

Measuring Manager Skill: Q&A with Arjun Jayaraman

Performance, Downside/UpSide Capture, Batting Average

June 2025

Risk Lens – our free, cloud-based investment analysis tool – helps advisers and asset managers unlock portfolio risk and manager skill. In a recent Q&A, “Risk Metrics That Matter,” we discussed key risk metrics – predicted volatility, tracking error, and beta and why they matter. In this Q&A, Causeway quantitative portfolio manager Arjun Jayaraman joined Turner Swan, chief operating officer of Risk Lens, to discuss some of our manager skill tools, including past active performance, downside capture, upside capture, and batting average.

Turner Swan: First, let’s discuss the most obvious and controversial measurement of manager skill – past performance – and how the *Performance Report* feature in Risk Lens works.

Arjun Jayaraman: Past performance is indeed a controversial measurement of manager skill and, by itself, is certainly no guarantee of future performance. Still, everyone evaluating manager skill will look at past performance as a relevant and key due diligence item among other factors. And I think analysts would generally agree that consistent poor past performance can suggest manager issues that should be researched.

We believe it is most helpful to evaluate past performance in context, both compared to the relevant benchmark index and peer funds. Risk Lens does both, comparing a manager’s returns to the benchmark selected by the user; that is, “active return,” and enabling users to compare funds to competitors. For example, Figure 1 below shows the active return of Causeway International Small Cap Fund – Institutional Class shares (CIISX) compared to the MSCI ACWI ex-USA Small Cap Index (Small Cap Index). “5-year 5.7%” means the average annual total return of CIISX outperformed

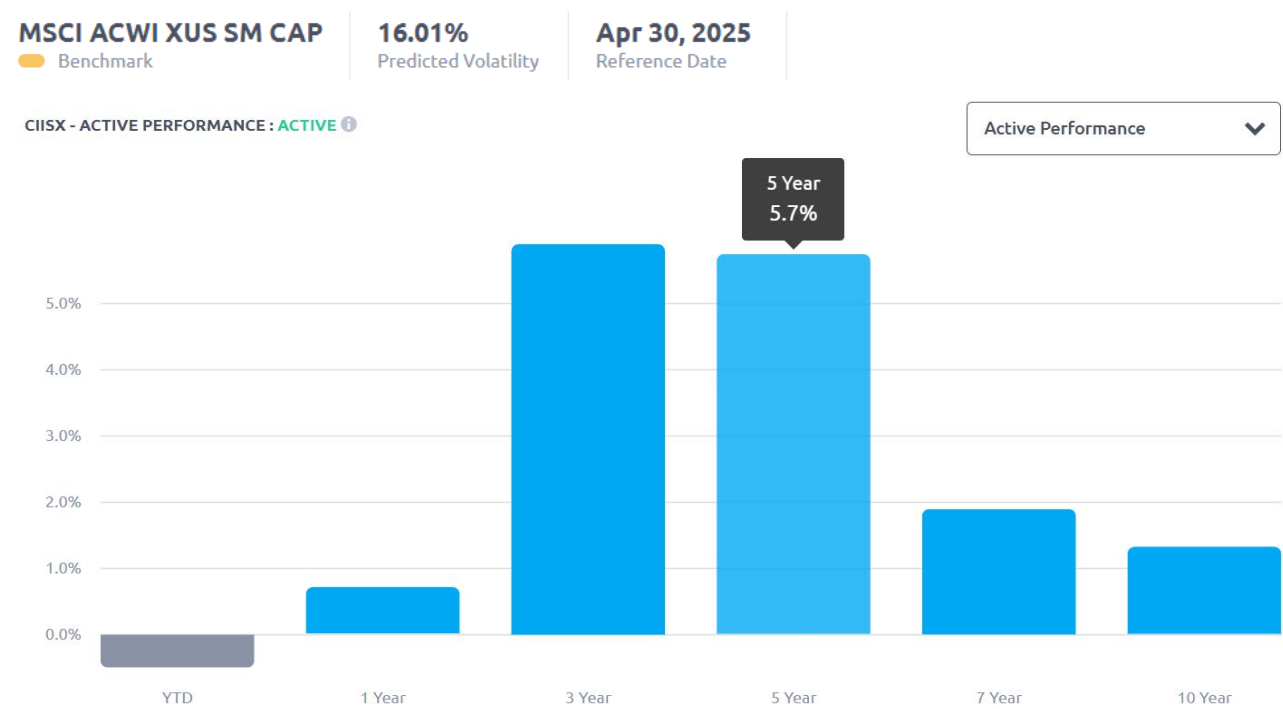
Key insights

- Measuring the skill of portfolio managers is critical to building quality investment portfolios for clients. Key metrics include:
 - past performance
 - downside capture
 - upside capture
 - batting average
- These metrics compared to benchmarks and peers are readily available in Causeway Risk Lens and discussed here.

the Small Cap Index by 5.7% annually for the five years ended April 30, 2025. We think most advisers want to see active returns as one of the key due diligence elements they evaluate.

For a fund or ETF selected by the user, Single Fund Performance Report shows active performance for trailing periods through ten years.

FIGURE 1: SINGLE FUND PERFORMANCE REPORT



For illustrative purposes only. Past performance is no guarantee of future performance. Source: Causeway Risk Lens. See Important Disclosures at end of presentation.

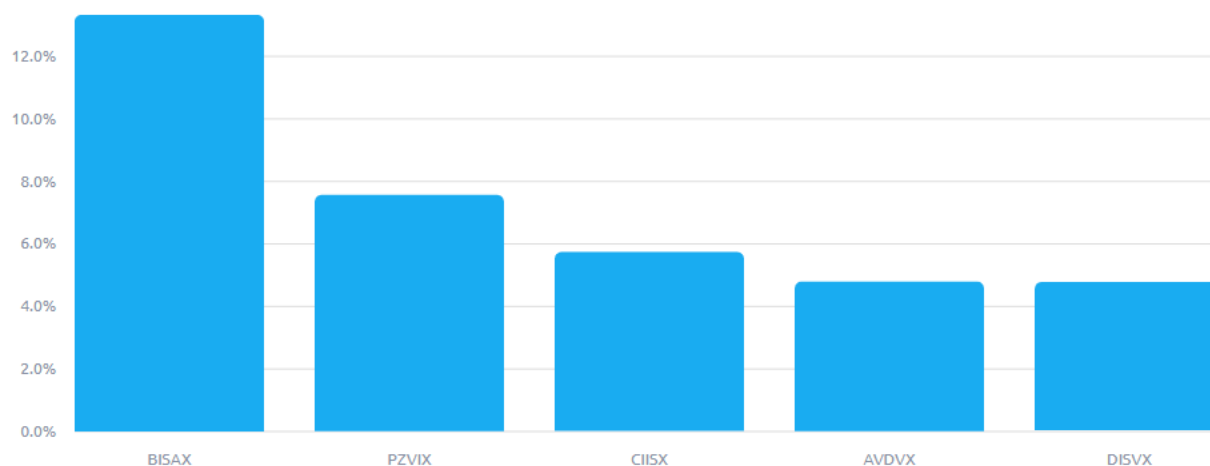
We also know that advisers and asset managers need to compare the performance of multiple funds quickly and easily. As shown in Figure 2 below, Risk Lens Performance Report can compare the active performance of multiple funds in easy-to-read graphs.

Risk Lens Comparative Fund Performance Report compares active performance for multiple funds for trailing periods through ten years.

FIGURE 2: COMPARATIVE FUNDS PERFORMANCE REPORT

PERFORMANCE - 5 YEAR : ACTIVE ⓘ

Performance - 5 Year ▼



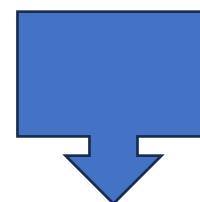
ACTIVE PERFORMANCE ⓘ

PERIOD	BISAX	PZVIX	CIISX	AVDVX	DISVX
YTD	10.8%	0.5%	-0.5%	6.1%	9.8%
1 Year	23.2%	-1.1%	0.7%	8.1%	9.8%
3 Year	21.8%	7.2%	5.9%	5.6%	6.8%
5 Year	13.3%	7.6%	5.7%	4.8%	4.8%
7 Year	5.7%	7.6%	1.9%	4.8%	0.8%
10 Year	2.9%	7.6%	1.3%	4.8%	0.6%

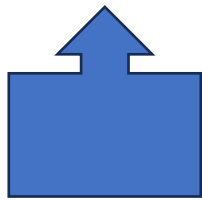
For illustrative purposes only. Past performance is no guarantee of future performance. Top 5 funds by annualized 5-year active performance versus Small Cap Index as of 4/30/25. Source: Causeway Risk Lens. See Important Disclosures at end of presentation.

TS: Two other skill measurements in Risk Lens are “downside capture” and “upside capture.” These assess whether a manager has beaten the benchmark during down markets and up markets.

AJ: Basically, yes. Downside capture measures a manager’s performance in down markets. Here, a value under 100 is good. This indicates the manager lost less than the benchmark, net of expenses, during periods of negative returns for the benchmark.



To calculate downside capture, we take the manager's returns each month during the specified period when the benchmark return was negative. We calculate the arithmetic average of the returns of the manager and the benchmark during those months. We divide the manager's average return by the benchmark's average return and then multiply that by 100. An investment manager who has a downside capture less than 100 has outperformed the index during the down market. For example, a downside capture of 75 indicates that the manager's portfolio declined only 75% as much as the index (*i.e.*, outperformed the index by 25%) during the period.



Conversely, upside capture measures a manager's performance in up markets over a measurement period. An upside capture value **over 100** is good. This means the manager outperformed the benchmark, net of expenses, during periods of positive returns for the benchmark.

To calculate upside capture, we similarly take the manager's returns each month during the specified period when the benchmark return was positive. We calculate the arithmetic average of the returns of the manager and the benchmark during those months. We divide the manager's average return by the benchmark's average return and then multiply that by 100.

An investment manager who has an upside capture greater than 100 has outperformed the index during the up markets over the period. For example, an upside capture of 120 indicates that the manager outperformed the market by 20% during the specified period.

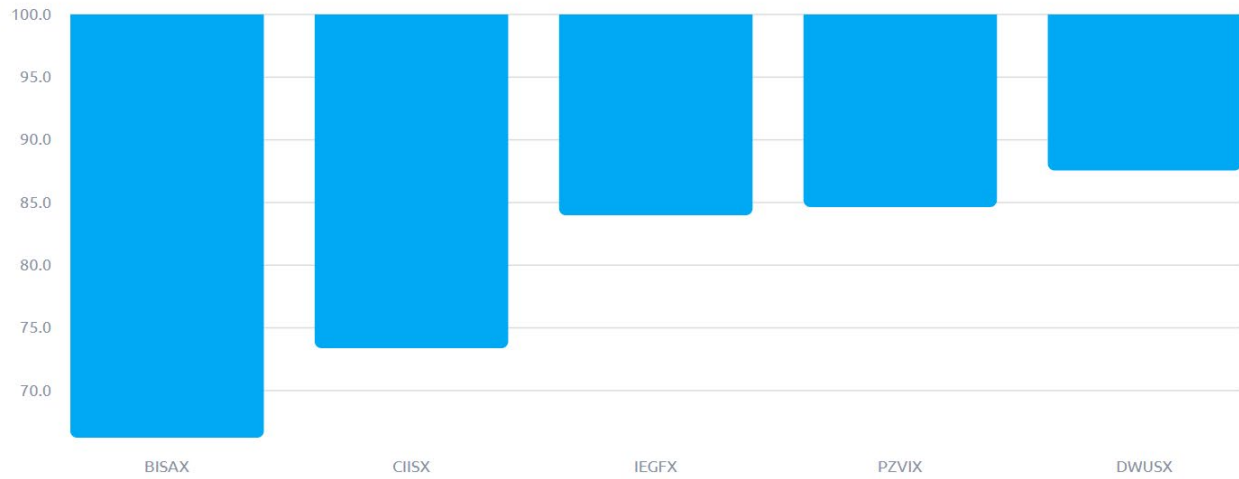
Again, as illustrated in Figures 3 and 4, Risk Lens allows users to compare multiple managers' downside capture and upside capture scores.

Risk Lens Fund Screener can screen a benchmark for top funds based on downside capture for trailing periods through ten years.

FIGURE 3: COMPARING DOWNSIDE CAPTURE

DOWNSIDE CAPTURE - 5 YEAR : ACTIVE

Downside Capture - 5 Year ▼



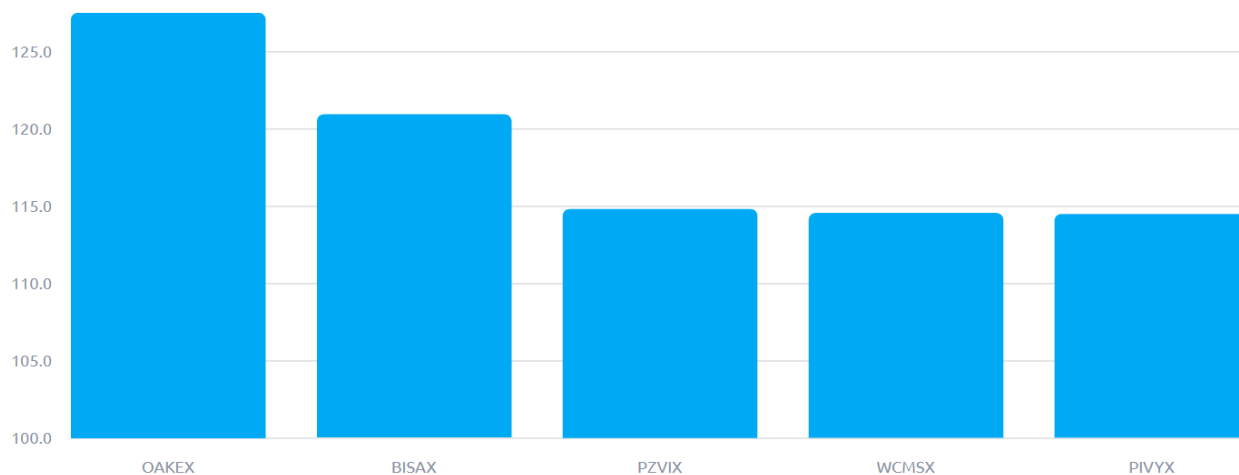
For illustrative purposes only. Past performance is no guarantee of future performance. Top 5 funds by 5-year downside capture versus the Small Cap Index as of 4/30/25. Source: Causeway Risk Lens. See Important Disclosures at end of presentation.

Fund Screener can also screen benchmarks for top funds based on upside capture.

FIGURE 4: COMPARING UPSIDE CAPTURE

UPSIDE CAPTURE - 5 YEAR : ACTIVE

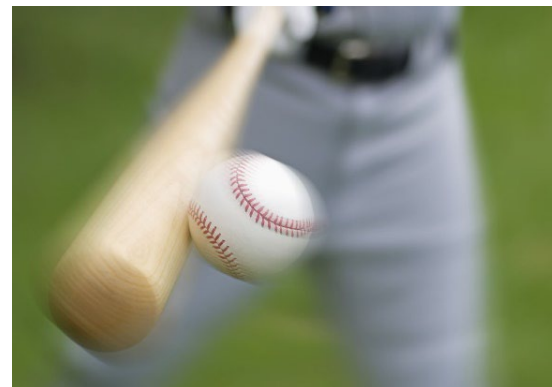
Upside Capture - 5 Year ▼



For illustrative purposes only. Past performance is no guarantee of future performance. Top 5 funds by 5-year upside capture versus the Small Cap Index as of 4/30/25. Source: Causeway Risk Lens. See Important Disclosures at end of presentation.

TS: To further measure manager skill, Risk Lens also shows a fund's "batting average." Can you discuss this metric?

AJ: Batting average is a popular and useful measure of manager skill. It divides the number of months in which a manager beat or matched the benchmark index by the total number of months in the period. Just like in baseball, a manager who equaled or outperformed the benchmark every month in a given period would have a batting average of 1.000. Meeting or beating the benchmark half the time would earn a batting average of 0.500. Note that in Risk Lens, the manager performance used for batting average is calculated net of expenses.



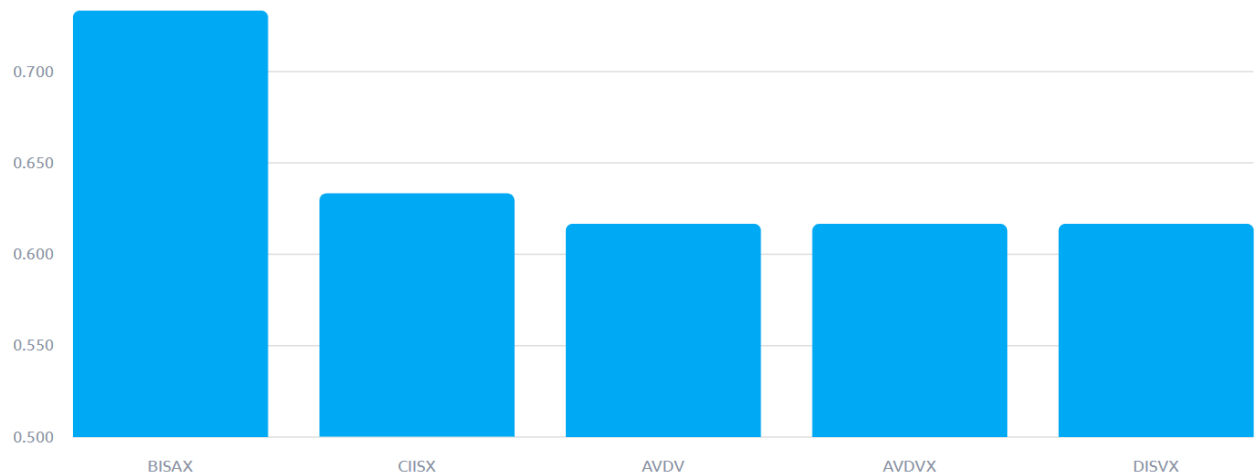
Investors are looking for managers who can beat the index and generate "alpha." Managers with higher batting averages have more consistently beaten the index than peers with lower batting averages over a measurement period. It's a skill indicator, and especially useful when comparing multiple managers. For example, the graphs in Figure 5 below illustrate Risk Lens' *Batting Average* screen, showing the top five equity funds by batting average 5-year percentile compared to the Small Cap Index as of April 30, 2025.

Fund Screener can screen benchmarks for top funds based on batting averages through ten-year trailing periods.

FIGURE 5: COMPARING BATTING AVERAGES

BATTING AVERAGE - 5 YEAR : ACTIVE

Batting Average - 5 Year



BATTING AVERAGE

PERIOD	BISAX	CIISX	AVDV	AVDVX	DISVX
3 Year	<div></div> 0.833	<div></div> 0.639	<div></div> 0.639	<div></div> 0.667	<div></div> 0.694
5 Year	<div></div> 0.733	<div></div> 0.633	<div></div> 0.617	<div></div> 0.617	<div></div> 0.617
10 Year	<div></div> 0.525	<div></div> 0.575			<div></div> 0.533

For illustrative purposes only. Past performance is no guarantee of future performance. Top 5 funds by 5-year batting average versus the Small Cap Index as of 4/30/25. Source: Causeway Risk Lens. See Important Disclosures at end of presentation.

TS: Arjun, thank you for explaining some of Risk Lens’ key manager skill features.

Key insights

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To sign up for Risk Lens, go to analytics.causewaycap.com.

Important Disclosures

About Risk Lens: Causeway manages global equities, fusing fundamental and quantitative analysis since 2001 and manages \$55.2 billion (at 3/31/25). In 2013, Causeway launched Risk Lens to bring the power of its risk model to clients, introducing the easy-to-use web application in 2019. Risk Lens covers approximately 3,700 U.S.-registered equity mutual funds and ETFs, approximately 9,500 share classes, and 37 benchmarks across all major geographies.

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The performance data quoted represents past performance. Past performance does not guarantee future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth less than their original cost and current performance may be lower than the performance quoted. Returns greater than one year are average annual total returns. Total returns assume reinvestment of dividends and capital gains distributions at net asset value when paid. Active return is the difference between a fund's return and the benchmark's

return. The average annual total return as of 3/31/25 for CIISX was 5.6%, 18.0%, 7.5%, and 7.9% for the past one-year, five-year, ten-year, and since inception (10/20/14) periods, respectively. For performance as of the most recent month-end, call 1-866-947- 7000. CIISX investment performance reflects fee waivers. In the absence of such fee waivers, total return would be reduced. Total annual fund operating expenses for CIISX (Institutional Class shares) are 1.21% before and 1.10% after investment adviser fee waivers. Total annual fund operating expenses for CVISX (Investor Class shares) are 1.44% before and 1.35% after investment adviser fee waivers. The waivers are contractual and in effect until 1/31/2026. Investor Class shares charge up to a 0.25% annual shareholder service fee.

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