

# GLOBAL Manager Performance Score League Tables



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Click <u>here</u> for PitchBook's report methodologies.

## **Overview**

PitchBook's Global Manager Performance Score League Tables employ a new, data-driven methodology to identify top-performing private capital fund strategies based on their track record. Leveraging data on thousands of closedend private funds in the PitchBook Platform, we rank the aggregate historical performance of each manager's family of funds across vintage years relative to each fund family's peer groups. The rankings in this report were created using a proprietary methodology developed by our Quantitative Research team, with the goal of providing market participants with an objective, relative measure of a strategy's performance track record.

We calculate Performance Scores at the fund family level because many managers have a variety of investment product offerings, each with their own teams and strategies. When potential limited partners (LPs) are assessing a new fund offering from a general partner (GP), the LP is typically evaluating the next fund in a sequence of closed-end funds of a particular strategy, such as North America buyout. That makes the performance track record of the firm's credit strategy, as an example, largely irrelevant for the fund offering being considered. Measuring performance at the family level also allows a GP to achieve high rankings across multiple strategies or a particularly high-performing team to be highlighted despite other in-house strategies with middling performance.

The PitchBook Manager Performance Scores are built to go beyond the limitations of traditional benchmarking techniques, such as internal rate of return (IRR) quartiles, to provide a more robust measure of relative performance that considers the dispersion of returns and their finality, which quartile ranking largely ignores. Further, the Scores consider multiple funds across a strategy to provide a more holistic measure of performance than benchmarking a single fund. While track record analysis has limitations on the predictability of future returns,<sup>1</sup> we believe our Performance Scores provide a useful input to the manager due diligence process. This approach has key advantages over standard peer group benchmarking approaches:

- **Interpretability:** The Scores represent the degree to which a fund family has outperformed or underperformed the benchmark, whereas quartiles have limited interpretability.
- Incorporated uncertainty: The Scores take into consideration the uncertainty of each fund's current IRR figure. The uncertainty is a function of how much LPs have received in distributions, the fund's age, and a mean reversion term based on the extent to which a fund's IRR is an outlier relative to its benchmark.
- **Performance aggregation:** Scoring fund families allows for quick digestion of the aggregate performance.
- **Comparability:** The Scores are comparable across families even with track records made up of different vintage years and numbers of predecessor funds.
- **Transparency:** All underlying fund performance data is available to PitchBook clients on our platform.

This report provides top family rankings for 10 fund strategies using data on funds launched since 2000. To qualify for inclusion in the league tables, a family must have at least two funds that are five years or older and have recent performance data available. The family must also have a fund with a vintage year of 2015 or later or have an open fund. While we present the top-ranked families in each strategy, the Manager Performance Scores are calculated for 1,557 fund families across 4,520 funds managed by 1,105 GPs. We provide further detail in subsequent sections as well as in a <u>deeper technical document</u>.

1: "Has Persistence Persisted in Private Equity? Evidence From Buyout and Venture Capital Funds," Fama-Miller Working Paper, Robert S. Harris, et al., March 31, 2022.

## **Global performance rankings**

#### **Buyout\***

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	Monomoy Capital Partners	Monomoy Capital Partners	90.1	North America	2022	\$1,109.9	Targeted: B2B
2	Clarion Investors	Clarion Capital Partners	77.7	North America	Open	\$427.0	Targeted: B2B
3	Hudson Ferry Capital Fund	Hudson Ferry Capital	75.8	North America	2018	N/A	Specialist: B2B
4	Riverside Micro-Cap Fund	The Riverside Company	75.7	North America	2021	\$1,872.2	Targeted: B2B
5	Platinum Equity Capital Partners	Platinum Equity	75.5	North America	Open	\$10,000.0	Targeted: B2B
6	Carousel Capital Partners	Carousel Capital	75.4	North America	2020	\$700.0	Targeted: B2B
7	Incline Equity Partners	Incline Equity Partners	75.0	North America	Open	\$1,165.0	Specialist: B2B
8	Thoma Bravo Fund	Thoma Bravo	75.0	North America	2022	\$24,300.0	Specialist: IT
9	Accel-KKR Capital Partners	Accel-KKR	74.7	North America	2023	\$4,400.0	Specialist: IT
10	Sentinel Capital Partners	Sentinel Capital Partners	74.0	North America	2022	\$4,360.0	Generalist

Source: PitchBook • Geography: Global \*As of December 31, 2022

Note: A total of 414 buyout fund families received Performance Scores. The strategy information leverages our investor style framework. To learn more, read our analyst note PE Manager Style.

### PE growth/expansion\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	Lead Edge Capital	Lead Edge Capital	73.0	North America	2022	\$1,960.0	Targeted: IT
2	DFJ Growth	DFJ Growth	71.3	North America	2021	\$1,000.0	Specialist: IT
3	PSG	Providence Equity Partners	71.0	North America	Open	\$4,700.0	Specialist: IT
4	Shamrock Capital Growth Fund	Shamrock Capital Advisors	69.7	North America	2021	\$1,000.0	Targeted: B2B
5	Fulcrum Growth Fund	Fulcrum Equity Partners	69.6	North America	Open	\$275.0	Targeted: Healthcare
6	Accel-KKR Growth Capital Partners	Accel-KKR	68.8	North America	2022	\$1,350.0	Specialist: IT
7	Mercato Partners	Mercato Partners	68.7	North America	2022	N/A	Targeted: IT
8	Summit Partners Growth Equity Fund	Summit Partners	67.2	North America	2021	\$8,350.0	Generalist
9	JMI Equity Fund	JMI Equity	66.3	North America	2023	\$2,400.0	Specialist: IT
10	Summit Partners Europe Growth Equity Fund	Summit Partners	66.0	Europe	2023	\$1,515.5	Targeted: IT

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 84 PE growth/expansion fund families received Performance Scores. The strategy information leverages our investor style framework. To learn more, read our analyst note PE Manager Style.

#### Venture capital\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	Union Square Ventures Opportunity Fund	Union Square Ventures	89.3	North America	2019	\$250.0	Specialist: IT
2	Emergence Capital Partners Fund	Emergence Capital Partners	84.3	North America	2020	\$575.7	Specialist: IT
3	Union Square Ventures	Union Square Ventures	82.2	North America	2014	\$166.0	Targeted: IT
4	IA Venture Strategies Fund	IA Ventures	78.2	North America	2020	\$160.0	Specialist: IT
5	Third Rock Ventures Fund	Third Rock Ventures	73.2	North America	2022	\$1,105.3	Specialist: Healthcare
6	TLV Partners	TLV Partners	73.0	Europe	2023	\$250.0	Specialist: IT
7	Newion	Newion Investments	72.4	Europe	Open	\$89.9	Specialist: IT
8	YLV	YL Ventures	70.5	North America	2022	\$400.0	Specialist: IT
9	True Ventures Select	True Ventures	70.5	North America	2020	\$375.0	Targeted: IT
10	Index Ventures	Index Ventures	69.5	North America	2021	\$900.0	Targeted: IT

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 254 venture capital fund families received Performance Scores. The strategy information leverages our investor style framework. To learn more, read our analyst note US VC Manager Style Drift.

### Real estate opportunistic\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	Fortress Japan Opportunity Fund	Fortress Investment Group	70.0	Asia	Open	\$1,500.0	N/A
2	Blue Heron Real Estate Opportunity Fund	Blue Heron Asset Management	67.2	North America	Open	\$79.3	Multifamily
3	Carlyle Realty Partners	The Carlyle Group	62.9	North America	2021	\$7,987.0	N/A
4	Principal Strategic Real Estate Equity Fund	Principal Real Estate Investors	64.3	North America	2017	\$230.0	Retail
5	Perella Weinberg Real Estate Fund	Perella Weinberg Partners	63.2	Europe	2016	\$1,579.0	N/A
6	TPG Real Estate Partners	TPG	62.3	North America	2022	\$6,820.0	Multifamily, retail
7	Broccolini	Broccolini	62.0	North America	2022	\$303.2	N/A
8	Blackstone Real Estate Partners	Blackstone	60.0	North America	2022	\$30,415.9	N/A
9	GEM Realty Fund	GEM Realty Capital	58.4	North America	Open	\$705.0	Hospitality, industrial, multifamily, office, retail
10	KKR Real Estate Partners Americas	Kohlberg Kravis Roberts	57.8	North America	2021	\$4,253.0	N/A

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 91 real estate opportunistic fund families received Performance Scores.

#### Real estate value-add\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	Realterm Logistics Fund	Realterm Global	81.8	North America	2022	\$610.0	Industrial
2	Cabot Industrial Value Fund	Cabot Properties	78.5	North America	Open	\$1,100.0	Industrial
3	Exeter Industrial Value Fund	EQT Exeter	75.5	North America	2023	\$4,900.0	Industrial
4	Griffis Premium Apartment Fund	Griffis Residential	69.4	North America	Open	\$516.0	Multifamily
5	Oak Street Real Estate Capital Fund	Oak Street Real Estate Capital	68.3	North America	Open	\$2,500.0	Retail
6	Penwood Select Industrial Partners	Penwood Real Estate Investment Management	67.7	North America	Open	\$381.5	Industrial
7	Roxborough Fund	The Roxborough Group	66.2	North America	2021	\$518.0	Industrial, multifamily, office, retail
8	NREP Nordic Strategies Fund	NREP	65.9	Europe	2023	\$3,650.0	Industrial, multifamily, retail
9	Hammes Partners	Hammes Partners	64.9	North America	2022	\$739.0	Medical buildings
10	DivcoWest Fund	DivcoWest	64.2	North America	2020	\$2,250.8	Office, retail

Source: PitchBook • Geography: Global \*As of December 31, 2022

Note: A total of 114 real estate value-add fund families received Performance Scores.

#### Infrastructure\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	Macquarie Infrastructure Partners	Macquarie Asset Management	70.9	North America	Open	\$6,900.0	Renewable energy, telecommunications, water & waste management
2	Equis Asia Fund	Equis Development	68.9	Asia	2015	\$1,006.0	Power, renewable energy
3	EQT Infrastructure	EQT	66.7	Europe	Open	\$18,211.0	Social services, telecommunications, transportation, water & waste management
4	Global Infrastructure Partners	Global Infrastructure Partners	66.2	North America	Open	\$22,000.0	Renewable energy, transportation, water & waste management
5	Meridiam Infrastructure North America Fund	Meridiam	62.4	North America	Open	\$1,347.6	Transportation
6	KKR Global Infrastructure Investors	Kohlberg Kravis Roberts	62.2	North America	Open	\$17,000.0	N/A
7	Grain Communications Opportunity Fund	Grain Management	61.2	North America	Open	\$2,250.0	Telecommunications
8	Energy Spectrum Partners	Energy Spectrum Capital	59.8	North America	2018	\$969.2	Oil & gas
9	CIM Infrastructure Fund	CIM Group	59.7	North America	Open	\$818.0	Power, renewable energy, telecommunications, water & waste management
10	EIV Capital Fund	EIV Capital	59.4	North America	2020	\$681.9	Renewable energy

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 43 infrastructure fund families received Performance Scores.

#### Natural resources\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	EnCap Flatrock Midstream	EnCap Flatrock Midstream	76.2	North America	Open	\$3,250.0	Oil & gas
2	HitecVision Private Equity	HitecVision	71.5	Europe	2020	\$367.5	Oil & gas
3	Pearl Energy Investments	Pearl Energy Investments	70.5	North America	2023	\$705.0	Oil & gas
4	Post Oak Energy Partners	Post Oak Energy Capital	69.5	North America	Open	\$600.0	Oil & gas
5	Carnelian Energy Capital	Carnelian Energy Capital	66.0	North America	2022	\$975.0	Oil & gas
6	EnCap Energy Capital Fund	EnCap Investments	63.5	North America	Open	\$7,000.0	Oil & gas
7	TIAA-CREF Global Agriculture	TIAA-CREF Asset Management	62.3	North America	2015	\$3,000.0	Agriculture
8	SCF	SCF Partners	58.5	North America	2018	\$840.0	Oil & gas
9	Quantum Energy Partners	Quantum Energy Partners	57.1	North America	Open	N/A	Oil & gas
10	Rockland Power Partners	Rockland Capital	57.0	North America	Open	\$454.0	Oil & gas

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 58 natural resources fund families received Performance Scores.

#### Private debt\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	VSS Structured Capital	VSS Capital Partners	94.1	North America	2021	\$530.0	Mezzanine
2	Apollo Structured Credit Recovery Fund	Apollo Global Management	78.2	North America	2017	\$2,502.0	Distressed debt
3	Davidson Kempner Long-Term Distressed Opportunities Fund	Davidson Kempner	75.6	North America	2023	\$2,999.0	Distressed debt
4	BDCM Opportunity Fund	Black Diamond Capital Management	75.0	North America	2021	\$372.4	Distressed debt
5	ABRY Senior Equity	ABRY Partners	72.6	North America	2021	\$247.0	Mezzanine
6	Torchlight Debt Opportunity Fund	Torchlight Investors	72.5	North America	Open	\$2,040.0	Real estate debt
7	Fortress Credit Opportunities Fund	Fortress Investment Group	71.4	North America	2020	\$1,834.7	Distressed debt
8	Armada Mezzanine Fund	Armada Credit Partners	70.4	Europe	2019	\$252.0	Mezzanine
9	Cerberus Institutional Partners	Cerberus Capital Management	69.5	North America	2017	\$4,000.0	Distressed debt
10	Castlelake Aviation	Castlelake	68.5	North America	Open	\$1,600.0	Distressed debt

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 181 private debt fund families received Performance Scores.

### Funds of funds\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	TrueBridge Capital Partners Fund	TrueBridge Capital Partners	91.1	North America	Open	\$750.0	Venture capital
2	Weathergage Capital Investments	Weathergage Capital	88.3	North America	2016	\$100.0	Venture capital
3	Industry Ventures Partnership Holdings	Industry Ventures	77.9	North America	2021	\$575.0	Venture capital
4	SVB Strategic Investors Fund	SVB Capital	75.9	North America	2022	\$1,962.0	Venture capital
5	Union Grove Partners Venture Access Fund	Union Grove Venture Partners	75.3	North America	2016	\$100.0	Fund of funds
6	Fairview Special Opportunities Fund	Fairview Capital Partners	73.8	North America	2015	\$87.2	Venture capital
7	Schroders Capital Private Equity Global Innovation	Schroders Capital	72.6	North America	Open	\$503.4	Fund of funds
8	Pacific Street Fund	Twin Bridge Capital Partners	69.4	North America	2021	\$880.6	Buyout
9	TrueBridge-Kauffman Fellows Endowment Fund	TrueBridge Capital Partners	69.4	North America	2017	N/A	Venture capital
10	StepStone Tactical Growth Fund	StepStone Group	65.5	North America	Open	\$690.0	PE growth/expansion

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 219 FoF fund families received Performance Scores.

### Secondaries funds\*

Rank	Family name	Firm	Performance Score	Family location	Most recent vintage	Last final close (\$M)	Strategy information
1	StepStone VC Secondaries Fund	StepStone Group	95.6	North America	2021	\$2,600.0	Venture capital
2	SG/NMERB Secondary Fund	Siguler Guff & Company	77.2	North America	2016	\$20.0	General
3	NewQuest Asia Fund	TPG NewQuest	76.2	Asia	Open	\$1,000.0	General
4	Industry Ventures Special Opportunities Fund	Industry Ventures	70.9	North America	2016	\$200.0	Venture capital
5	Fort Washington Private Equity Opportunities	Fort Washington Capital Partners	70.8	North America	Open	\$225.0	GP-led
6	AlpInvest Secondary Investments	AlpInvest Partners	69.2	Europe	Open	\$8,775.0	General
7	Industry Ventures Secondary Fund	Industry Ventures	69.1	North America	Open	\$850.0	Venture capital
8	Hollyport Secondary Opportunities Fund	Hollyport Capital	64.4	Europe	2022	\$2,200.0	General
9	Ardian Secondary Fund	Ardian	61.7	Europe	2018	\$19,000.0	General
10	RCP Secondary Opportunity Fund	RCP Advisors	60.3	North America	Open	\$400.0	General

Source: PitchBook • Geography: Global

\*As of December 31, 2022

Note: A total of 62 secondaries fund families received Performance Scores.

## Going beyond the top quartile

Private markets have seen a surge in assets under management, as returns have historically been favorable to public markets. Survey results across the industry, <u>as well as our own forecasts</u> for private capital assets under management, suggest that more and more investors plan to increase their allocations to private markets over the long term. However, wading through the thousands of active private capital fund managers can be a daunting task even for seasoned LPs. Despite the maturation of the industry, performance dispersion across managers has remained wide relative to other asset classes. That means industry-average returns are rarely achieved, especially when allocators typically select only a handful of managers per year. Consistently getting the manager selection process wrong can be quite painful.

Evaluating a manager's track record is a helpful input to the mosaic of manager due diligence, but the framework commonly used by allocators is quite blunt. Traditional track record analysis entails the bucketing of a manager's funds into percentile rankings (often quartiles) based on a variety of measures, such as IRR, distributions to paid-in (DPI) capital, public market equivalents (PMEs), and more.<sup>2</sup>

Take, for example, the benchmarking of a manager's prior funds using reported IRRs. An LP's research analyst will gather those fund IRRs as well as the IRRs of each fund's peer group across the asset class. Peer groups are often defined as the vintage and fund type of the fund being compared. The vintage is an important parameter given the locked-up, finite investment period of closedend private funds. Funds calling down committed capital during the peak of an economic cycle should not be unfairly compared with funds investing during the start of the next upcycle. Therefore, a 2005 buyout fund operated by the manager in question will be compared against other 2005 buyout funds.

Across the family of buyout funds managed by the GP, the research analyst ranks each fund's IRR performance against the quartile cutoff points of the peer groups serving as the benchmark. This exercise then provides a quartile ranking for each fund and allows for comparison between fund managers. Top managers are often those described as being in the top quartile (that is, the top 25%) of fund returns when compared with funds of similar vintage years. Some consistency rankings place managers into a scoring system based on the average quartile of their funds over a specified time frame.

#### Hypothetical fund family comparison

		Fund 1	Fund 2	Fund 3	Average
Fund family A	Vintage	2012	2014	2018	N/A
	IRR	13.0%	18.0%	8.0%	13.0%
	Quartile	2	1	4	2.33
	Vintage	2013	2016	2019	N/A
Fund family B	IRR	11.0%	9.0%	19.0%	13.0%
	Quartile	3	3	1	2.33

The problem with this approach is that it lacks nuance. The table above compares two hypothetical GPs. An LP is considering making an investment into each GP's fourth fund in their respective fund family and is comparing the track record of the two managers' prior funds. The quartile comparisons are an interesting starting point, but they clearly cannot tell us which manager has had the superior past performance. Unanswered questions remain:

#### How do you compare the managers' consistency?

One common measure, average quartile ranking, is the same for each fund family at 2.33, so that is not particularly helpful. Manager A has had two funds in the top two quartiles, but the most recent fund is in the bottom quartile. Interpreting the aggregate results presents challenges.

#### Manager B has a recent top-quartile fund, but it also came in the youngest vintage across the six funds, so can we trust that is truly how the fund will end up?

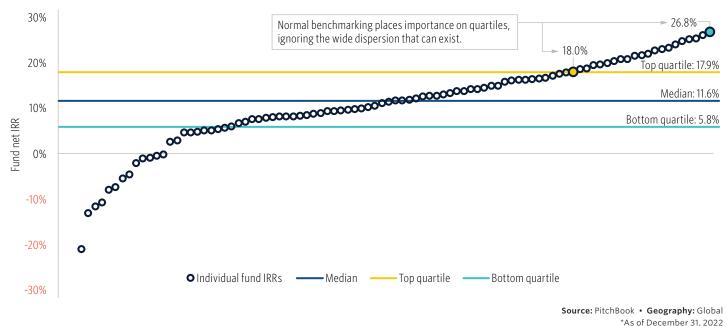
IRRs of young funds are especially volatile from one reporting period to the next, with many funds ending up in a different quartile from where they started.

### Being a top-quartile fund is great, but how high has it jumped the hurdle?

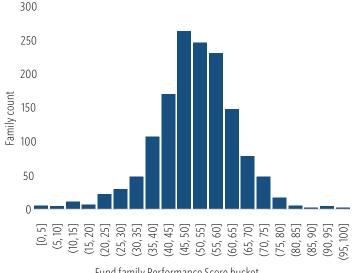
As shown in the top chart on the following page, the dispersion of IRRs within quartiles is material and will lead to large differences in the economic returns experienced by LPs. More granular percentile rankings are certainly possible, but the inherent flaw remains in the rigidity of this approach.

2: Our quarterly Benchmarks report series includes thousands of these data points and more across vintage years, fund types, and geographies.

### Dispersion of IRRs in the 2008 buyout fund cohort\*



### Dispersion of fund family Performance Scores across all strategies\*



Fund family Performance Score bucket

Source: PitchBook • Geography: Global \*As of December 31, 2022

To help answer these questions, we are launching Manager Performance Scores as an alternative to the standard practice of "quartiling," one that better incorporates the wide dispersion of returns experienced and that allows for objective comparisons between peer families that have divergent fund vintages. The goal is to provide a standardized, single quantitative metric of a fund family's historical returns. The Scores are calculated in four key steps: **1. Benchmark selection:** Constructed by combining a peer group of funds based on:

a. Fund classification (private equity, venture capital, real estate, and so on)

b. Vintage year +/- one year. The three-year window is utilized to improve data counts of peer group comparisons with funds actively investing within a similar window. The higher data counts reduce outsized impact from outliers.

- **2. Fund score calculation:** The fund's most recent IRR is subtracted from the median IRR of the peer group created in step 1. We normalize the excess IRR using a modified Z-score, which is less affected by outliers than traditional Z-scores.
- **3. Weight assignment:** Each fund in a fund family with a Score is assigned a weight based on its age, realized distributions, and the deviation of the fund IRR from its benchmark.
- **4. Family score calculation:** We calculate the weighted average scores for funds in the family. We then convert the family score to a 0-100 scale, with 50 representing a neutral performance (neither beating nor losing to its benchmarks).

Our accompanying technical documentation goes into greater detail on the methodologies used to calculate the Performance Scores. Interested readers are encouraged to reach out to <u>pbinstitutionalresearch@pitchbook.com</u> to provide feedback or learn more.

## Limitations and disclaimers

Despite their advantages, PitchBook's Manager Performance Scores have several limitations to note:

- "Historical performance is not a guarantee of future results"; this oft-mentioned refrain applies to any and all past performance evaluation tools, not just our Performance Scores.
- Data availability will limit how comprehensive the Scores are. In order to be included, we require families to have at least two funds that are at least five years in age and have available performance details. Emerging managers, or fund families for which we have not captured the requisite information, will be missed in our rankings. Again, this is not unique to the Performance Scores, as all private fund peer group benchmarking is opaque and incomplete.
- We will continue to update historical and current performance information. This can shift the Performance Scores materially.

- The strategy and/or management of a GP's fund family can change over time, so further diligence is necessary to determine if the historical track record analysis is appropriate for subsequent funds.
- Even with adjustments made in the PitchBook Manager Performance Scores methodology, IRR can be a flawed measure of fund performance and does not take into consideration any risks the GP may be taking, so LPs should always consider a basket of metrics in the diligence process in addition to a qualitative evaluation.

This report is by no means an endorsement of any managers included, nor are the Performance Scores to be used as indications of future performance. The Scores are an objective measure of past performance and are to be used for informational purposes. PitchBook takes great effort to ensure the quality of all datasets, but inevitably revisions occur, and new data will be added that can materially impact the rankings in the future.

## **Additional research**

### Quantitative research



Global PitchBook Benchmarks (as of Q4 2022)

Download the report <u>here</u>



### Q4 2022 PitchBook Private Capital Indexes

Download the report <u>here</u>



Q2 2023 Analyst Note: Are "ESG Investors" Underperforming?

Download the report <u>here</u>



2022 Allocator Solutions: Taking the "Demons" Out of the "Denominator Effect"

Download the report <u>here</u>



Q2 2023 Quantitative Perspectives: Pumping the Brakes

Download the report <u>here</u>

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### Q1 2023 Global Private Market Fundraising Report

Download the report <u>here</u>