
Manager Selection Quant Screens: The Case of Managers' Track Records

Does a manager's past performance matter?

By Dan Golosovker, Dan O'Donnell, Amar Patel, Dane Rook

1. Introduction

One of the main reasons investors allocate capital to private markets is to enhance returns relative to earning risk premia from traditional asset classes, such as stocks and bonds. However, earning those higher returns requires picking a great manager. A top-quartile manager has earned a 1.65 KS-PME,¹ whereas picking a median manager would have only earned 1.15 and picking a bottom quartile manager generated a ratio of 0.65 KS-PME. These are large relative gaps in performance; however, picking winners isn't easy. Despite conventional assumptions, winners don't necessarily keep winning, as we show. Additionally, through our analysis, we learned that a manager's track record isn't as material as presumed, based on the most recent information an investor has at their time of choice — manager selection hindsight is 20/20.

2. Analysis

In Figure 1, we illustrate the large gap between top- and second-quartile buyout and venture managers over third- and bottom-quartile performers. The metric used in this analysis is the KS-PME, which can be thought of as a market-adjusted performance ratio over the S&P 500 and is defined in the appendix. A KS-PME of greater than 1 indicates that the investment is outperforming the S&P 500. Top- and second-quartile managers showed incremental outperformance of the S&P 500, while the third- and bottom-quartile managers underperformed. Additionally, the gap between the top and bottom quartile is extremely wide, a full 100% in relative performance.

¹ Market-adjusted performance ratio, based on an investment's performance relative to an index. Performance is net of fees.

**Figure 1: Summary KS-PME by quartile: buyout & venture capital funds (2000-2023)**

	Buyout		Venture Capital	
	Median	Average	Median	Average
Top Quartile	1.65	1.81	2.42	4.17
Second Quartile	1.20	1.22	1.31	1.33
Third Quartile	0.93	0.95	0.92	0.90
Bottom Quartile	0.65	0.60	0.56	0.53

PME > 1.00 → Fund outperformed S&P 500

PME < 1.00 → Fund underperformed S&P 500

Source: Addepar Research

Picking the right manager can yield outsized returns, while at the same time, the opportunity cost of underperformance is significant. Historically, top-quartile buyout and venture funds have returned 13% and 16% in annualized excess returns over the market, respectively, while the median fund has returned 2% (buyout) and 1% (venture) in excess of the market.² Consequently, manager selections are among the most impactful decisions that investors make.

In this paper, as well as others in this series, we focus on identifying quantitative consistent (and empirically validated) indicators of performance that work — and debunking some conventional wisdom that does not. Both are extremely useful for improving manager selection. We also share evidence that managers' prior track records are not as useful in making such decisions as is conventionally presumed. As we show in our analysis below, past performance is typically a poor indicator of future returns.

Historically, allocators have leaned heavily on prior track records to guide the manager-selection process. For many years, the research literature has supported the idea that — while not a perfect guide — past performance has offered important predictive power. Harris et al (2023) summarized this approach to manager selection:

² Excess returns reported are the median IRR spread, which is calculated by taking the actual fund IRR and subtracting the Long Nickels Public Market Equivalent (LN-PME), which is the theoretical return in the S&P 500 based on the actual cash flows of the private investment.

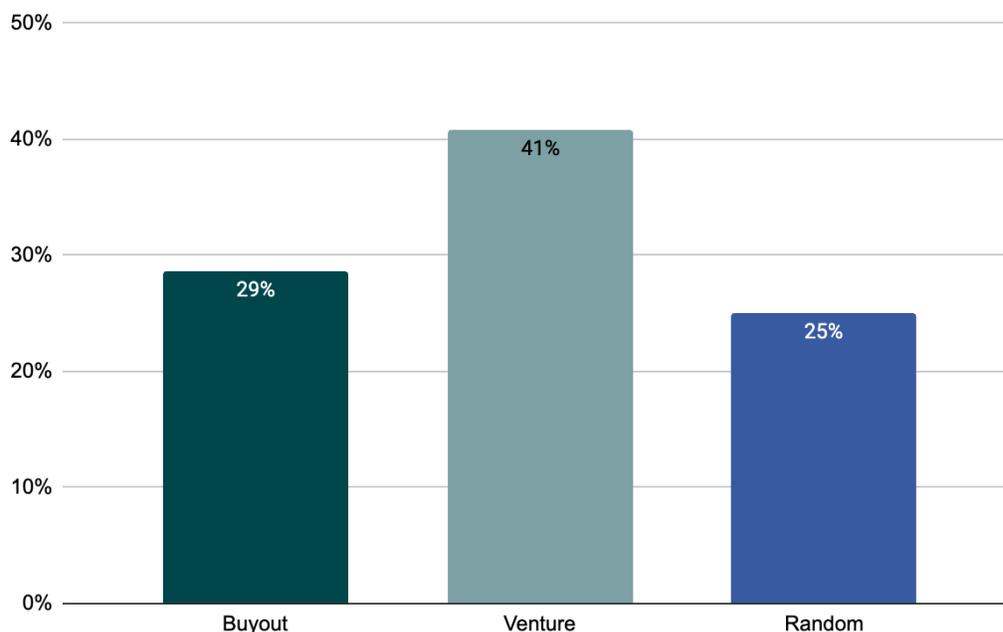


It has long been conventional wisdom for investors in private equity to choose funds run by managers who have performed well in the past, particularly so-called top quartile funds, while avoiding first-time funds. **This conventional wisdom is based on the belief that performance in private equity persists across successive funds** — typically organized as limited partnerships — with the same manager (the General Partner or “GP”).

While previous academic research, studying pre-2000 data, has shown performance persistence, as we shall demonstrate, there is little evidence of persistence after 2000, a finding that is consistent with those by Harris et al. (2023).

As with other academic studies on this topic, in this work, performance persistence based on managers’ track records is measured by the frequency at which managers who generate top-quartile performance with Fund N also generate top-quartile performance with Fund N+1. The KS-PME is used to measure performance. Figure 2 summarizes fund-to-fund persistence as measured by this methodology for buyout and venture funds using the Addepar data set.³

Figure 2: Fund-to-fund top-quartile persistence → traditional methodology (2000-2023)



Source: Addepar

³ Detailed data, analyses and comparisons to other studies can be found in the appendix.



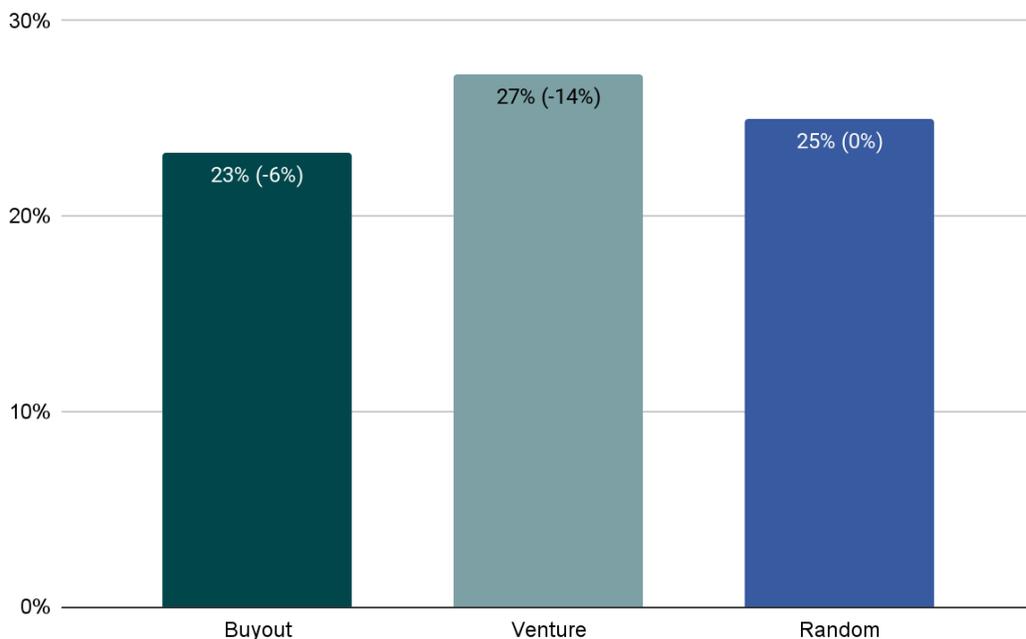
As Figure 2 illustrates, the chances that a top-quartile fund was also in the top quartile in the previous round is 29%, or little more than a random draw (each quartile has an equal chance of 25%). However, for venture funds, this probability rises to 41%, a value that is quite unlikely to have occurred randomly. In other words, there is some validity in conventional wisdom for venture funds (certainly enough to add to manager search criteria), but little evidence to suggest this for buyout funds.

One potential criticism of the analysis above is that it assumes a degree of hindsight vision. In many cases, investors do not have the knowledge of the full previous fund performance when tasked with choosing whether to invest in a subsequent round. Figure 3 illustrates the analysis adjusted for only including information that is available at the time of the investment opportunity. Interestingly, the modest track-record advantage we witnessed in the previous analysis dissipates to probabilities that are similar to a random draw for venture funds, while buyout funds' probabilities remain roughly consistent.⁴ This analysis illustrates that past performance is not a practical trade signal because the fund investment decisions have to be made before one has adequate performance information.

⁴ We can either focus the charts on the key data points or be more descriptive of everything in these charts.



Figure 3: Fund-to-fund top-quartile persistence → Investable track-record analysis (2008-2023)



Note: (+X%) represents the difference from traditional methodology (Figure 2)

Source: Addepar

Interestingly, the analyses in Figures 2 and 3 are consistent, both quantitatively and qualitatively, with findings from Harris et al. (2023). In their study, they showed that, although there was some persistence in manager skill prior to 2001, it no longer seems to be the case. The conventional wisdom used to have merit, which is perhaps why it is conventional wisdom — albeit much less valid today.

Does this analysis translate to other markets?

The investigation into the persistence of actively managed mutual funds has been a favorite topic of academic literature, dating back several decades, with generally mixed results.⁵ Rather than revisiting the mutual fund literature, we triangulate our analysis by analyzing the signal value of manager track-records in hedge funds. When testing the value of a signal, we believe that, in

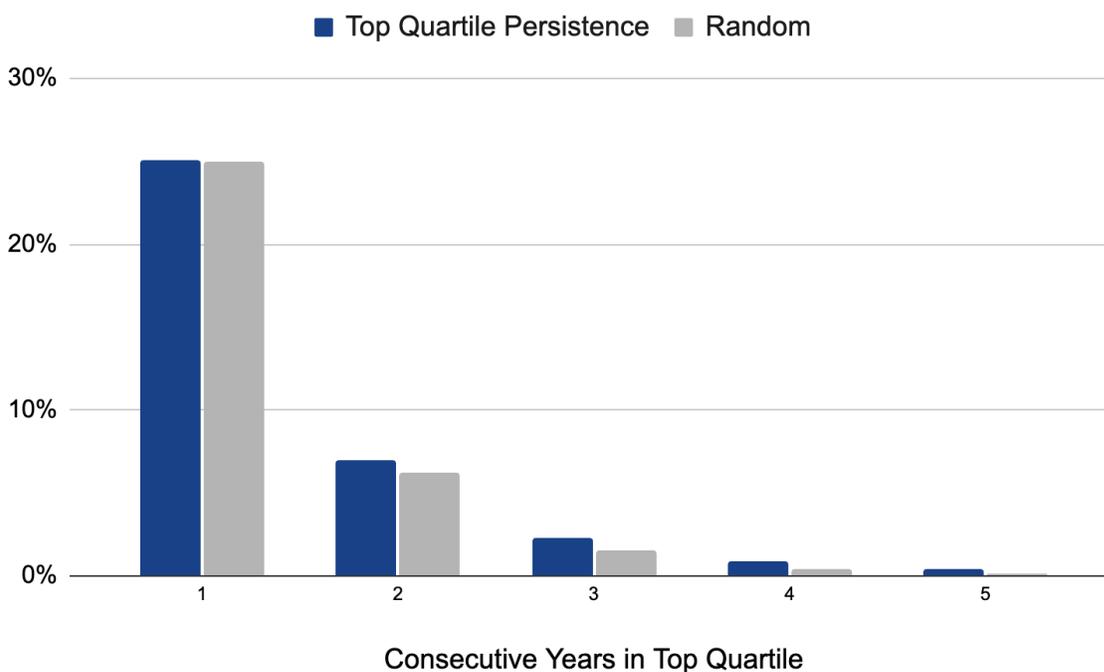
⁵ Hendricks, Patel and Zeckhouser (1993) showed that the performance of growth-oriented mutual funds persists in the short-term (one year), though later Carhart (1997) demonstrated that accounting for the momentum effect removes this “hot hands” effect. Busse, Goyal and Wahal (2006) found evidence of persistence in institutional investment management portfolios across asset classes, but later (in 2010) determined that evidence for persistence in equity institutional products is reduced to modest after controlling for the Fama-French three factors + momentum.



addition to historical back-testing, testing within other or analogous markets and sectors adds incremental credibility to the analysis.

Figure 4 shows the probability of a hedge fund manager being a top-quartile manager in consecutive years. We compare this against a completely random process (four quartiles imply a 25% chance). **As illustrated, there appears to be very slight persistence in managers appearing in subsequent years, or slightly better than random. Because we do not adjust for survivorship bias in this analysis, one can imagine that the odds can only decrease with this additional analytical tweak.**

Figure 4: Hedge fund managers' probability of having top-quartile returns (2000-2023)



Source: Addepar

At Addepar, we foundationally believe that systematic and data-driven decision-making produces better portfolio outcomes over time. In this paper, we have shown evidence on the reliability of managers' track records using the Addepar cashflow dataset. Our evidence also corroborates previous academic findings, which show dissipating persistence after 2000.⁶ We have additionally triangulated against the adjacent hedge fund market and found similar conclusions. At first order, we see that evidence that supports track records is not a reliable predictor in buyout funds, and it

⁶ See Harris et al.'s paper "Has Persistence Persisted in Private Equity?"



is, at best, a modest trading signal for venture funds and not reliable for hedge funds. These findings reinforce the need to identify other indicators of future performance, which will be the focus of subsequent research pieces.

We regularly publish reports on investment trends we see across high-net-worth investors. Please reach out to us at research@addepar.com if you're interested in discussing these topics.



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Authors

Dan Golosovker, Head of Applied Research at Addepar (dan.golosovker@addepar.com)

Dan O'Donnell, Private Placement Director at Addepar (dan.odonnell@addepar.com)

Amar Patel, Research Analyst at Addepar (amar.patel@addepar.com)

Dane Rook, Head of Research at Addepar (dane.rook@addepar.com)



Appendix

Definitions

Performance persistence: The frequency at which managers who generate performance in a quartile of a peer universe with Fund N also generate the same quartile performance with Fund N+1. Statistically significant persistence in the top quartile would be top-quartile to top-quartile frequency in excess of the 25% that would result from assigning quartile values via a purely random draw. Where persistence measurements are presented as percentages below, they answer the question: “How many managers in the top quartile of this cohort were also in the top quartile with their prior fund?”

Public market equivalent (“PME”): A collection of performance measures used to compare a private investment directly to a public market benchmark index. The PME metric used in this analysis was devised by Steven Kaplan and Antoinette Schoar (KS-PME) in Kaplan and Schoar (2005).

- The KS-PME method “invests” the cash outlays to a private markets fund at the total return of a reference index (in this case, the S&P 500) and compares the resulting value to the actual return of the fund investment. The output is a measure of the wealth created (or destroyed) relative to an investment in the reference index and thereby answers the question “By how much did a private capital fund investment outperform (or underperform) its public market benchmark?” A fund with a PME of greater than 1.00 outperformed the reference index and created incremental wealth. A PME below 1.00 represents underperformance, where investors would have been better off in the public index.
- For example, assume that a private equity fund “ABC Fund I” invested \$100 million and returned \$200 million to limited partners, while that same \$100 million invested in the S&P 500 over the same period of time would have grown to \$150 million.
- The KS-PME value for ABC Fund I would be $1.33 \text{ } \$200\text{m} / \$150\text{m} = 1.33$. If ABC Fund II also returned \$200 million on \$100 million of invested capital, but \$100 million in the public index would have grown to \$250 million during that time frame, the KS-PME value for ABC Fund II would be $0.80 \text{ } \$200\text{m} / \$250\text{m} = 0.80$



Data Tables

Figure 5: Fund-to-fund track-record analysis → traditional methodology vs. Harris et al. (2023)

					<u>Buyout, Post-2000 Funds: Harris et al (2023)</u>						
		<u>Buyout:</u>									
Previous	Current Round Quartile				Previous	Current Round Quartile					
Round Quartile	1	2	3	4	Round Quartile	1	2	3	4		
1 (-)	29%	26%	27%	19%	1	34%	25%	26%	16%		
2 (-)	17%	29%	32%	22%	2	22%	21%	36%	20%		
3 (-)	19%	33%	21%	26%	3	22%	35%	25%	18%		
4 (-)	21%	31%	23%	25%	4	14%	22%	24%	41%		

					<u>Venture, Post-2000 Funds: Harris et al (2023)</u>						
		<u>Venture:</u>									
Previous	Current Round Quartile				Previous	Current Round Quartile					
Round Quartile	1	2	3	4	Round Quartile	1	2	3	4		
1 (***)	41%	28%	15%	17%	1	44%	26%	19%	10%		
2 (*)	30%	31%	25%	14%	2	23%	28%	30%	20%		
3 (-)	21%	21%	26%	32%	3	14%	37%	31%	18%		
4 (*)	16%	20%	31%	33%	4	8%	23%	27%	42%		

Harris et al. (2023) are results from the publication.

Sources: Addepar, Harris et al. (2023)

For each of the transition probabilities from the previous round quartile to the current round quartile, we ran a Chi-squared goodness of fit test against the null hypothesis of random transitions.

The asterisks *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. There is no statistically significant evidence to suggest that the transition probabilities in Buyout are not purely random, while in Venture we see evidence, particularly for funds in the top previous round quartile (significant at the 1% level).



Figure 6: Fund-to-fund track-record analysis → investable track record vs. Harris et al. (2023)

					<u>Buyout, Post-2000 Funds: Harris et al (2023)</u>				
<u>Buyout:</u>									
Previous	Current Round Quartile				Previous	Current Round Quartile			
Round Quartile	1	2	3	4	Round Quartile	1	2	3	4
1 (-)	23%	22%	32%	23%	1	24%	26%	26%	24%
2 (-)	19%	35%	30%	17%	2	26%	21%	34%	19%
3 (-)	17%	39%	22%	22%	3	23%	26%	30%	22%
4 (-)	37%	16%	16%	32%	4	23%	41%	15%	21%

					<u>Venture, Post-2000 Funds: Harris et al (2023)</u>				
<u>Venture:</u>									
Previous	Current Round Quartile				Previous	Current Round Quartile			
Round Quartile	1	2	3	4	Round Quartile	1	2	3	4
1 (-)	27%	18%	29%	26%	1	30%	24%	27%	19%
2 (*)	25%	38%	18%	19%	2	24%	34%	23%	19%
3 (**)	38%	20%	30%	13%	3	23%	26%	60%	22%
4 (-)	16%	32%	24%	29%	4	13%	36%	24%	27%

Harris et al. (2023) are results from the publication.

Sources: Addepar, Harris et al. (2023)

For each of the transition probabilities from the previous round quartile to the current round quartile, we ran a Chi-squared goodness of fit test against the null hypothesis of random transitions.

The asterisks *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. There is, again, no statistically significant evidence to suggest that the transition probabilities in Buyout are not purely random. In Venture, we see the statistical significance of the top previous round quartile transitions disappear, while third previous round quartile transitions are significant at the 5% level.



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