		11.85%	9
2005	6.03%	5.72%	7		8.49%	4.90%	2.98%		6.26%	8
2006	6.67%	5.40%	13	9.60%	8.36%	4.20%	1.27%	-1.98%	6.61%	15
2007	6.23%	5.99%	21	12.91%	8.95%	5.21%	2.14%	-0.82%	6.71%	22
2008	14.23%	12.95%	20	26.22%	15.88%	11.70%	7.45%	2.57%	20.83%	27
2009	8.27%	8.51%	12	14.21%	12.18%	8.90%	4.70%	1.58%	7.59%	13
2010	14.71%	11.79%	22	18.86%	13.36%	12.20%	7.88%	5.92%	7.80%	31
2011	8.54%	9.45%	15	12.73%	9.87%	7.70%	6.33%	4.31%	4.36%	23
2012	6.64%	6.34%	30	12.50%	10.74%	8.00%	4.93%	1.32%	4.95%	38
2013	4.93%	6.22%	36	10.79%	8.62%	6.81%	4.93%	3.23%	3.82%	34
2014	5.38%	7.37%	44	11.64%	8.88%	7.96%	5.86%	2.23%	3.97%	37
2015	5.65%	5.06%	56	11.80%	9.41%	7.83%	4.82%	-0.64%	7.36%	51
2016	7.65%	9.45%	47	17.82%	11.49%	8.52%	6.94%	-2.83%	13.27%	35
2017	6.50%	6.80%	56	16.00%	12.62%	8.25%	5.50%	3.80%	8.19%	62
2018	1.00%	1.52%	53	13.95%	11.49%	7.80%	5.48%	-3.96%	10.17%	44

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Private debt

IRRs by vintage





Private debt

PMEs by vintage

S&P 500 index

Bloomberg Barclays Global High Yield Corporate Index

Vintage year	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1996	6.01%	9.02%	1.36	6.01%			1
1997	10.83%	8.35%	1.55	10.83%			3
1998							
1999	11.58%	6.62%	1.76	11.58%			2
2000	8.05%	6.27%	1.19	8.05%			4
2001	27.60%	7.14%	1.61	27.60%	7.41%	1.39	3
2002	17.99%	8.15%	1.31	17.99%	7.92%	1.18	5
2003	13.40%	10.24%	1.35	13.40%	8.09%	1.25	8
2004	6.44%	8.94%	1.05	6.44%	7.04%	0.97	5
2005	6.03%	9.07%	1.16	6.03%	6.84%	0.90	7
2006	6.67%	9.02%	0.91	6.67%	7.00%	0.85	13
2007	6.23%	8.73%	0.95	6.23%	6.57%	0.83	21
2008	14.23%	9.76%	1.05	14.23%	7.25%	0.98	20
2009	8.27%	15.45%	0.82	8.27%	10.37%	0.97	12
2010	14.71%	13.18%	0.99	14.71%	6.52%	1.24	22
2011	8.54%	12.65%	0.81	8.54%	5.67%	1.09	15
2012	6.64%	13.50%	0.80	6.64%	5.84%	1.05	30
2013	4.93%	13.32%	0.82	4.93%	4.66%	1.00	36
2014	5.38%	11.79%	0.81	5.38%	4.11%	1.01	44
2015	5.65%	11.26%	0.85	5.65%	5.10%	1.01	56
2016	7.65%	14.81%	0.91	7.65%	7.59%	1.04	47
2017	6.50%	12.89%	0.91	6.50%	5.11%	1.02	56
2018	1.00%	10.22%	0.87	1.00%	3.74%	0.95	53



Private debt

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
Pre-1996							
1996	1.45x	1.45x	0.00x	1.45x	1.45x	0.00x	1
1997	1.70x	1.69x	0.01x	2.19x	2.18x	0.02x	3
1998							
1999	1.49x	1.48x	0.01x	1.48x	1.45x	0.03x	2
2000	1.26x	1.26x	0.00x	1.04x	1.03x	0.01x	4
2001	2.12x	2.12x	0.00x	2.19x	2.19x	0.00x	3
2002	1.75x	1.75x	0.00x	1.81x	1.81x	0.00x	5
2003	1.91x	1.86x	0.05x	1.99x	1.94x	0.04x	8
2004	1.27x	1.25x	0.02x	1.41x	1.39x	0.02x	5
2005	1.35x	1.34x	0.02x	1.30x	1.26x	0.04x	7
2006	1.51x	1.35x	0.16x	1.37x	1.23x	0.15x	13
2007	1.32x	1.28x	0.03x	1.29x	1.26x	0.04x	21
2008	1.68x	1.64x	0.04x	1.60x	1.55x	0.05x	20
2009	1.37x	1.30x	0.06x	1.33x	1.24x	0.09x	12
2010	1.54x	1.47x	0.07x	1.46x	1.38x	0.08x	22
2011	1.43x	1.14x	0.28x	1.42x	1.22x	0.20x	15
2012	1.28x	1.08x	0.19x	1.26x	0.99x	0.27x	30
2013	1.16x	0.92x	0.24x	1.21x	0.91x	0.30x	36
2014	1.20x	0.68x	0.51x	1.26x	0.76x	0.51x	44
2015	1.15x	0.52x	0.63x	1.14x	0.52x	0.62x	56
2016	1.14x	0.36x	0.78x	1.20x	0.44x	0.76x	47
2017	1.11x	0.25x	0.85x	1.11x	0.28x	0.83x	56
2018	1.01x	0.14x	0.87x	1.02x	0.22x	0.80x	53

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Private debt

Multiples by vintage

TVPI

DPI

Vintage year	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	Number of funds
Pre-1996											
1996			1.45x					1.45x			1
1997			1.49x					1.49x			3
1998											
1999			1.48x					1.44x			2
2000		1.34x	1.11x	0.79x			1.32x	1.09x	0.79x		4
2001			1.88x					1.88x			3
2002		1.72x	1.69x	1.69x			1.72x	1.69x	1.69x		5
2003		2.05x	1.54x	1.47x			1.97x	1.54x	1.47x		8
2004		1.65x	1.64x	1.14x			1.65x	1.63x	1.14x		5
2005		1.47x	1.34x	1.25x			1.47x	1.34x	1.14x		7
2006	1.74x	1.36x	1.19x	1.10x	0.93x	1.64x	1.36x	1.18x	1.10x	0.92x	13
2007	1.68x	1.49x	1.24x	1.10x	0.96x	1.68x	1.49x	1.23x	1.06x	0.91x	21
2008	2.24x	1.74x	1.48x	1.17x	1.13x	2.23x	1.71x	1.48x	1.17x	1.04x	20
2009	1.64x	1.56x	1.40x	1.12x	1.05x	1.64x	1.56x	1.26x	1.05x	0.92x	12
2010	1.81x	1.55x	1.38x	1.29x	1.21x	1.71x	1.49x	1.34x	1.19x	1.13x	22
2011	1.75x	1.58x	1.30x	1.17x	1.06x	1.59x	1.35x	1.13x	1.05x	0.90x	15
2012	1.59x	1.42x	1.27x	1.09x	1.04x	1.36x	1.24x	1.10x	0.90x	0.46x	30
2013	1.44x	1.33x	1.18x	1.12x	1.00x	1.16x	1.08x	0.98x	0.82x	0.64x	36
2014	1.51x	1.29x	1.22x	1.12x	1.05x	1.23x	0.92x	0.72x	0.50x	0.25x	44
2015	1.29x	1.25x	1.19x	1.11x	0.93x	0.81x	0.70x	0.50x	0.32x	0.22x	56
2016	1.34x	1.25x	1.14x	1.06x	0.91x	0.82x	0.51x	0.30x	0.21x	0.07x	47
2017	1.26x	1.17x	1.11x	1.05x	0.98x	0.53x	0.40x	0.22x	0.14x	0.07x	56
2018	1.15x	1.11x	1.05x	0.97x	0.89x	0.42x	0.34x	0.14x	0.03x	0.00x	53

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Private debt

Quarterly return

Quarter end	1-quarter return
Q1 2001	1.98%
Q2 2001	5.82%
Q3 2001	1.02%
Q4 2001	-0.74%
Q1 2002	3.06%
Q2 2002	1.35%
Q3 2002	-1.83%
Q4 2002	1.32%
Q1 2003	3.13%
Q2 2003	7.51%
Q3 2003	-2.24%
Q4 2003	10.28%
Q1 2004	7.71%
Q2 2004	7.65%
Q3 2004	4.48%
Q4 2004	17.96%
Q1 2005	5.35%
Q2 2005	-4.69%
Q3 2005	6.23%
Q4 2005	2.58%
Q1 2006	3.68%
Q2 2006	5.93%
Q3 2006	2.54%
Q4 2006	10.33%

Quarter end	1-quarter return
Q1 2007	2.92%
Q2 2007	8.47%
Q3 2007	3.01%
Q4 2007	0.04%
Q1 2008	-1.79%
Q2 2008	-1.50%
Q3 2008	-8.34%
Q4 2008	-17.39%
Q1 2009	-4.70%
Q2 2009	10.02%
Q3 2009	12.06%
Q4 2009	6.56%
Q1 2010	6.20%
Q2 2010	1.76%
Q3 2010	3.31%
Q4 2010	7.85%
Q1 2011	2.94%
Q2 2011	2.58%
Q3 2011	-4.68%
Q4 2011	1.63%
Q1 2012	-1.07%
Q2 2012	2.22%
Q3 2012	4.18%
Q4 2012	3.32%

Quarter end	1-quarter return
Q1 2013	5.10%
Q2 2013	2.98%
Q3 2013	2.98%
Q4 2013	2.00%
Q1 2014	1.79%
Q2 2014	2.36%
Q3 2014	3.09%
Q4 2014	0.31%
Q1 2015	5.84%
Q2 2015	-0.90%
Q3 2015	-0.13%
Q4 2015	-1.06%
Q1 2016	1.34%
Q2 2016	1.00%
Q3 2016	4.40%
Q4 2016	1.43%
Q1 2017	2.35%
Q2 2017	2.88%
Q3 2017	2.06%
Q4 2017	4.26%
Q1 2018	2.46%
Q2 2018	2.67%
Q3 2018	-0.44%
Q4 2018	0.33%

Quarter end	1-quarter return
Q1 2019	1.50%
Q2 2019	1.58%
Q3 2019	1.44%
Q4 2019	2.60%
Q1 2020	-6.51%
Q2 2020	2.16%
Q3 2020	4.15%
Q4 2020*	4.01%

*Preliminary data

Funds of funds



Funds of funds

IRR by vintage

Pooled IRRs

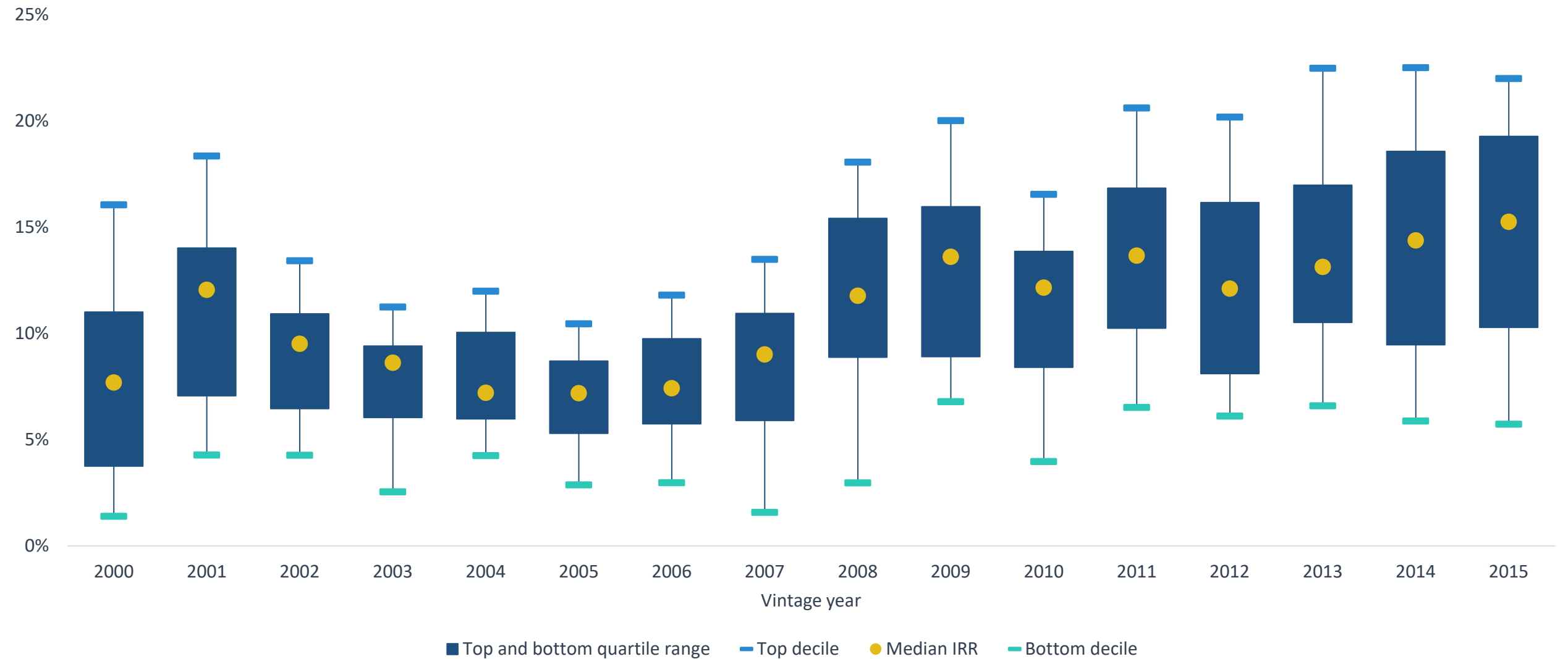
IRR hurdle rates

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
Pre-1996				30.79%	20.19%	11.33%	5.20%	1.73%	16.87%	11
1996						14.24%				1
1997	-13.96%	-13.93%	2		0.38%	-1.80%	-13.50%		12.06%	5
1998	7.86%	7.64%	3	24.44%	10.62%	7.52%	4.83%	1.60%	8.50%	10
1999	5.50%	4.94%	8	16.66%	11.96%	4.27%	2.78%	-1.23%	6.66%	19
2000	5.65%	6.39%	9	16.05%	11.00%	7.68%	3.75%	1.39%	5.65%	22
2001	10.75%	8.06%	9	18.34%	14.02%	12.04%	7.07%	4.27%	5.88%	23
2002	7.96%	6.26%	4	13.42%	10.92%	9.51%	6.46%	4.26%	4.08%	20
2003	7.78%	5.77%	6	11.24%	9.40%	8.61%	6.04%	2.54%	3.64%	19
2004	7.98%	7.76%	9	11.98%	10.05%	7.20%	5.97%	4.24%	3.81%	37
2005	6.99%	6.55%	19	10.44%	8.70%	7.18%	5.29%	2.87%	3.87%	47
2006	8.39%	8.01%	37	11.79%	9.75%	7.41%	5.74%	2.97%	3.38%	68
2007	9.21%	8.02%	41	13.48%	10.94%	9.00%	5.90%	1.58%	5.57%	69
2008	3.76%	10.61%	40	18.05%	15.41%	11.77%	8.87%	2.96%	5.85%	65
2009	12.70%	13.00%	29	20.00%	15.96%	13.60%	8.90%	6.78%	5.37%	37
2010	11.50%	11.96%	31	16.54%	13.86%	12.15%	8.40%	3.96%	7.15%	43
2011	13.72%	14.87%	46	20.60%	16.84%	13.66%	10.24%	6.51%	7.42%	52
2012	14.26%	13.91%	42	20.17%	16.16%	12.10%	8.10%	6.10%	6.61%	37
2013	13.45%	12.71%	48	22.47%	16.97%	13.12%	10.51%	6.58%	6.80%	36
2014	14.71%	13.81%	46	22.50%	18.56%	14.37%	9.46%	5.87%	6.11%	51
2015	14.63%	14.39%	43	21.99%	19.27%	15.25%	10.28%	5.72%	6.75%	44
2016	16.14%	14.67%	37	22.89%	18.10%	14.06%	9.55%	5.45%	6.73%	35
2017	12.44%	14.44%	24	30.18%	18.78%	11.70%	7.66%	5.08%	9.88%	29
2018	11.78%	11.51%	33	29.60%	20.34%	16.34%	7.81%	4.17%	11.83%	24

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Funds of funds

IRRs by vintage



Funds of funds

PMEs by vintage

S&P 500 index

MSCI All Country World Index

Vintage year	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1996							
1997	-13.96%	8.35%	0.26	-13.96%	6.81%	0.24	2
1998	7.86%	7.38%	1.25	7.86%	6.17%	1.12	3
1999	5.50%	6.62%	1.05	5.50%	5.79%	0.96	8
2000	5.65%	6.27%	0.99	5.65%	5.12%	0.93	9
2001	10.75%	7.14%	1.12	10.75%	6.25%	1.06	9
2002	7.96%	8.15%	1.05	7.96%	7.45%	1.04	4
2003	7.78%	10.24%	1.05	7.78%	9.26%	1.14	6
2004	7.98%	8.94%	1.01	7.98%	7.56%	1.10	9
2005	6.99%	9.07%	0.93	6.99%	7.27%	1.06	19
2006	8.39%	9.02%	0.88	8.39%	6.62%	1.06	37
2007	9.21%	8.73%	0.87	9.21%	5.85%	1.05	41
2008	3.76%	9.76%	0.59	3.76%	6.19%	0.73	40
2009	12.70%	15.45%	0.95	12.70%	12.08%	1.15	29
2010	11.50%	13.18%	0.92	11.50%	9.03%	1.11	31
2011	13.72%	12.65%	1.02	13.72%	8.25%	1.20	46
2012	14.26%	13.50%	1.07	14.26%	9.51%	1.25	42
2013	13.45%	13.32%	1.04	13.45%	9.05%	1.16	48
2014	14.71%	11.79%	1.07	14.71%	7.91%	1.19	46
2015	14.63%	11.26%	1.04	14.63%	8.06%	1.13	43
2016	16.14%	14.81%	1.06	16.14%	12.03%	1.14	37
2017	12.44%	12.89%	0.99	12.44%	9.94%	1.04	24
2018	11.78%	10.22%	0.98	11.78%	5.55%	1.02	33

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Funds of funds

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
Pre-1996							
1996							
1997	0.31x	0.31x	0.00x	0.32x	0.32x	0.00x	2
1998	1.48x	1.48x	0.01x	1.51x	1.50x	0.01x	3
1999	1.36x	1.33x	0.03x	1.33x	1.29x	0.05x	8
2000	1.34x	1.31x	0.03x	1.38x	1.35x	0.03x	9
2001	1.66x	1.56x	0.10x	1.56x	1.40x	0.16x	9
2002	1.46x	1.41x	0.05x	1.34x	1.31x	0.03x	4
2003	1.62x	1.52x	0.09x	1.41x	1.33x	0.08x	6
2004	1.53x	1.42x	0.11x	1.55x	1.41x	0.14x	9
2005	1.48x	1.35x	0.14x	1.47x	1.29x	0.17x	19
2006	1.65x	1.38x	0.27x	1.63x	1.37x	0.25x	37
2007	1.67x	1.31x	0.36x	1.57x	1.26x	0.30x	41
2008	1.23x	0.88x	0.35x	1.75x	1.17x	0.58x	40
2009	1.81x	1.07x	0.74x	1.82x	1.20x	0.62x	29
2010	1.71x	1.10x	0.60x	1.78x	1.00x	0.78x	31
2011	1.77x	0.83x	0.94x	1.90x	0.86x	1.04x	46
2012	1.80x	0.63x	1.17x	1.76x	0.65x	1.11x	42
2013	1.58x	0.45x	1.13x	1.58x	0.41x	1.16x	48
2014	1.58x	0.33x	1.25x	1.57x	0.38x	1.20x	46
2015	1.40x	0.23x	1.17x	1.42x	0.26x	1.16x	43
2016	1.40x	0.18x	1.23x	1.36x	0.15x	1.21x	37
2017	1.20x	0.07x	1.13x	1.25x	0.07x	1.18x	24
2018	1.14x	0.07x	1.07x	1.14x	0.10x	1.05x	33

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Funds of funds

Multiples by vintage

TVPI

DPI

Vintage year	Top decile	Top quartile	Median TVPI	Bottom quartile	Bottom decile	Top decile	Top quartile	Median DPI	Bottom quartile	Bottom decile	Number of funds
Pre-1996											
1996											
1997			0.32x					0.32x			2
1998			1.56x					1.56x			3
1999		1.46x	1.24x	1.14x			1.46x	1.21x	1.14x		8
2000		1.57x	1.50x	1.23x			1.57x	1.48x	1.15x		9
2001		1.70x	1.54x	1.49x			1.70x	1.45x	1.33x		9
2002		1.48x	1.42x	1.28x			1.43x	1.40x	1.28x		4
2003		1.63x	1.54x	1.27x			1.48x	1.46x	1.22x		6
2004		1.57x	1.55x	1.37x			1.51x	1.36x	1.32x		9
2005	1.79x	1.61x	1.47x	1.38x	1.25x	1.66x	1.43x	1.28x	1.21x	0.92x	19
2006	1.95x	1.78x	1.62x	1.43x	1.29x	1.68x	1.52x	1.32x	1.22x	1.13x	37
2007	2.03x	1.87x	1.55x	1.25x	1.01x	1.67x	1.47x	1.32x	0.95x	0.71x	41
2008	2.47x	2.13x	1.71x	1.38x	1.03x	1.67x	1.41x	1.14x	0.92x	0.57x	40
2009	2.41x	1.98x	1.73x	1.63x	1.41x	1.81x	1.53x	1.09x	0.81x	0.71x	29
2010	2.49x	1.89x	1.67x	1.51x	1.26x	1.33x	1.18x	1.01x	0.77x	0.65x	31
2011	2.62x	2.09x	1.76x	1.43x	1.21x	1.17x	1.03x	0.90x	0.73x	0.33x	46
2012	2.79x	2.21x	1.53x	1.35x	1.24x	1.31x	0.80x	0.55x	0.36x	0.25x	42
2013	2.20x	1.76x	1.56x	1.30x	1.10x	0.85x	0.59x	0.34x	0.19x	0.12x	48
2014	2.12x	1.82x	1.46x	1.27x	1.14x	0.79x	0.34x	0.26x	0.19x	0.11x	46
2015	1.78x	1.61x	1.39x	1.24x	1.07x	0.48x	0.32x	0.20x	0.09x	0.02x	43
2016	1.65x	1.47x	1.32x	1.19x	1.10x	0.38x	0.14x	0.08x	0.03x	0.00x	37
2017	1.48x	1.36x	1.22x	1.10x	1.07x	0.14x	0.12x	0.04x	0.02x	0.00x	24
2018	1.40x	1.21x	1.11x	1.04x	0.96x	0.21x	0.04x	0.00x	0.00x	0.00x	33

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Funds of funds

Quarterly return

Quarter end	1-quarter return
Q1 2001	-10.12%
Q2 2001	-5.57%
Q3 2001	-10.00%
Q4 2001	-5.99%
Q1 2002	-9.57%
Q2 2002	-5.84%
Q3 2002	-7.21%
Q4 2002	-5.03%
Q1 2003	-8.48%
Q2 2003	4.02%
Q3 2003	0.27%
Q4 2003	-5.66%
Q1 2004	4.42%
Q2 2004	1.90%
Q3 2004	4.93%
Q4 2004	6.27%
Q1 2005	1.91%
Q2 2005	5.87%
Q3 2005	5.71%
Q4 2005	8.02%
Q1 2006	4.52%
Q2 2006	6.11%
Q3 2006	4.79%
Q4 2006	8.36%

Quarter end	1-quarter return
Q1 2007	0.95%
Q2 2007	11.31%
Q3 2007	4.01%
Q4 2007	3.68%
Q1 2008	9.79%
Q2 2008	-1.99%
Q3 2008	-6.41%
Q4 2008	-10.53%
Q1 2009	-2.02%
Q2 2009	-5.02%
Q3 2009	5.29%
Q4 2009	2.84%
Q1 2010	5.04%
Q2 2010	-0.76%
Q3 2010	4.83%
Q4 2010	2.65%
Q1 2011	3.51%
Q2 2011	5.72%
Q3 2011	-1.82%
Q4 2011	-0.15%
Q1 2012	5.27%
Q2 2012	0.99%
Q3 2012	-0.47%
Q4 2012	3.22%

Quarter end	1-quarter return
Q1 2013	2.52%
Q2 2013	3.21%
Q3 2013	2.81%
Q4 2013	3.92%
Q1 2014	2.15%
Q2 2014	6.88%
Q3 2014	1.42%
Q4 2014	2.28%
Q1 2015	3.38%
Q2 2015	6.32%
Q3 2015	2.22%
Q4 2015	-0.01%
Q1 2016	1.56%
Q2 2016	1.28%
Q3 2016	4.13%
Q4 2016	0.35%
Q1 2017	3.17%
Q2 2017	3.87%
Q3 2017	3.51%
Q4 2017	1.81%
Q1 2018	5.22%
Q2 2018	5.54%
Q3 2018	3.11%
Q4 2018	1.50%

Quarter end	1-quarter return
Q1 2019	2.79%
Q2 2019	3.60%
Q3 2019	1.51%
Q4 2019	2.65%
Q1 2020	-1.66%
Q2 2020	4.45%
Q3 2020	9.54%
Q4 2020*	7.05%

*Preliminary data

Secondaries



Secondaries

IRR by vintage

Pooled IRRs

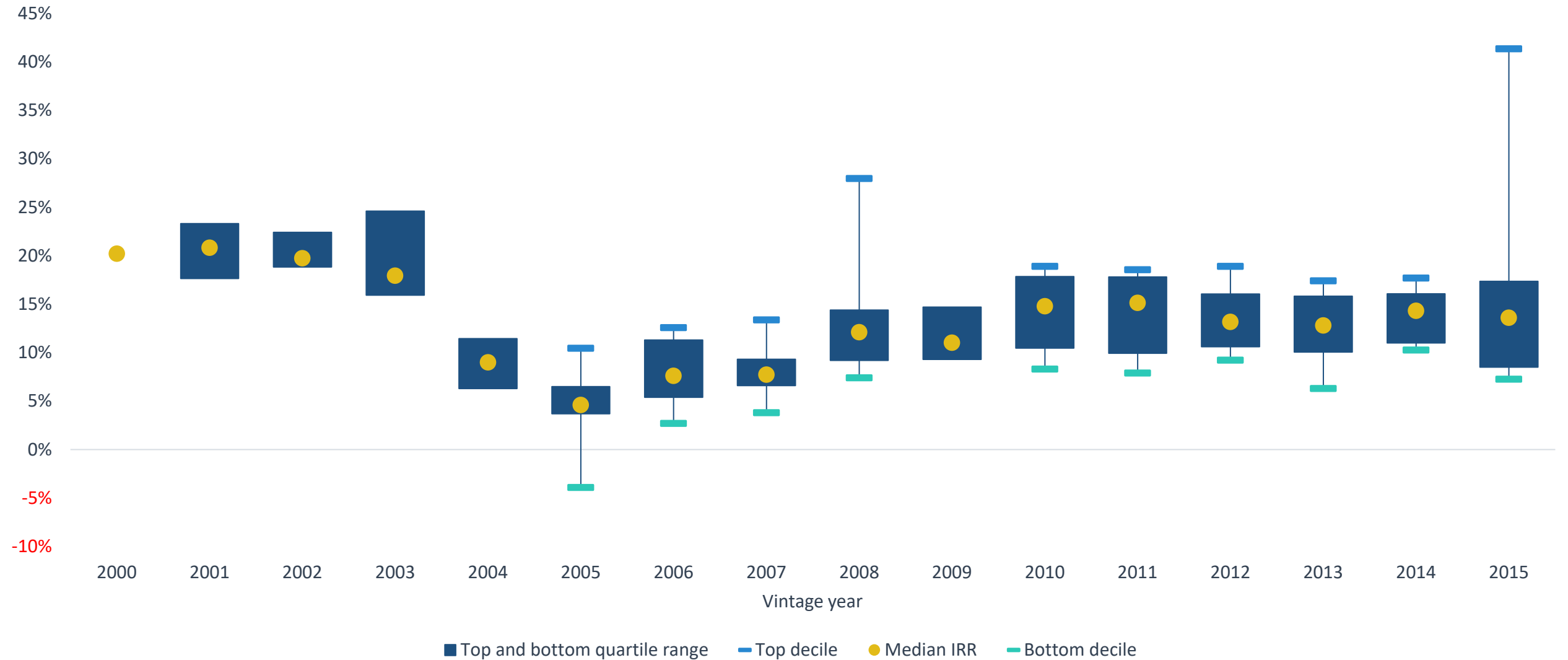
IRR hurdle rates

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
Pre-1996					34.85%	28.69%	18.86%		13.24%	9
1996	18.56%	18.56%	1			31.48%			16.00%	3
1997	16.60%	16.60%	1			9.61%			9.89%	2
1998	8.97%	11.56%	3		8.02%	5.38%	4.39%		8.35%	7
1999	7.33%	5.51%	3		15.03%	8.38%	2.81%		13.72%	8
2000	15.09%	14.35%	3			20.20%			10.00%	3
2001	14.20%	16.13%	2		23.31%	20.81%	17.64%		6.22%	4
2002	16.10%	18.08%	4		22.40%	19.72%	18.82%		4.60%	5
2003	37.92%	37.92%	1		24.60%	17.93%	15.93%		7.76%	7
2004	10.91%	10.97%	5		11.44%	9.00%	6.30%		7.81%	5
2005	6.23%	5.92%	10	10.45%	6.49%	4.60%	3.70%	-3.92%	12.10%	13
2006	5.87%	5.68%	10	12.58%	11.30%	7.60%	5.38%	2.69%	4.78%	13
2007	5.32%	8.88%	10	13.36%	9.33%	7.72%	6.59%	3.80%	8.61%	12
2008	11.27%	11.75%	16	27.95%	14.40%	12.11%	9.20%	7.39%	9.65%	13
2009	11.31%	10.66%	11		14.70%	11.02%	9.29%		8.06%	9
2010	11.91%	13.68%	5	18.89%	17.85%	14.77%	10.46%	8.30%	4.22%	11
2011	14.43%	13.37%	11	18.53%	17.80%	15.12%	9.94%	7.89%	4.79%	15
2012	11.78%	11.79%	11	18.89%	16.06%	13.16%	10.61%	9.22%	4.52%	12
2013	7.98%	9.07%	15	17.40%	15.82%	12.80%	10.05%	6.29%	12.00%	15
2014	14.30%	14.98%	11	17.68%	16.07%	14.32%	11.00%	10.26%	6.13%	10
2015	6.56%	15.96%	11	41.33%	17.35%	13.60%	8.51%	7.25%	14.30%	10
2016	17.97%	20.62%	17	40.64%	25.63%	17.29%	13.19%	10.19%	12.85%	18
2017	11.50%	12.37%	16	23.46%	18.88%	11.68%	8.41%	3.52%	10.97%	20
2018	19.66%	23.51%	10		68.16%	23.52%	21.08%		33.70%	8

Source: PitchBook | Geography: Global | Data as of September 30, 2020

Secondaries

IRRs by vintage





Secondaries

PMEs by vintage

S&P 500 index

MSCI All Country World Index

Vintage year	Pooled IRR	Index return	KS-PME	Pooled IRR	Index return	KS-PME	Number of funds
1996	18.56%	9.02%	1.28	18.56%	7.02%	1.29	1
1997	16.60%	8.35%	1.36	16.60%	6.81%	1.40	1
1998	8.97%	7.38%	1.27	8.97%	6.17%	1.21	3
1999	7.33%	6.62%	1.23	7.33%	5.79%	1.17	3
2000	15.09%	6.27%	1.38	15.09%	5.12%	1.25	3
2001	14.20%	7.14%	1.20	14.20%	6.25%	1.12	2
2002	16.10%	8.15%	1.23	16.10%	7.45%	1.16	4
2003	37.92%	10.24%	1.56	37.92%	9.26%	1.46	1
2004	10.91%	8.94%	1.14	10.91%	7.56%	1.20	5
2005	6.23%	9.07%	0.94	6.23%	7.27%	1.04	10
2006	5.87%	9.02%	0.91	5.87%	6.62%	1.01	10
2007	5.32%	8.73%	0.80	5.32%	5.85%	0.90	10
2008	11.27%	9.76%	0.92	11.27%	6.19%	1.06	16
2009	11.31%	15.45%	0.90	11.31%	12.08%	1.03	11
2010	11.91%	13.18%	0.95	11.91%	9.03%	1.09	5
2011	14.43%	12.65%	1.01	14.43%	8.25%	1.16	11
2012	11.78%	13.50%	0.94	11.78%	9.51%	1.07	11
2013	7.98%	13.32%	0.89	7.98%	9.05%	0.99	15
2014	14.30%	11.79%	1.04	14.30%	7.91%	1.11	11
2015	6.56%	11.26%	0.90	6.56%	8.06%	0.96	11
2016	17.97%	14.81%	1.09	17.97%	12.03%	1.17	17
2017	11.50%	12.89%	0.98	11.50%	9.94%	1.03	16
2018	19.66%	10.22%	1.03	19.66%	5.55%	1.06	10



Secondaries

Multiples by vintage

Pooled multiples

Equal-weighted pooled multiples

Vintage year	TVPI	DPI	RVPI	TVPI	DPI	RVPI	Number of funds
Pre-1996							
1996	1.55x	1.55x	0.00x	1.55x	1.55x	0.00x	1
1997	1.59x	1.59x	0.00x	1.59x	1.59x	0.00x	1
1998	1.33x	1.33x	0.00x	1.35x	1.35x	0.00x	3
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	0.01x	2
2002	1.51x	1.50x	0.01x	1.53x	1.52x	0.00x	4
2003	1.79x	1.79x	0.00x	1.79x	1.79x	0.00x	1
2004	1.51x	1.45x	0.05x	1.49x	1.44x	0.05x	5
2005	1.37x	1.33x	0.04x	1.35x	1.31x	0.04x	10
2006	1.32x	1.26x	0.06x	1.30x	1.24x	0.05x	10
2007	1.26x	1.13x	0.13x	1.43x	1.30x	0.13x	10
2008	1.56x	1.41x	0.14x	1.58x	1.42x	0.17x	16
2009	1.54x	1.38x	0.16x	1.50x	1.29x	0.21x	11
2010	1.44x	1.37x	0.07x	1.52x	1.36x	0.17x	5
2011	1.59x	1.31x	0.27x	1.59x	1.18x	0.42x	11
2012	1.45x	1.11x	0.34x	1.42x	1.05x	0.37x	11
2013	1.28x	0.91x	0.37x	1.34x	0.78x	0.56x	15
2014	1.35x	0.70x	0.65x	1.55x	0.64x	0.91x	11
2015	1.13x	0.33x	0.80x	1.32x	0.74x	0.57x	11
2016	1.38x	0.39x	0.99x	1.45x	0.48x	0.97x	17
2017	1.16x	0.27x	0.90x	1.19x	0.26x	0.93x	16
2018	1.14x	0.14x	1.00x	1.25x	0.22x	1.03x	10

Source: PitchBook | Geography: Global | Data as of September 30, 2020



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	
Pre-1996											
1996			1.55x					1.55x			1
1997			1.59x					1.59x			1
1998			1.32x					1.32x			3
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			1.57x	1.54x	1.49x		4
2003			1.79x					1.79x			1
2004		1.63x	1.47x	1.34x			1.54x	1.39x	1.32x		5
2005	1.70x	1.58x	1.31x	1.26x	1.09x	1.67x	1.41x	1.29x	1.26x	1.09x	10
2006	1.55x	1.44x	1.29x	1.20x	1.08x	1.44x	1.37x	1.28x	1.16x	1.05x	10
2007	1.74x	1.60x	1.39x	1.35x	1.06x	1.59x	1.35x	1.31x	1.06x	0.94x	10
2008	1.79x	1.66x	1.51x	1.38x	1.36x	1.68x	1.46x	1.42x	1.28x	1.05x	16
2009	1.71x	1.69x	1.39x	1.25x	1.09x	1.67x	1.48x	1.37x	1.04x	0.78x	11
2010		1.64x	1.48x	1.41x			1.46x	1.41x	1.27x		5
2011	1.92x	1.69x	1.60x	1.41x	1.29x	1.35x	1.33x	1.11x	1.10x	0.98x	11
2012	1.59x	1.55x	1.46x	1.29x	1.25x	1.23x	1.20x	1.16x	0.94x	0.79x	11
2013	1.68x	1.47x	1.41x	1.21x	1.17x	1.06x	0.99x	0.80x	0.65x	0.39x	15
2014	1.53x	1.38x	1.34x	1.32x	1.23x	1.01x	0.91x	0.70x	0.47x	0.27x	11
2015	1.52x	1.45x	1.34x	1.20x	1.14x	1.34x	0.89x	0.80x	0.35x	0.22x	11
2016	1.74x	1.43x	1.37x	1.29x	1.17x	0.88x	0.64x	0.40x	0.29x	0.14x	17
2017	1.39x	1.26x	1.14x	1.11x	1.04x	0.38x	0.32x	0.23x	0.14x	0.05x	16
2018	1.49x	1.39x	1.35x	1.11x	0.95x	0.32x	0.29x	0.13x	0.05x	0.00x	10

Source: PitchBook | Geography: Global | Data as of September 30, 2020



Secondaries

Quarterly return

Quarter end	1-quarter return
Q1 2001	-3.14%
Q2 2001	-3.73%
Q3 2001	1.63%
Q4 2001	-3.31%
Q1 2002	4.07%
Q2 2002	2.13%
Q3 2002	-6.34%
Q4 2002	-4.65%
Q1 2003	-3.16%
Q2 2003	1.78%
Q3 2003	0.69%
Q4 2003	2.70%
Q1 2004	8.34%
Q2 2004	5.39%
Q3 2004	6.19%
Q4 2004	7.06%
Q1 2005	6.10%
Q2 2005	2.79%
Q3 2005	4.55%
Q4 2005	1.89%
Q1 2006	8.39%
Q2 2006	4.57%
Q3 2006	3.99%
Q4 2006	6.43%

Quarter end	1-quarter return
Q1 2007	4.02%
Q2 2007	11.69%
Q3 2007	9.18%
Q4 2007	4.49%
Q1 2008	2.61%
Q2 2008	-3.00%
Q3 2008	2.06%
Q4 2008	-6.08%
Q1 2009	-8.90%
Q2 2009	-3.78%
Q3 2009	0.21%
Q4 2009	1.96%
Q1 2010	1.28%
Q2 2010	6.16%
Q3 2010	6.00%
Q4 2010	5.23%
Q1 2011	6.82%
Q2 2011	5.64%
Q3 2011	4.76%
Q4 2011	-3.95%
Q1 2012	4.03%
Q2 2012	2.79%
Q3 2012	4.87%
Q4 2012	2.05%

Quarter end	1-quarter return
Q1 2013	3.24%
Q2 2013	3.53%
Q3 2013	2.12%
Q4 2013	4.90%
Q1 2014	3.73%
Q2 2014	3.17%
Q3 2014	3.71%
Q4 2014	2.88%
Q1 2015	2.42%
Q2 2015	6.89%
Q3 2015	1.59%
Q4 2015	0.00%
Q1 2016	0.18%
Q2 2016	3.16%
Q3 2016	1.25%
Q4 2016	2.94%
Q1 2017	3.58%
Q2 2017	4.03%
Q3 2017	3.45%
Q4 2017	3.65%
Q1 2018	2.54%
Q2 2018	6.97%
Q3 2018	3.73%
Q4 2018	0.89%

Quarter end	1-quarter return
Q1 2019	2.51%
Q2 2019	5.46%
Q3 2019	1.27%
Q4 2019	3.55%
Q1 2020	-3.49%
Q2 2020	-3.96%
Q3 2020	1.97%
Q4 2020*	6.59%

*Preliminary data



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