



**Summit** *Strategies Group*

## Venture Capital: Fund of Funds' Silver Lining

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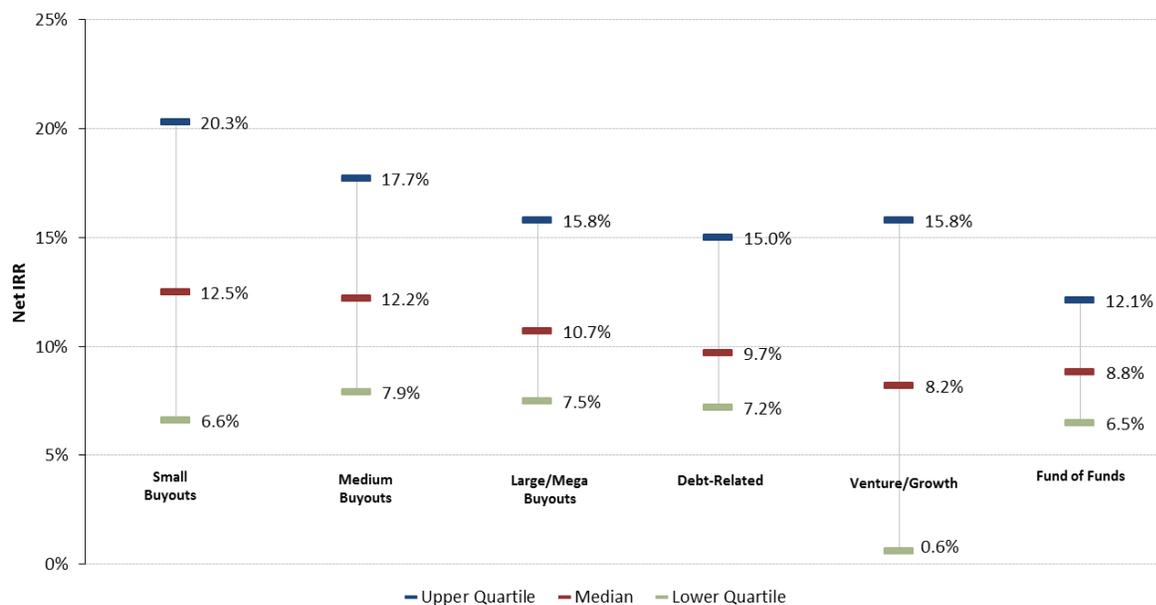
## Executive Summary

Over the past several years, fund of funds have lost favor with a broad set of Limited Partners (“LPs”) that have graduated to a direct manager selection model. This migration has been primarily driven by fee savings; but increasing access to information, greater sophistication of LPs and dissatisfaction with fund of fund performance has also contributed to the shift. In this paper, we analyze the performance of buyout fund of funds versus venture capital fund of funds, as well as the performance of each segment relative to a strategy-specific benchmark of direct funds, to test whether specific categories of fund of funds have added value for LPs relative to what could have been achieved thru a direct model. Our findings show that, on average, buyout fund of funds underperform both venture fund of funds and direct buyout funds, while venture fund of funds outperform both buyout fund of funds and direct venture funds. This suggests that the average venture fund of fund earns its fees, creating value for its LPs in excess of what could be achieved thru the construction of a direct venture portfolio.

### Historical Fund of Fund Returns

To start off the discussion, it is important to understand how fund of funds have performed historically relative to other private equity strategies. In *Figure 1*, we show strategy-by-strategy returns for 2002-2011 vintage funds, as of 9/30/2014. Over the past 10 years, fund of funds have produced the second lowest median return of any private equity strategy. However, they have delivered on their ability to minimize risk and volatility, posting the smallest interquartile range of any private equity strategy over the last decade. It is important to note that this profile is largely a result of broad diversification. So while this has been a benefit to the strategy, it has also been its Achilles heel. Over time, many LPs have become tired of paying two layers of fees for what has long equated to a market (or indexed) return that has fallen short of what could have been achieved, on average, by building a direct portfolio. While fund of funds will always play a role for certain investment mandates and governance structures, a healthy amount of LPs with the bandwidth and ability to go direct have moved out of the space, a trend that is expected to continue.

**Figure 1: Private Equity Return Dispersion by Strategy (2002-2011 Vintages)**



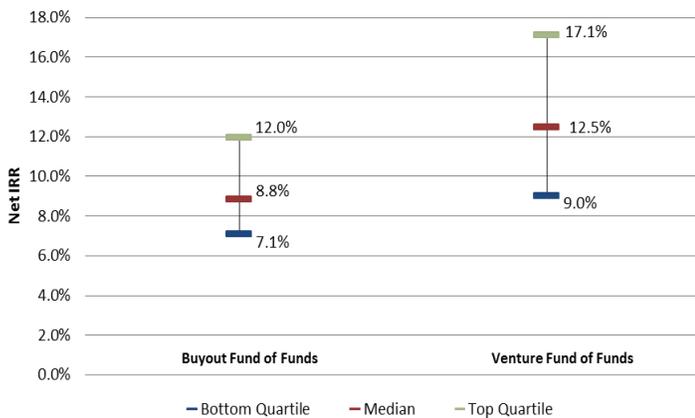
Source: Preqin (Data as of 9/30/2014)

## Breaking Down the Fund of Funds Landscape

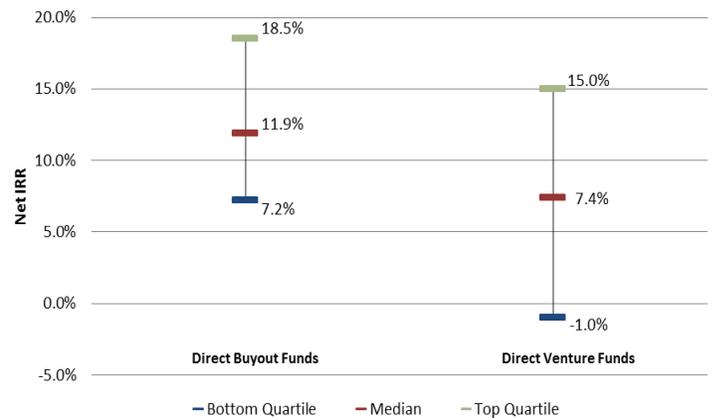
On the surface, fund of funds are expensive diversification tools that have produced underwhelming performance relative to direct private strategies. However, a second-order analysis suggests that not all fund of fund strategies are created equal, and that there could be a silver lining within the asset class. To see if there has been a dispersion of returns between fund of fund sub-strategies, we split the market into two primary groups: buyout and venture capital.

Figure 2 shows the output of this analysis, and we believe the results are quite interesting. Over the past decade, venture capital fund of funds have significantly outperformed buyout fund of funds on an IRR basis (for clarity, the conclusion holds if analyzed based on net MOIC). Interestingly, over the same time period, direct buyout funds have significantly outperformed direct venture funds. So, despite a better average underlying opportunity set, buyout fund of funds have still managed to underperform venture fund of funds. This data suggests that something larger and more nuanced is happening behind the scenes; something that perhaps changes the perception of how fund of funds can and should be utilized.

**Figure 2: Private Equity Return Dispersion: Buyout vs. Venture (2002-2011 Vintages)**



Source: Preqin (Data as of 9/30/2014)

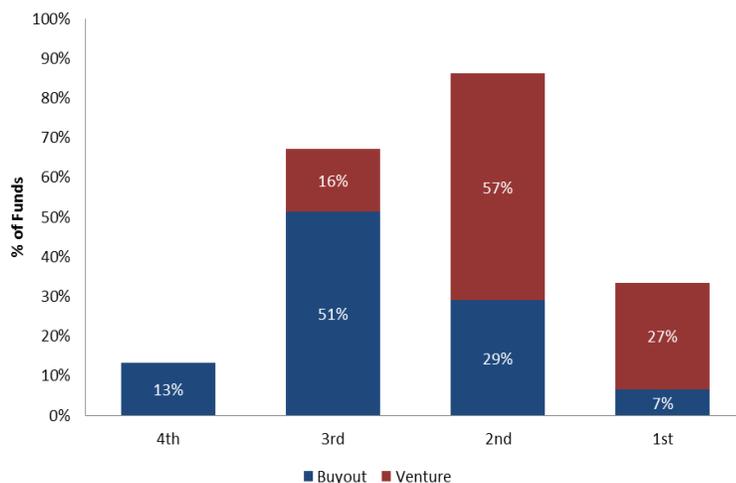


Source: Preqin (Data as of 9/30/2014)

Taking these results, we dove yet one layer deeper and analyzed how both strategies have performed relative to a strategy-specific direct benchmark. The purpose here was to see whether or not venture fund of fund outperformance holds steady when compared to an alternative portfolio of direct funds. Initially, one might think the extra layer of fees would cause a fund of fund benchmark, on average, to underperform a direct benchmark with a similar strategy and focus. The results of our analysis once again proved intriguing.

As shown in *Figure 3*, buyout fund of funds have statistically underperformed their direct peers (i.e. 63% have underperformed the direct benchmark median), while venture fund of funds have statistically outperformed their direct peers (i.e. 84% have outperformed the direct benchmark median). What this suggests is, not only do venture fund of funds offer better performance than buyout fund of funds, they also offer better average performance than direct venture funds. The takeaway from this is significant, in that it implies that venture fund of funds not only serve as an administratively simple solution, but actually offer better performance than direct venture funds in aggregate.

**Figure 3: Buyout and Venture Fund of Fund Quartile Performance vs. Direct Benchmark (2002-2011 Vintages)**



Source: Preqin and Fund Managers (Data as of 9/30/2014)

Note: Analysis includes 76 buyout fund of funds and 82 venture fund of funds; Data derived by using a vintage-weighted analysis\*

## Digging Deeper

These results are certainly insightful, but it is important to truly understand their driving forces. Why have buyout fund of funds underperformed those focused on venture capital? And despite having an extra layer of fees, why do venture fund of funds appear to offer greater value than the average direct venture portfolio? We first set out to analyze why buyout fund of funds have tended to underperform venture fund of funds. To do this, we formed and tested four independent hypotheses, each of which is laid out below.

### 1. Buyout fund of funds build more diversified portfolios than venture fund of funds = FALSE

- **Theory:** Certain buyout fund of funds have been known to invest in 50+ underlying managers in a given fund; this much diversification can create an index effect and significantly lower returns.
- **Finding:** Our analysis showed no distinct difference in the average number of funds targeted by venture managers versus buyout managers.

### 2. The top direct venture funds materially outperform the top direct buyout funds = FALSE

- **Theory:** As an asset class, venture is perceived to have a more convex return distribution than buyout; therefore, the top-performing venture managers should be expected to produce significantly greater returns than the top-performing buyout managers.
- **Finding:** According to Preqin data from 2002-2011, the top 10 direct venture funds produced a 72% net IRR while the top 10 direct buyout funds produced a 66% net IRR. In other words, the top buyout funds essentially performed in line with the top venture funds.

\* The analysis compared each individual fund of fund to a vintage-weighted direct benchmark. As example of how a vintage-weighted return was calculated, if a 2006 vintage fund of fund committed capital over three years, the fund was compared to a 2006-2008 vintage direct benchmark. For the benchmark, each of the three vintages received an equal weight, and a weighted average MOIC was calculated. This helped adjust for the fact that fund of funds commit capital over multiple years, and allowed for a more direct comparison to the direct benchmark.

### 3. Venture fund of funds target smaller underlying managers than buyout fund of funds = FALSE

- **Theory:** There is an inverse relationship between fund size and performance, so if buyout fund of funds tend to skew up-market and target larger underlying managers, this could offer a reasonable explanation for their relative underperformance.
- **Finding:** Analyzing a subset of the buyout and venture fund of fund universes from 2002-2011, we found that the median size of the underlying funds in each segment was \$1.6 billion and \$470 million, respectively. To appropriately compare the two figures, we also looked at the median size of the entire universe of direct funds that were raised during the same time period. On the buyout side, the median direct fund was \$600 million and the median venture fund was \$160 million. This shows that on a relative basis, venture fund of funds have historically targeted underlying funds that are 2.9x the size of the average direct fund available at the time of investment; whereas buyout fund of funds have a ratio of 2.6x. In other words, relative to the available direct opportunity set, venture fund of funds do not appear to target smaller funds than buyout managers.

### 4. Venture fund of funds have more favorable terms than buyout fund of funds = FALSE

- **Theory:** While direct venture funds have long had less favorable terms than buyout funds, perhaps the fund of fund community has implemented an LP-friendly fee model in order to attract capital and enhance returns.
- **Finding:** Broadly speaking, venture fund of funds have terms that are similar to those seen in buyout. While this is good in an absolute sense, it does nothing to suggest that venture fund of funds have somehow benefited from a more favorable fee structure.

As you can see, each of our hypotheses proved false. So, what does this mean? It means there may not be a tangible, data-driven rationale for why venture fund of funds have outperformed their buyout counterparts. Therefore, the answer must be more nuanced and qualitative in nature. Perhaps venture groups tend to excel more at manager selection, or maybe they are better than buyout groups at identifying alpha opportunities (such as investing in high-performing emerging managers). Whatever the case may be, the data fundamentally suggests that venture fund of funds are able to outperform buyout fund of funds.

Next, we analyze why venture fund of funds, despite an extra layer of fees, have outperformed their direct counterparts. To do this, we interpret the market data previously laid out as being indicative of the average LP, which by definition would be expected to perform in line with the market. Viewed this way, the question becomes, "Why have venture fund of funds historically offered higher returns than what could have been achieved by the average direct portfolio?" We believe it comes down to three key components: Persistence, Access, and Diversification.

1. **Persistence:** Harris et al. (2014) found that there is relatively strong persistence within venture. According to their analysis, which looked at funds from 1984-2008, venture funds post-2000 that were previously top quartile were in the top quartile with a subsequent fund 48% of the time (this compared to only 22% for buyout funds). Assuming an LP can identify these funds, which is made easier with the growth in database providers, direct portfolios should theoretically invest in these funds and consistently outperform fund of funds given the lower fee structure. However, even though venture exhibits a decent amount of persistence, the data suggests that there is still a 52% chance of getting the persistence bet wrong. In this regard, fund of fund managers likely have an edge over the average LP. A fund of funds' job is to select and intensively monitor direct managers, and this increased proximity to the underlying portfolio creates an information advantage in detecting opportunities for strong repeat performance.

- 2. Access:** Even if LPs are able to identify the managers that consistently perform well, accessing them is very difficult, if not impossible, for new investors. Fundraising processes are often by invitation only and may require rapid decision-making, and even then an LP may receive sub-optimal allocations that do not justify the work or administrative burden relative to their plan assets. Institutional investors may not have the staff or governance process or appropriate scale to secure access.
- 3. Diversification:** While venture funds exhibit stronger persistence than buyout funds, the fact that over half of top-quartile funds were not top quartile or did not exist previously suggests LPs must also seek out new names. Whether due to institutional biases against emerging managers or a sheer lack of resources, the average LP probably overlooks these new names. Even for LPs that do know of these emerging groups, a desire for concentration due to administrative burden reduces diversification in the one part of the market where diversification probably creates the greatest value.

This is where fund of funds come into play:

- 1. The top groups are generally not capacity-constrained, yet they maintain well-established access to the premier direct managers.** This is crucial, since most LPs opting for a direct portfolio simply cannot find their way into these funds. As a result, they miss out on a large portion of the driving force behind the convex returns within venture.
- 2. Further, as just alluded to, achieving broad diversification in a direct program can be time intensive and difficult to accomplish.** Therefore, the average LP is not likely to achieve the same level of diversification that would be expected from a fund of funds. This means the probability of choosing an underperforming fund goes up, as does the impact of this fund on the overall portfolio since it is not diluted through diversification.
- 3. Fund of funds help protect against this downside through their broad diversification and offer the extra benefit of access to top-performing groups,** thereby helping LPs gain access to the upper echelon of venture returns. The end result is that venture fund of funds tend to earn their fees and outperform their direct counterparts.

## The Academic Data

As a litmus test for our internal data, we turned to academia to see if there have been any similar findings. In a recent publication, Harris et al. (2015) conducted an in-depth analysis of fund of fund performance relative to direct private equity. The method employed in the paper was to compare actual fund of funds to “synthetic” portfolios of direct investments (i.e. portfolios of randomly selected direct funds, which serve to replicate the selection process of a hypothetical LP). To do this, Harris et al. (2015) used Burgiss data on 294 fund of funds, covering the vintage years 1987-2007. From the Burgiss data, Harris et al. (2015) constructed a benchmark of synthetic direct portfolios by randomly selecting direct funds based on the underlying holdings of the fund of funds in the sample. Each synthetic buyout fund consisted of a blend of 20 direct funds, while each synthetic venture fund consisted of a blend of 28 direct funds to account for the fact that venture fund of funds tend to hold slightly more positions than their buyout peers. The Public Market Equivalents (“PMEs”)\* of these synthetic funds were then formed into a distribution of returns against which the PME of the individual fund of funds could be compared.

\* Harris et al. (2015) use the PME method from Kaplan and Schoar (2005), which they describe as a calculation that “discounts (or invests) all cash distributions to, and any residual value of, the fund at the public market total return and divides the resulting value by the value of all cash contributions discounted (or invested) at the public market total return.” The resulting output is a net multiple of invested capital. For instance, if the PME for a fund equals 1.50, it implies that the fund’s LPs ultimately received 50% more than they would have received had they invested in the public markets.

Figure 4 shows a high level summary of the results. Using no restrictions on the data set, corporate finance fund of funds (primarily buyout funds; n = 135) produced an average excess PME of -0.06 versus the distribution of synthetic portfolios, which was significant at the 1% level. However, venture fund of funds (n = 72) produced an average excess PME that was not significantly different from zero. This says that buyout fund of funds, on average, underperformed their direct peers, while venture fund of funds performed at least as well as their direct counterparts.

**Figure 4: Harris et al. Data: Fund of Fund vs. Direct Portfolio Performance**

	No Restrictions	Ex Each Vintage's Best Fund	Ex Each Vintage's Top Decile of Funds
<b>Buyout</b>	-0.06***	-0.03*	0.03*
<b>Venture</b>	0.02	0.10*	0.20***

Source: Harris et al. (2015)

Note: \*, \*\*, \*\*\* denotes significance at the 10, 5 and 1 percent levels, respectively

Harris et al. (2015) then deepened the analysis by placing restrictions on the data set. In the real world, constrained access is an important issue that many LPs face, particularly in the venture capital space. Harris et al. (2015) attempted to mimic this dilemma by enforcing restrictions on the types of funds that could be held by the synthetic portfolios. The first restriction was to exclude the single best performing buyout and venture fund for each vintage year. Using the same method of analysis as in the first example, Harris et al. (2015) found that buyout fund of funds still underperformed, while venture fund of funds generated an average excess PME of 0.10 (significant at the 10% level).

The second restriction was to exclude the top decile of buyout and venture funds for each vintage year. Under this new scenario, buyout fund of funds generated an average excess PME of 0.03 (significant at the 10% level), while venture fund of funds produced an average excess PME of 0.20 (significant at the 1% level). This translates to the average venture fund of fund performing in the top quartile of the constrained synthetic fund index (i.e. versus the full distribution of individual synthetic portfolios, the PME produced by the average venture fund of fund in the sample is top quartile).

## Conclusions

Despite the ongoing decline of the traditional fund of fund construct, there appears to be tangible value-add associated with funds that target venture capital managers. As our analysis shows, venture fund of funds (on average) have displayed an ability to outperform buyout fund of funds, and more importantly, direct venture funds. This statistical insight provides a fresh perspective on the fund of fund landscape and how it can be utilized to the advantage of LPs. The data laid out in this paper suggests that buyout fund of funds, by underperforming the direct benchmark, generally do not earn their fees; however, venture fund of funds typically do. This can be attributed to the ability of venture fund of funds to diversify away tail risk while still gaining access to the highest-performing managers. The end result is a rightward shift in the venture return distribution, which allows for alpha generation even after accounting for the fund of fund layer of fees.

## References

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## About the Authors



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