Enhancing Private Equity Manager Selection with Deeper Data

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While all institutional investors strive to predict and select top quartile private equity funds, there is a significant cost of missing out on these funds. According to various research studies, the difference between being invested in a top quartile and bottom quartile private equity fund has a significant impact on fund returns,[1] reported at as much as 16.9 percentage points in one study.[2]

What's more, is that achieving top quartile returns is crucial for investors' private equity portfolios to justify their place as a return enhancer relative to other asset classes. From 1980 through 2012, only those funds in the top quartile have produced returns clearly over and above those of public markets when a three-percent illiquidity premium is applied to an index (Exhibit 1, on next page).

The Myths of Gaining Top Quartile Returns

Preferential access to brand name managers is often cited as a common driver in private equity portfolio returns. Investors that have missed out on debut funds, or investors with smaller allocations, often perceive that they are unable to get into these funds and thus capture those returns. However, a recent study by Daniel Cavagnaro, Berk Senoy, Yingdi Wang and Michael Weisbach has busted those myths.[3]

Cavagnaro et al. analyzed a data sample of over 12,000 fund investments made by 630 limited partners (LPs), looking at the distribution of the returns. Their findings suggest that an investor's skill level in fund selection is a more important driver of their returns, than luck or access to managers. An increase of "one standard deviation in skill" leads to a three percentage point increase in

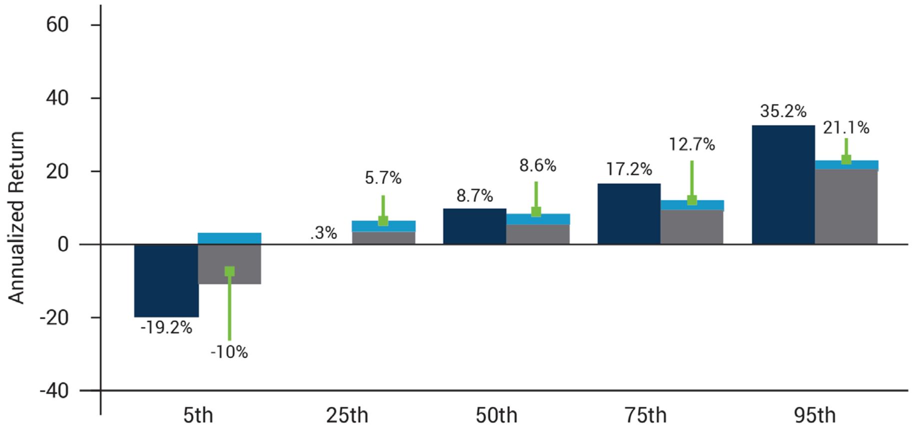


Exhibit 1: Private Equity Results are Highly Dependent on Quality of Manager-Selection Decisions-Jan. 1, 1980 Through Dec. 31, 2012
Source: The Allure of the Outlier, Vanguard, 2015

annual internal rate of returns (IRRs) according to the findings. Simply put, the ability to boost private equity portfolio returns is in the LP's hands.

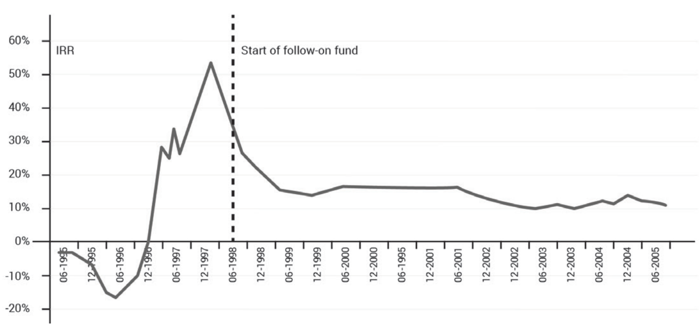
With this finding in mind, eVestment has compiled research, analysis and insights from the institutional investment community to provide valuable information on some of the key factors contributing to a truly skillful private equity manager selection process.

What Can You Do to be More Skillful in Fund Selection?

Realize the Importance of the Unrealized

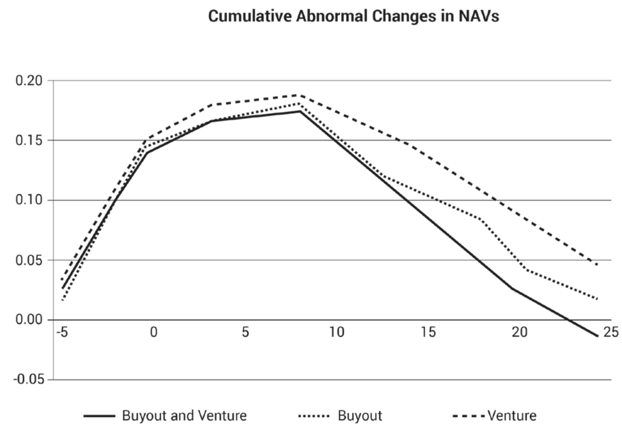
When private equity firms come back to market with a new fund, their track record will be comprised of a combination of realized and unrealized returns. With investors having to make investment decisions based on unrealized performance, investors must assess managers' NAVs with a level of scrutiny.

Figure 1 = IRR Development of an Exemplary US Buyout Fund



This figure shows the development of a U.S. buyout fund's IRR over its lifetime. The fund itself started investing in 1995. Its follow-on fund had its first close in the second quarter of 1998.

Exhibit 2: IRR Development of an Exemplary US Buyout Fund
Source:: How Fair are the Valuations of Private Equity funds? Jenkinson et al., 2013



This figure follows the cumulative abnormal annual changes in the sample fund's valuations around the first close of the follow-on fund for all corporate private equity funds, as well as buyout and venture funds separately.

Exhibit 3: Cumulative Abnormal Changes in NAVs
Source: Jenkinson et al., 2013

Research by Jenkinson, Sousa, and Stucke[4] in 2013 found that while private equity valuations are generally conservative and understate subsequent distributions over the life of a fund, this does not hold true when follow-on funds are being raised. Their research suggests that there is no statistically significant relationship between IRRs reported on fund n – 1 at both four and two quarters before a manager holds a first close on fund n, and the final performance of fund n – 1.

While Jenkinson et al. highlight this using what they even deem to be an extreme example (Exhibit 2) their results suggest that it is "by no means an isolated case" as displayed in the cumulative NAV data (Exhibit 3).

This may not be intentional or artificial NAV inflation by the managers, but could simply be a result of managers choosing to return to market when they can point to a strong track record. Jenkinson, Sousa, and Stucke suggest LPs should carefully consider the weight they put on IRRs reported by managers during fundraising that contain portions of unrealized investments. They suggest using public market equivalent analysis instead of IRR in this evaluation, as their research showed that this increases predictability of future performance significantly. To combat the potential inaccuracies of NAVs at fundraising, eVestment's limited partner clients are increasingly using eVestment Private Markets' What-if Analysis module to model the unrealized element of the portfolio under different scenarios to quantify the potential final performance. More sophisticated clients are also analyzing the NAVs of the unrealized deals at the time of the last fundraising compared with their eventual realized proceeds to gauge the level of NAV realism produced by a manager.

Reconsider Your Re-Ups

Even if a private equity manager can sustain top quartile NAVs through to exit, LPs should consider putting as much scrutiny on a re-investment with this manager as when considering a GP in the second or third quartile with their latest fund: only 19% of buyout funds raised after 2001 that were a successor to a top quartile performer have repeated this level of performance, showing a lack of persistent returns.[5]

This research has also been carried out separately by other groups including McKinsey.[6] Their analysis shows similar results – that top quartile persistence is low and has been steadily decreasing in more recent vintages (Exhibit 4). Interestingly, the only place where performance is persistent is for those producing bottom quartile funds.

It seems many investors understand the importance of thorough due diligence no matter the past relationship. In eVestment's 2018 survey of leading investors and consultants, the average number of days spent on due diligence of a re-up was 21 days, compared with 40 days on a new manager relationship.[7] While a difference is present, part of the shorter time frame may be explainable by the readily-available access to data for an existing relationship as opposed to the process of requesting and preparing data from a new manager relationship.

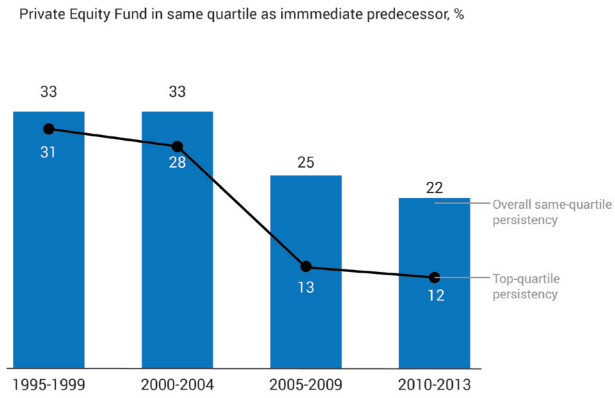
Trust but Verify Performance Numbers

Not all IRRs are created equal, and the majority of investors find this to be a challenge. In a 2018 survey, eVestment found that 61% of investors believe it is difficult to compare one manager's performance to another's on a fair and consistent basis.[8]

The best practice for investors is to use deal-level cash flow data to recalculate manager performance to address this challenge. According to eVestment's survey results, 75% of LPs recalculate manager performance more often than not. This is done in an attempt to ensure performance is calculated on a consistent basis for more accurate comparison, more informed decision making and compliance with fiduciary responsibility.

Determine the Impact of Credit Facilities

The increased use of credit facilities is also having a major impact on the industry's view of manager-reported IRRs. Credit facilities, also referred to as subscription lines, can be perfectly valid as an efficient fund management tool to ease the burden on LPs in



Note: Persistency is measured with immediate successor fund (eg. Asia Buyout Partners IV would be successor to Asia Buyout Partners III.

Exhibit 4: Persistency of Performance is Still Falling

Source: Global Private Markets Review, McKinsey, 2017

responding to short drawdown notices and allowing the manager to move quickly on deals.
That said, it is imperative to strip out the impact of credit facilities by recalculating managers' performance using their gross level cash flow data to ensure that comparisons are being made on a truly like-for-like basis.

This also highlights the importance of not just looking at IRR in isolation, but considering many other metrics to determine the real value produced by the manager. The caveat to this is that recalculating performance can be a very time-consuming process, which is why so many investors are switching to using dedicated private equity performance analytics software.

Perspectives From Leading Investors And Consultants

Q: Why do you recalculate private markets fund manager performance?

"I don't trust the hyperbole – 'top quartile.' I always test that against benchmarks."
>$3B Investment Consultant

"We recalculate as often as we can, and have found numbers almost always materially identical. However, managers will certainly cherry pick elements of their track record. So the issue isn't as much inaccuracy or misrepresentation as it is selective representation. Getting the entire attributable track record is key."
>$2B North American State Pension

"To independently verify the manager's performance figures, perform cross-sectional analyses, etc."
>$3.5B Consultant

"Little differences in timing and qualification of cash flows add up to meaningfully influence the performance figures."
>$12B Insurance Company

"By recalculating, you can determine the impact that bridge loans or credit facilities can have on the numbers."
>$1.5B North American State Pension

Find the Value Drivers

Looking just at IRRs, multiples and other headline numbers tells investors very little about the manager, their performance and their ability to repeat this – a point highlighted by the research around persistence of performance, credit facilities and more. Along with recalculating headline performance metrics to ensure consistency and standardization, LPs must gather granular data from managers in order to validate future strategy and make truly informed decisions.
In fact, Korteweg and Sorensen suggest that the reported drop in persistence of GP performance explains why LPs have increased their focus on looking beyond just high level returns and are now collecting more detailed information,[9] including performance at the deal and partner level to fully evaluate the repeatability of a GP's past fund returns.

Breaking down the key drivers of past success is one of the first ports of calls for sophisticated investors: a quarter of investors and consultants cited factors relating to this area as extremely important during their track record analysis.[10] (Exhibit 5).

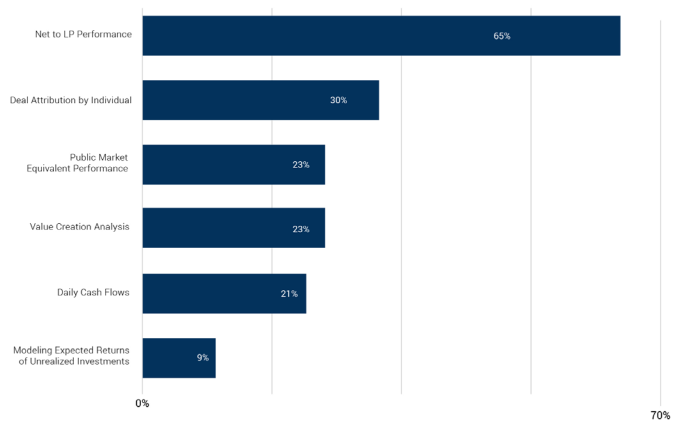


Exhibit 5: Factors Extremely Important to Investors and Consultants in Track Record Analysis
Source: Private Markets Due Diligence Survey, 2018

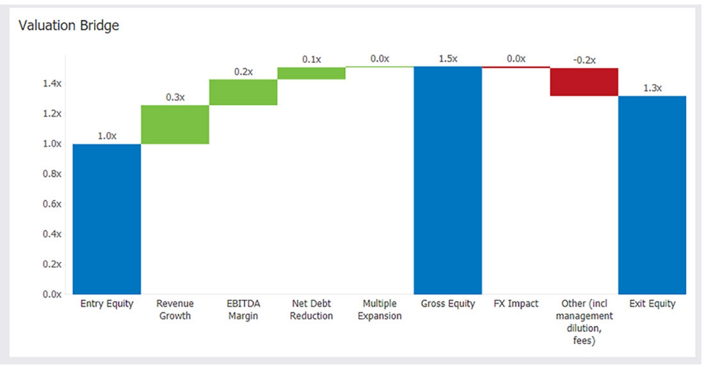


Exhibit 6: Valuation Bridge Analysis
Source: : eVestment Private Markets

	Smallest Market Cap	Median Market Cap
S&P 500	$2.7B	$20.0B
MSCI World	$1.2B	$9.4B
Russell 3000	$144M	$1.6B

Key Value Creation Analysis Techniques

Valuation Bridges: Valuation Bridges attempt to quantify the drivers of value and attribute them to certain key areas. From analyzing this at a fund level and individual deal level it is possible to gauge whether value was delivered through operational improvement, market dynamics, financial engineering and/or M&A activity. Investors then seek to evaluate how this compares to the future or current strategy of the manager. (See Exhibit 6, below)

Sensitivity Analysis: Another key area to focus on is understanding what deals have driven a fund manager's performance and how sensitive the fund level performance is to them.
This can be done through simple exclusion of specific deals based on IRR, TVPI, size etc. More sophisticated approaches include the use of box plots, return curves and impact charts to determine what proportion of deals have had a positive or negative impact on performance. (See Exhibit 7, next page)

Public Market Equivalent Analysis: While valuation bridges can help identify market dynamics such as multiple expansion, it can be difficult to identify if this is down to buying cheaply or a rising market. Public Market Equivalent (PME) analysis helps identify whether the manager has benefited from a general uptick in markets or has truly outperformed through skill in deal selection and/or operational improvements.
Market timing is not necessarily a bad strategy, and could be part of a manager's skill set, but it is crucial to understand how it has influenced returns. (See Exhibit 8, next page)

Identify Alpha Through Public Market Equivalent Analysis

Public market equivalent (PME) analysis is becoming standard practice in LP's due diligence and portfolio monitoring: eVestment's 2018 survey found that 72% of respondents carried out PME analysis and 52% were expecting to increase their use of it.[11]

While it is undoubtedly a useful tool to overcome some of the pitfalls of traditional benchmarking (such as the opaqueness of IRRs) and gain an understanding of a manager's value creation skills, the effectiveness of this analysis can depend heavily on the PME calculation methodology used and also the index it is benchmarked against.

Impact of Index Selection

Often, private equity's performance is compared to returns of the S&P 500 or MSCI World – most benchmarking reports reference this. However, the median market cap of the S&P 500 is $20B, and $9.4B for the MSCI World,[12] yet 95% of buyouts from 1993 to 2010 were below $1.08B in value.[13]

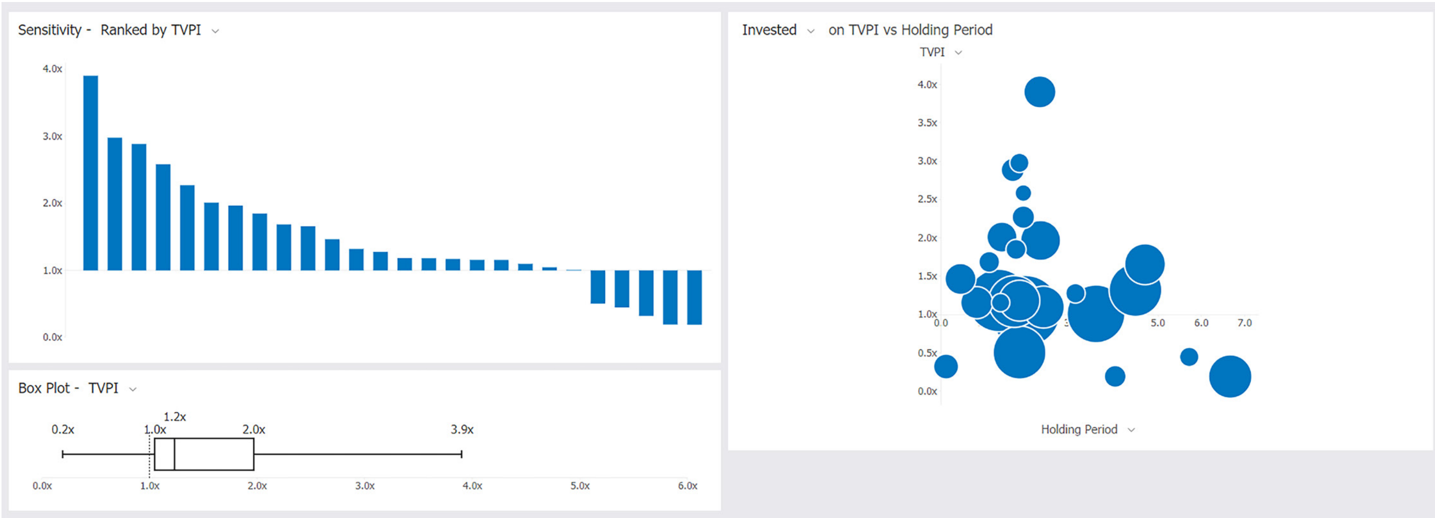


Exhibit 7: Sensitvity Analysis
Source: : eVestment Private Markets

TVPI 4.4x / IRR 36.0% (Net Cash Flows)	Time Weighted Return (Absolute Outperformance)	Modified IRR (Absolute Outperformance)	PME (Absolute Outperformance)	PME+ (Absolute Outperformance)	Direct Alpha
S&P 500 COMPOSITE RI	3.6% ▲ +32.4%	11.8% ▲ +8.2%	2.3% ▲ +33.7%	9.3% ▲ +26.7%	31.5% ▲
RUSSELL 3000 RI	4.3% ▲ +31.8%	12.4% ▲ +8.1%	2.7% ▲ +33.3%	9.7% ▲ +26.3%	30.9% ▲
NASDAQ COMPOSITE RI	6.8% ▲ +29.2%	14.5% ▲ +7.7%	6.6% ▲ +29.4%	11.1% ▲ +24.9%	27.1% ▲
S&P Listed Private Equity $ RI	5.2% ▲ +30.8%	13.7% ▲ +8.5%	0.8% ▲ +35.2%	8.9% ▲ +27.2%	29.7% ▲

Exhibit 8: Public Market Equivalent Analysis
Source: : eVestment Private Markets

When trying to assess opportunity cost of private equity, are these indices most appropriate? The Russell 3000 is perhaps closer to the size of a PE deal given the median market cap. Those carrying out PME analysis should also consider if a sector-focused index is appropriate if the manager is a specialist.

Methodologies

Since the PME methodology was first proposed by Austin Long and Craig Nickels in 1996, various iterations have been developed to counter some issues with this methodology. Read the full description of each methodology in the Appendix.

While many methodologies exist, there is not one industry standard. In an eVestment survey, it was discovered that that 54% of respondents use more than one methodology.[14]

As shown in Exhibit 9, the most popular PME methodology used by respondents to the 2017 eVestment survey was Kaplan-Schoar, with 48% using it. Direct Alpha, the newest of the methodologies, was used by 35% of respondents.

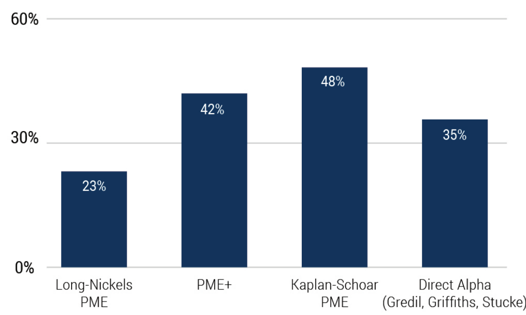


Exhibit 9: Most Popular PME Methodologies Used by Investors and Consultants
Source: : eVestment, 2018 Private Markets Due Diligence Survey

So Which Methodology Should LPs Use?

There is no "right" answer and so it highly depends on why PME is being used – is it to evaluate opportunity cost of an existing private equity portfolio? Is it to benchmark prospective managers? Is it to evaluate if PE investments are worth the PE-level fees?

LPs should consider these questions and evaluate the nuances of each methodology in depth to decide which methodology, or methodologies, are most appropriate.

Understand the People

Even though the industry has changed dramatically since its genesis, one of the old adages about it still rings true: private equity is a people business. eVestment's 2018 Private Markets Due Diligence survey found 79% of investors believe assessing a GP's team to be an extremely important aspect of their due diligence,[15] and understandably so. At the end of the day, investors are investing in a blind pool and entrusting a group of investment professionals to make good decisions on their behalf. During a webinar hosted by eVestment and Privcap that included representatives from StepStone and HarbourVest, industry practitioners shared key tips and best practices for how to carry out a comprehensive evaluation of a team.[16]

Leverage Quantitative Data for Better Qualitative Processes

The track record is never the end of due diligence – it won't answer all the questions, but it does provide the questions you need to ask in qualitative assessments, especially about the team.

Integrate Your Data

Data is important – it is the integration of the quantitative assessment and qualitative work that get you to the end conclusion.

Investing in PE is a mosaic. You've got lots of little tiles, lots of little pieces that you're trying to assemble together to get an overall picture of what the investment opportunity looks like, and that quantitative data helps you to assemble a lot of those little pieces to the puzzle.

Be Thorough, but be Efficient

Data really helps us ignore the "known knowns", so that we can truly focus on the list of questions from a qualitative perspective that the quantitative side have just eliminated. The trick is to make sure that you don't spend too much time on data risking the loss of too much qualitative time on the team itself.

As with all aspects of due diligence, it can be time consuming without the right tools, which is why more and more LPs are utilizing dedicated performance analytics tools to make quantitative due diligence more efficient, allowing them to spend more time on qualitative aspects.

Attributing Performance

Like looking at the effect of certain deals on overall performance, it is imperative to attribute fund performance back to the individuals within the team. If they are the ones managing the fund going forward, you must ensure you validate their skill set. What's more is that while fund structures last over a decade, team tenure may not always be as long-term, so understanding the history of the current team is important.

Key Questions to Ask PE Fund Managers About Performance

- Is the performance generated by the team balanced across the team?
- Is it skewed to certain individuals?
- How does this look across geographies and sectors?
- Are the current partners really the ones that are responsible for that track record, or is it people who have retired or left the organization?
- Has strong performance in early funds by retired professionals propped up an overall track record?

Team Dynamics

Understanding how a team works together is a crucial factor, but not always easy to uncover. Investors need to know the set of questions they are going to ask ahead of time, as well as the methods of getting the answers. Tapping multiple sources of information is crucial in this stage to get well-rounded and accurate information on the area of the team you're investigating. Sources can include interviews with the team, but also reference calls to other limited partners, portfolio companies and previous firms, of which the importance was highlighted by one panelist: *It's amazing some GPs put CEOs on their reference list, and when you actually talk to them, they give a reference on something completely different.*

Key Questions to Ask PE Fund Managers About Team

- What is the length and the quality of experience of the team?
- How is the team cohesiveness?
- How are they structured to share information with each other? How do they leverage the knowledge of the entire team.
- How do they source deals – what is their network like?
- How do they evaluate if investment opportunities in one of their target geographies or sectors are as good as those in another?
- Do they have bandwidth? What kind of capacity do they have when they're raising a new fund, to invest that fund?
- What are the assets under management per partner?
- How many board responsibilities do they have?
- What are the succession plans? Are there mentoring programs to develop leaders and investors?

Conclusion

The importance of selecting top quartile private equity funds has never been more clear – there is a significant cost of not being in these funds and historically those below the top quartile have not materially outperformed public markets. To justify the increases in allocations, its place as a return enhancer, and the fees, a private equity portfolio must materially outperform relative to public markets.

However, investors are faced with substantial challenges in fund selection: persistence of managers' top quartile performance is low and headline metrics are increasingly opaque, which means metrics such as IRRs and multiples can't be taken at face value or solely relied upon as accurate indicators of future performance.

Fortunately for investors, the power to build a leading private equity portfolio is in their hands and achievable through a more skillful due diligence process, not merely luck or preferential access to managers as is commonly cited.

Investors need to leverage quantitative data as a foundation to their due diligence process. Importantly, they need to look beyond headline numbers and into a variety of metrics and performance statistics across a manager's track record to understand how they created value, what their skillset is, and how this aligns with the strategy of the fund they are evaluating. They also need to collect detailed cash flow data to enable them to recalculate and standardize manager performance for truly like-for-like comparisons.
Yet this level of due diligence be challenging if relying on spreadsheet-based processes for track record analysis.

It can make a process prone-to-error, inefficient and not effective, with quantitative due diligence hindering the full due diligence process rather than helping it.

By using dedicated private equity performance analytics tools, such as eVestment Private Markets, investors can make track record analysis much more efficient and more valuable by being able to easily extract important insights for more informed fund selection.

Appendix

PME

First proposed by Austin M. Long and Carig J. Nickels in 1996 (A Private Investment Benchmark). They called it the ICM method (Index Comparison Method). Also known as the Long Nickels PME or LN-PME.

Creates a theoretical investment into the selected benchmark using the actual cash flows. Each Contribution is invested in the index and each distribution is treated as a sale out of the index. This results in a theoretical NAV, which is substituted in place of the actual NAV in order to calculate an IRR.

The PME result is directly comparable to an IRR and so outperformance is measured against the IRR. Where the fund significantly outperforms the selected benchmark it can result in a short in the index and a negative value, which is not appropriate for calculating a PME result.

Modified IRR

The MIRR (Modified Internal Rate of Return) is a modification of the IRR with the intention of resolving the associated issues of the finance rate and re-investment rate.

All contributions are discounted back to the initial cash flow date by the growth in the selected benchmark. All distributions are discounted forward to the final cash flow date by the growth in the selected benchmark.

The annualized performance can then be calculated using these two values as you would a Time Weighted Return (TWR). The MIRR is directly comparable to TWR of the selected benchmark over the same time period.

PME Ratio

First proposed by Steve Kaplan and Antoinette Schoar in 2005 (Private Equity Performance: Returns, Persistence and Capital Flows). Also known as the Kaplan Schoar PME or KS-PME.

Both the contributions and distributions are discounted back to the initial cash flow date by the growth in the selected benchmark. The resultant PV of all distributions is then divided the PV of all contributions.

The PME Ratio is not directly comparable to an IRR or other measure. Instead, if the ratio is in excess of 1.0 then the fund is deemed to have outperformed the selected benchmark and where the ratio is below 1.0 the fund is deemed to have underperformed the selected benchmark.

PME+

First proposed by Thomas Kubr and Christophe Rouvinez at Capital Dynamics in 2003, it was patented in 2010. In order to avoid the issue where PME results in a short position in the index and therefore a negative NAV, PME+ maintains the actual NAV and instead scales the distributions by a factor lambda. An IRR is then calculated on the revised cash flows.

The PME result is directly comparable to an IRR and so outperformance is measured against the IRR.

Direct Alpha

The Direct Alpha was introduced in March 6, 2014 in a paper by Gredil, Oleg and Griffiths. Both the contributions and distributions are discounted back to the intial cash flow date by the growth in the selected benchmark.

An IRR is calculated on the PV of all cash flows. The Direct Alpha result is an absolute measure of alpha and not a relative comparable.

Endnotes

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