Summit Strategies Group

THE IMPACT OF COGNITIVE BIASES ON THE MANAGER SELECTION PROCESS

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EXECUTIVE SUMMARY

The private equity industry, with roughly $3.5 trillion of assets under management, is as large as ever. However, despite private equity's evolution as an asset class, the fundamental process employed by investors to underwrite and select private equity managers has, in many ways, failed to adapt. The process is highly qualitative and filled with cognitive biases that can negatively influence LPs' decision making. This issue is exacerbated by the behavioral biases that also impact private equity managers. This paper looks to break away from the traditional line of thinking and introduce a fresh perspective on the issues surrounding the manager selection process. Human nature will never allow LPs to fully overcome their human biases, but a better understanding of what biases exist and how they influence decision making will help LPs mitigate their impact moving forward.

WHAT BIASES EXIST?

The private equity manager selection process requires LPs to analyze and synthesize many different variables. As with any decision-making process that involves multiple inputs, LPs often use mental shortcuts to scale down the manager selection process and make it more efficient. However, while these shortcuts are often necessary and can be quite useful, they can also result in systematic biases. Over the course of time, these biases can become embedded in LPs' mental framework and result in misconceptions or false realities. Below, we lay out some of these misconceptions and discuss their impact to LPs.

RELATIONSHIP BETWEEN INTERIM AND FINAL PERFORMANCE (I.E., ANCHORING)

Private equity managers typically start raising a follow-on fund around the fourth year of an existing fund's life. Since analyzing past performance is a large component of the LP underwriting process, LPs are biased toward relying on interim returns when making commitment decisions. This dynamic naturally raises the question of, "Are interim returns a good, reliable indicator of final fund performance?" If the answer is no, then the traditional method of taking interim returns and applying them to end state performance must be reconsidered.

Jenkinson et al. (2013) analyzed the relationship between interim and final performance of private equity funds, and found that performance numbers reported by GPs during fundraising have limited ability to predict final performance. As shown in Figure 1, for both buyout and venture capital funds, the interim IRR in all four periods was economically insignificant in helping to predict ultimate fund performance. In other words, even four-plus years into a fund's life, its interim IRR remained a poor indicator of its final IRR. On a TVPI basis (shown in Figure

Figure 1. Fund IRR After 10 Years

	Buyout	Venture
Fund IRR:		
4 Quarters Before Start of New Fund	No Significance	No Significance
2 Quarters Before Start of New Fund	No Significance	No Significance
Quarter of Start of New Fund	Statistically, but not Economically Significant	No Significance
2 Quarters After Start of New Fund	Statistically, but not Economically Significant	Statistically, but not Economically Significant

Source: Jenkinson, T., Sousa, M., & Stucke, R. (2013). How Fair are the Valuations of Private Equity Funds?

Figure 2. Fund TVPI After 10 Years

	Buyout	Venture
Fund TVPI:		
4 Quarters Before Start of New Fund	No Significance	No Significance
2 Quarters Before Start of New Fund	Statistically, but not Economically Significant	No Significance
Quarter of Start of New Fund	Statistically Significant, with Limited Economic Significance	Statistically, but not Economically Significant
2 Quarters After Start of New Fund	Statistically and Economically Significant	Statistically, but not Economically Significant

Source: Jenkinson, T., Sousa, M., & Stucke, R. (2013). How Fair are the Valuations of Private Equity Funds?

2), the results improved slightly, but they still largely remained insignificant. The interim TVPI for buyout funds only became economically significant two quarters after the start of a new fund, and there was still no systematic relationship found between the interim and final TVPI for venture capital funds.

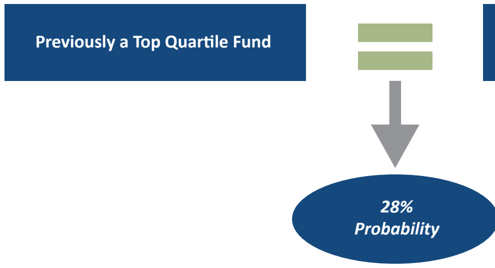
This analysis serves as a cautionary tale for LPs. For one, it challenges the notion of participating in initial closings. GPs will sometimes try to incentivize LPs to commit to the first closing by offering fee breaks. However, the marginal cost savings this provides over the life of a fund can easily be offset if the fund underperforms. From a risk-return perspective, the data suggests that it makes more sense to commit to a fund later on in its fundraising period, after it has already held at least one closing. This would allow interim performance to mature and become a more meaningful representation of ultimate performance. Second, the data shows that LPs must be careful with how heavily they weight a manager's current performance in their selection process. Rather than analyzing the absolute returns of a manager's current fund, LPs are better served if they analyze the drivers of those returns. Interim performance is much more likely to predict final performance if the interim returns are underpinned by strong fundamentals, thus allowing for replicability of performance throughout time.

PERSISTENCE OF RETURNS (I.E., HOT HAND FALLACY)

Even though a fund's interim performance is not a reliable indicator of its ultimate return potential, one would think that previous top quartile managers would remain top quartile in subsequent funds. Managers that produce top quartile performance are often thought to possess superior investment expertise and operational capabilities. This would insinuate that previous top quartile performance by managers should be replicable in the future. This idea of persistence has long permeated the private equity manager selection process, and has resulted in a systematic bias toward top quartile managers. However, what if persistence is really an anomaly and top quartile performance is based more on luck than skill?

Analyzing funds with vintages from 1984 through 2008, Harris et al. (2013) found that buyout managers with a previous fund in the top quartile produced a subsequent top quartile fund only 28% of the time (see Figure 3). Post-2000, the translation rate was even lower, as top quartile funds (22%) were equally as likely as bottom quartile funds (21%) to produce a subsequent fund in the top quartile. This shows that picking a current top quartile manager with the expectation that the manager is going to remain top quartile will not always produce the desired results. A certain level of persistence will always exist, as highly skilled managers that work intensively to create operational growth will likely continue to outperform their peers. However, from an industrywide perspective, investors should no longer assume a manager's positive past performance will translate into positive future performance.

Figure 3. Probability of Repeating as a Top Quartile Fund

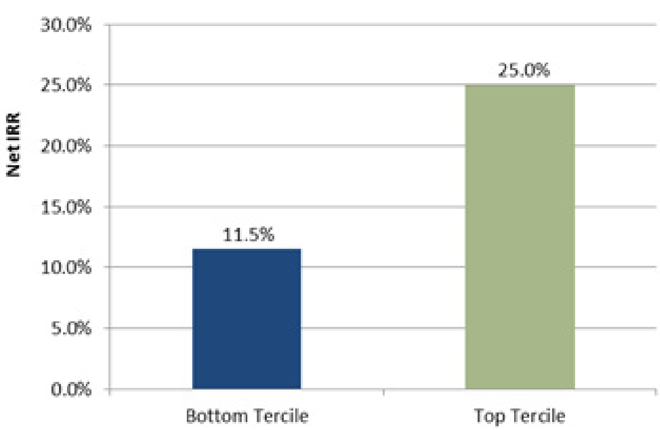


Source: Harris, R. S., Jenkinson, T., Kaplan, S. N., & Stucke, R. (2014). Has Persistence Persisted in Private Equity? Evidence from Buyout and Venture Capital Funds.

TEAM TURNOVER (I.E., STATUS QUO BIAS)

In addition to quantitative metrics like performance, LPs must also analyze softer, more nuanced qualitative metrics when underwriting managers. One prominent qualitative metric that LPs analyze during the manager selection process is team turnover. Historically, the widely held belief has been that turnover within a firm is bad, in that it leads to lower future performance, and is a possible indicator of employee unrest/discontent. As a result, many LPs include a turnover analysis in their underwriting process and use it as a quick check for positive or negative team chemistry and alignment. However, the notion that turnover is bad is not necessarily grounded in reality. Instead, it is the result of a natural human bias against departure and change due to their negative connotations. Contrary to popular belief, team turnover within private equity firms may actually increase performance rather than decrease it. In a joint research effort between Capital Dynamics and the London Business School, Lichtner et al. (2013) found that firms that experienced the highest team turnover (top tercile) between the investment periods of two successive funds outperformed firms with the lowest team turnover (bottom tercile) by 1,350 bps (see Figure 4). More specifically, the study found that a 1% increase in turnover between investment periods translated to a 10% higher net IRR.

Figure 4. Average Fund Net IRR Based on Turnover Tercile



Source: Lichtner, K., Perembetov, K., Cornelli, F., Simintzi, E., & Vig, V. (2013). Team Stability and Performance in Private Equity: Joint research findings from Capital Dynamics and the London Business School.

It is important to note that this increase in performance due to team turnover is tied only to turnover among those professionals that have operational experience. As shown in Figure 5, for professionals that have private equity experience, turnover actually has a negative impact on fund performance, and turnover of professionals with a financial/investment banking background has an insignificant impact on returns. However, according to the study, of the 30% of senior professionals who inevitably leave their firms, over half (58%) have financial/investment banking backgrounds and the remaining 42% have operational or private equity backgrounds. Based on these statistics, over half of senior level turnover that occurs within the private equity industry is insignificant from a return perspective, and another portion actually helps to generate higher returns. As such, the conventional wisdom that team turnover is bad must be reconsidered. Turnover has the ability to bring in new perspectives and fresh ideas. It can also afford rising stars within a firm the opportunity to re-engage the firm's mindset and process, and lay the groundwork for a new generation of thinking. Certainly, this does not always result in prosperous growth; however, the data suggests that increased positive returns are likely to result.

Figure 5. Turnover Impact on Returns

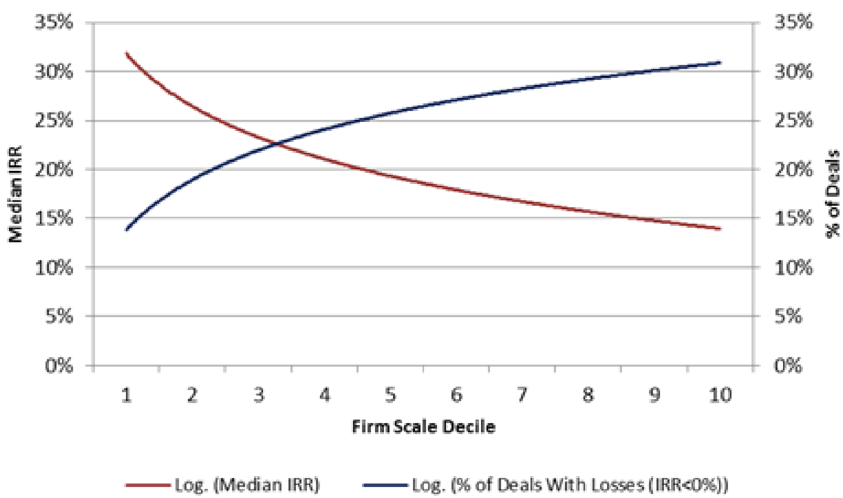
Background	Impact
Operational	Positive & Significant
Private Equity Only	Negative & Significant
Financial	Insignificant

**Turnover between funds*

MANAGER SCALE (I.E., DIVERSIFICATION BIAS)

When evaluating private equity managers, many LPs are biased toward more established managers who have already successfully invested two or three prior funds. In the eyes of LPs, this decreases firm/team risk and creates a comforting sense of institutionalization. However, as these firms achieve success they will naturally continue to grow. After a while, this can lead to the same team managing 20+ investments simultaneously. As the number of contemporaneous investments grows, the time and attention paid to each individual deal starts to wane and performance can suffer as a result. Lopez-de-Silanes et al. (2013) explored this dynamic, and found that an investment's median IRR declines as the number of simultaneous investments held by the firm increases. As shown in Figure 6, there is a clear, persistent decline in performance when more investments are held simultaneously, and the spread between the lowest and highest decile is nearly 20% in IRR terms. However, not only does the average return fall as the number of investments increases, but the percentage of deals resulting in a negative IRR increases as well. In the bottom decile, only 14% of investments produced a negative IRR, versus 32% of investments in the top decile. This spread is economically and statistically significant, and it shows how a greater number of simultaneous investments can result in both lower average returns and higher capital loss rates.

Figure 6. Returns and Losses by Scale Decile



Source: Lopez-de-Silanes, F., Phalippou, L., & Gottschalg, O. (2013). Giants at the gate: Investment returns and diseconomies of scale in private equity.

This data firmly supports the thesis that concentration matters and negates the long-held belief that more diversification is better. While Lopez-de-Silanes et al. (2013) focused their analysis at the firm level, their findings may easily be applied to the individual fund level. LPs have been trained to think that broad diversification within a fund is critical to mitigating downside risk. However, this narrow view of diversification often leads to LPs being over-diversified at the total plan level. LPs typically make multiple private equity commitments per year, which offers a natural way to achieve manager diversification. This manager diversification offers a built-in hedge against downside risk, and further diversification at the fund level can result in diminishing marginal returns for the overall plan. Rather than seeking out broadly diversified funds, LPs should target managers that specialize in a particular area of focus and make reasonably concentrated bets within their area of expertise. This will help ensure that only deals carrying the highest conviction make it into a fund, and it will prevent the managers' time and focus from being stretched too thin. The end result is likely to be higher average returns accompanied by lower loss rates.

"There is a clear, persistent decline in performance when more investments are held simultaneously, and the spread between the lowest and highest decile is nearly 20% in IRR terms."

STIGMA OF EMERGING MANAGERS (I.E., HERD BEHAVIOR)

Emerging managers (typically defined as Funds I or II), are often avoided by LPs. Many investors see emerging managers as too green or under-institutionalized, and they place a stigma on these groups with the notion that they carry greater risk and less potential upside than more established managers. Further, there seems to be a clustering effect with LPs when it comes to emerging managers. In other words, if your peers are not taking the "risk" on emerging managers, why should you?

To analyze this mindset toward emerging managers and test its validity, Summit looked at Preqin data for 327 private equity funds raised between 2000 and 2010. We categorized the funds based on: 1) whether or not they were emerging managers (i.e., Funds I or II); and 2) whether they were top quartile or bottom quartile relative to a peer group with a similar strategy and vintage year. If conventional wisdom were to hold, the majority of top quartile managers would be non-emerging and vice versa for bottom quartile managers. However, this was not the case—as shown in Figure 7, emerging managers represented 50% of the top quartile funds and only 43% of the bottom quartile funds. This shows that emerging managers are equally as likely to produce top quartile performance as more mature managers, and that they carry substantially less tail risk than LPs have historically thought. In fact, based on this data set, emerging managers proved themselves to be a better risk-adjusted option than non-emerging managers. This goes to show that avoiding emerging managers is not necessarily a winning formula, and that sticking to the traditional line of thinking could cause LPs to unintentionally forego strong, positive returns.

Figure 7. Returns of Emerging vs. Non-Emerging Managers

# of Funds:	**327**
% Emerging	*43%*
% Non-Emerging	*57%*
# of Top Quartile Funds:	**80**
% Emerging	*50%*
% Non-Emerging	*50%*
# of Bottom Quartile Funds:	**80**
% Emerging	*43%*
% Non-Emerging	*57%*

Source: Summit Analysis of Preqin Performance Data

CONCLUSION - WHAT DOES IT ALL MEAN?

Understanding what biases exist in private equity is the first step in working to evolve and adapt the private equity manager selection process. However, the ultimate benefit comes from taking this understanding and using it to transform the mindset with which LPs analyze managers. One of the hardest human processes is to take an idea that has been embedded in our line of thinking, openly challenge its accuracy, and accept that it may be flawed. However, this process lies at the core of innovation, and it is time for the traditional manager selection process to be reconsidered. By taking this understanding of cognitive biases in private equity and working to create a less subjective approach to manager analysis, LPs will be able to make better-informed, more rational decisions. Ultimately, this will lead to a more efficient and effective manager selection process.

ABOUT THE AUTHORS

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Dan Pogue joined Summit Strategies Group in 2013 as a Research Analyst on the Private Equity team. His responsibilities include assisting with client reporting and performing research and due diligence on private equity managers. Dan graduated magna cum laude from the University of Missouri, receiving a BSBA in Business Administration with an emphasis in Finance. Dan is currently a Level II CFA candidate.

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Chris is a Managing Director of the firm, responsible for overseeing all aspects of Summit's Private Markets research including client education, portfolio modeling, market research and manager due diligence. Prior to joining Summit in 2007, Chris spent 10 years in the healthcare industry working with development stage companies and established firms like Guidant and Bristol-Myers Squibb. His roles spanned sales and marketing, finance, investment & corporate development.