

US PE Fund Performance by Investment Style

Determining whether specialist funds outperform

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Key takeaways

- Buyout fund performance for generalist, targeted, and specialist managers shows no clear outperformance trends between the three groups over time based on public market equivalents (PMEs). It is far more beneficial to allocate to top-quartile managers across the investment style spectrum than it is to indiscriminately allocate to specialists.
- IRR and DPI metrics also support the conclusion that no single style reigns supreme. Additionally, these metrics reveal how performance numbers may differ across timeframes and should be used concurrently to assess relative performance.
- A regression analysis illustrates that while there is not a linear relationship between sector concentration and performance, funds that were classified into the targeted group had slightly lower average PMEs and IRRs than both generalist and specialist funds. Even though this underperformance is statistically significant, it is unlikely to compel investors to shy away from targeted managers on its own.

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Previous research

In past analyses, we have sought to better understand and illustrate PE firm investment style. A [primer on the subject](#) outlined how we approached categorizing investment styles. The [following piece](#) took that framework and applied it to the landscape of PE firms, categorizing them into three groups utilizing the Herfindahl-Hirschman Index (HHI): Generalist (a sector HHI score below 3,000, which approximately means no sector accounts for more than half of the strategy's investments), Targeted (sector HHI score between 3,000 and 4,500, or one sector comprises between roughly half and two thirds of the strategy's investments), and Specialist (sector HHI score of 4,500 or greater, or approximately two thirds or more is invested in one sector). In [our most recent piece](#), we observed how PE firm investment style has shifted over time.

Introduction

Specialization among PE firms has been a defining aspect of the past two-plus decades. As capital has flowed into the industry, competition among dealmakers has continually intensified, and managers have turned to specialization to find alpha. Firms and funds have specialized by investment type (such as buyout or growth equity), geography, sector, and, in some cases, subsector. Irrespective of performance, many allocators appreciate the additional control this has given them in portfolio construction and management as private allocations look more like public allocations. LPs also view specialists as possessing superior sector expertise and having an edge over generalists when competing for deals and transforming companies. However, the most important question about specialization remains unanswered: Does specialization, particularly by sector, lead to outperformance? This analysis seeks to remedy that.

Unlike in our previous research on the topic, this analysis segments out funds by “fund families.” This allows us to observe an entity such as Blackstone with more nuance. For example, the firm's healthcare fund strategy is labeled a specialist, while its global buyout strategy falls into the generalist camp. This analysis uses data from 341 fund families and 717 US buyout funds with vintage years spanning from 1996 to 2015. We exclude funds with vintage years after 2015 because preliminary performance numbers are highly uncertain for younger funds.

Findings: Part I

One of the most complete methods with which to compare buyout fund performance is the PME. The metric takes into consideration public markets during the investment period and illustrates either outperformance or underperformance. Looking at the PMEs of buyout funds by specialization demonstrates that there is no clear winner in performance by style, though specialists have had an edge more recently. Vintages from the early 2000s saw specialists underperform, but from 2005 onward, specialists have had higher marks for the top-quartile, median, and bottom-quartile PMEs. Some of the extremely high PMEs in recent vintage buckets are attributable

to a small cohort of high-performing technology-focused investors. Interestingly, targeted managers appear to perform more poorly in recent vintage buckets. However, the amount of underperformance is minuscule and demonstrates that selecting a top-quartile manager, irrespective of strategy, is more important than aimlessly allocating to all specialists.

PME distribution by vintage cohort and style*

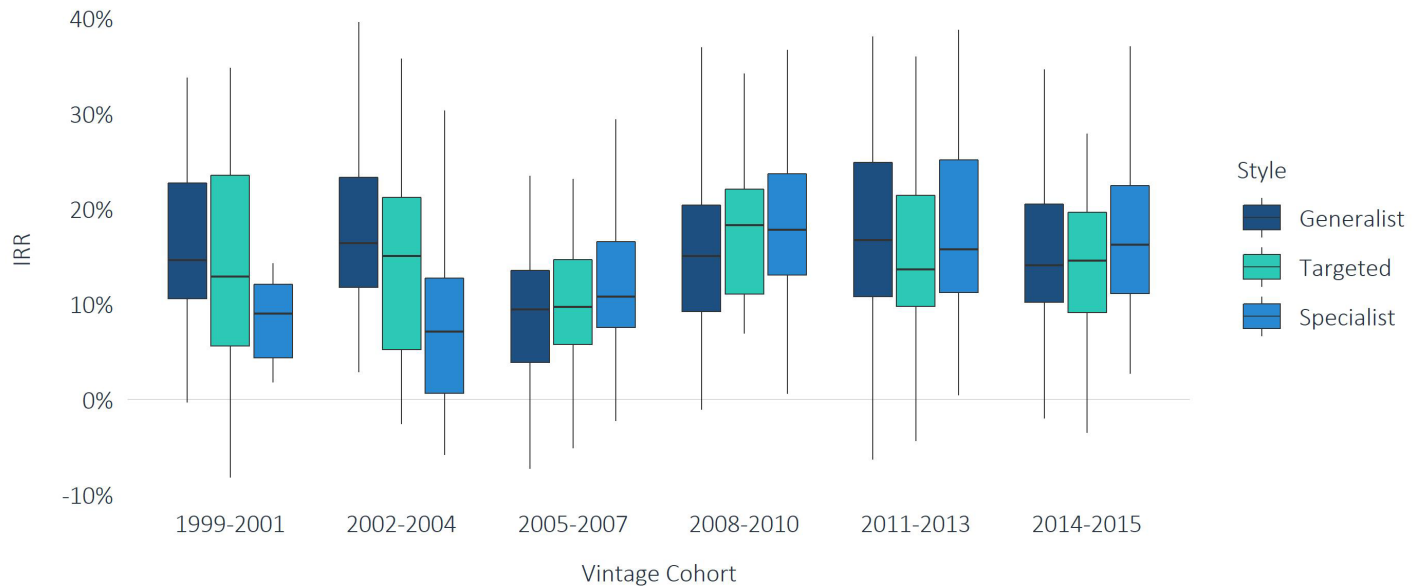


Source: PitchBook | Geography: US
*As of December 31, 2020

Observing trends in IRR and DPI distributions provides additional insight to our analysis. With IRR, the outperformance by specialists appears less clear, especially compared with generalist funds. Similar to PME, the dispersion of IRRs between investment styles has tightened in recent years. The observation of DPI confirms this narrowing and a less significant outperformance by specialists.¹ Distributions over time appear most similar among the three manager types, thus suggesting that the timing of the payout or speed of marking up portfolio companies is responsible for the specialist funds' higher IRRs and PMEs.

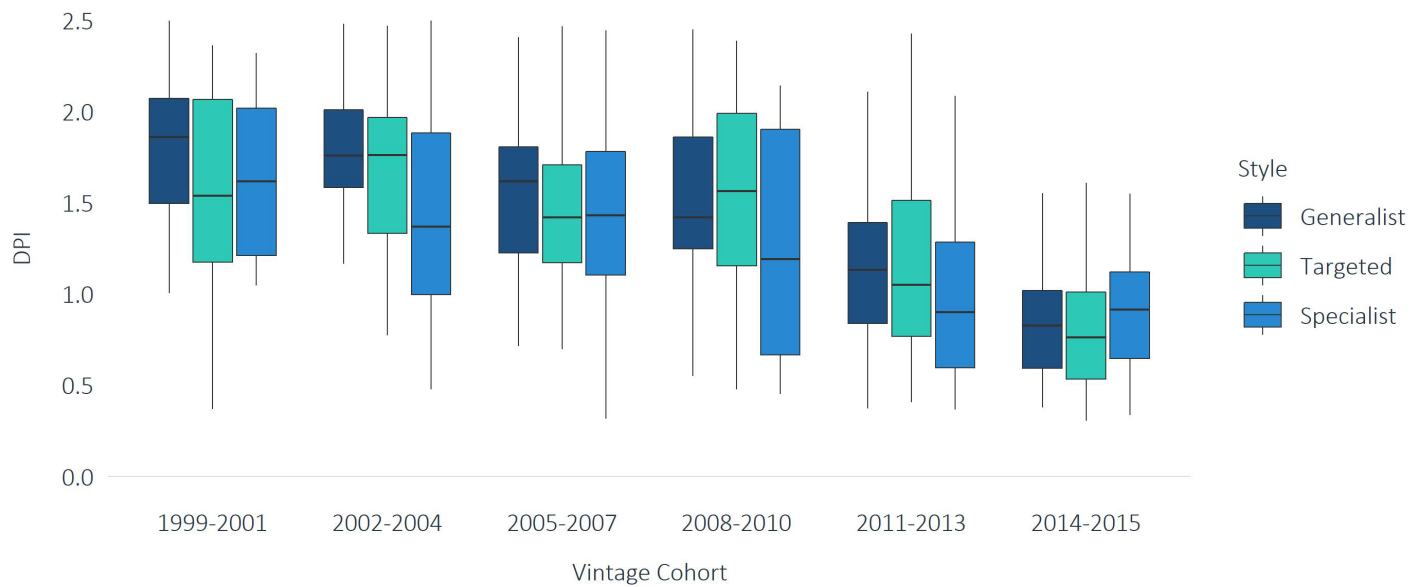
1: We used DPI rather than TVPI—which includes unrealized value—to avoid any bias with net asset value figures, which should be mostly accounted for by our vintage bucketing.

IRR distribution by vintage cohort and style*



Source: PitchBook | Geography: US
*As of December 31, 2020

DPI distribution by vintage cohort and style*



Source: PitchBook | Geography: US
*As of December 31, 2020

Findings: Part II

While breaking out aggregate statistics by vintage cohort provides a simple way to compare performance across fund styles, it does not succinctly answer the question of whether managers with different styles have achieved significantly different performance metrics over the full sample. Linear regression is an alternative approach to answering the research question at hand. This type of analysis allows us to more directly compare performance differences between styles and control for additional factors that were likely to affect performance. We can also investigate the relationship between the raw HHI measure of concentration and performance to assess its effect on a more granular level, rather than grouping funds into three discrete styles.

The primary factor for which we control in the regression is market conditions. This is particularly important because the style composition of the PE universe has not been static and [has trended toward more specialists over time](#). We need market control variables even when analyzing PME given the underlying assumption in the calculation that the beta of PE to the public equity benchmark is 1.0. To quantify market conditions, we consider five variables that were measured over the forward five-year period from the end of a fund's vintage year, including public market returns, public market volatility, the average level and change in Treasury yields, and the average level of high-yield corporate credit spreads. Given the high degree of collinearity among these time series—which can skew the interpretation of regression results—we apply a technique called principal component analysis (PCA). PCA transforms a set of correlated variables by determining the directions within those variables that contain the most information. As an added benefit, the transformed variables are designed to be completely uncorrelated with each other. We include the first three principal components of the market condition's data, which contain 90% of the variance, as control variables. We also include control variables for the fund number within its family as a proxy for manager experience and fund size because larger, more experienced managers are more likely to be generalists.

The accompanying table provides a summary of the regression results, with PME as the dependent variable and industry style represented by the raw HHI value. Given the natural positive skew in HHI values, it was log-transformed prior to performing the regression. The coefficient for the key variable of interest, sector HHI, is not significantly different than zero, thus indicating that the expected average PME does not materially change as sector specialization increases.

PME regression results with sector HHI value*

| | Coefficient | t-statistic | p-value |
|-------------------------|-------------|-------------|---------|
| Intercept | 0.934 | 2.350 | 0.019 |
| Market conditions (PC1) | -0.057 | -3.043 | 0.002 |
| Market conditions (PC2) | 0.064 | 3.602 | 0.000 |
| Market conditions (PC3) | -0.593 | -2.643 | 0.008 |
| Fund number | 0.010 | 1.251 | 0.211 |
| Fund size (log) | 0.003 | 0.178 | 0.859 |
| Sector HHI (log) | 0.030 | 0.681 | 0.496 |

Source: PitchBook | Geography: US

*As of December 31, 2020

To gain a more nuanced understanding of the relationship between sector HHI and PME, we first reran the regression without sector HHI and calculated the difference between the actual and predicted value to get a PME relative to expectations based on the market conditions for each fund. We then compared the sector HHI and the relative PME in two dimensions. The plot below displays the PME relative to expectations as a function of the sector HHI. The chart is color-coded by the assigned fund style and includes a smoothed local regression line.

Sector HHI versus PME relative to expectations*



Source: PitchBook | Geography: US

*As of December 31, 2020

The plot illustrates that while no linear relationship exists between the two variables, there may be subtle performance differences between the three style groups. It appears that funds in the targeted group—with an HHI value between 3,000 and 4,500—have slightly underperformed both generalist and specialist funds after accounting for market conditions. To test this hypothesis, we ran another regression with style represented by the three discrete style groups. The results are shown in the following table.

PME regression results with style groups*

| | Coefficient | t-statistic | p-value |
|-------------------------|-------------|-------------|---------|
| Intercept | 1.234 | 12.830 | 0.000 |
| Market conditions (PC1) | -0.056 | -3.038 | 0.002 |
| Market conditions (PC2) | 0.065 | 3.684 | 0.000 |
| Market conditions (PC3) | -0.060 | -2.704 | 0.007 |
| Fund number | 0.010 | 1.330 | 0.184 |
| Fund size (log) | -0.003 | -0.181 | 0.857 |
| Targeted | -0.067 | -2.117 | 0.035 |
| Specialist | 0.018 | 0.463 | 0.643 |

Source: PitchBook | Geography: US

*As of December 31, 2020

The coefficients for targeted and specialist funds represent the difference in the expected average PME relative to the baseline value, which in this case is the generalist group. Therefore, the average PME for funds in the targeted group is approximately 0.07 and 0.09 lower than funds in the generalist and specialist groups, respectively. There is no significant difference in performance between generalist and specialist funds. The underperformance within the targeted group is statistically significant at the 95% confidence level. Similar conclusions can be drawn from a regression analysis that uses IRR as the dependent variable. Please see the Appendix for detailed results.

Closing thoughts

Competition in PE is too high for sector concentration to be an investment philosophy panacea. While we found no categorical outperformance for generalists versus specialists, targeted funds have marginally underperformed. Like many things in life, there are benefits to each side, and it can be hard to succeed in the middle. One theory here is that both ends of the specialization spectrum offer unique advantages. First, generalist is a bit of a misnomer because these managers often employ sector specialist deal teams and operators. With the ability to deploy capital to several different sectors based on which presents the most attractive risk/reward prospects, these generalist managers may be able to eke out a performance edge. Certain hedge funds take a similar approach, wherein each sector team sources the best ideas and portfolio managers decide to put capital to work in the best ideas and most attractive sectors.

On the specialization side, it appears that deep industry knowledge—which often goes down to the subsector—provides a slight edge as well. These managers, whether focusing on technology, healthcare, financial services, or other sectors, often have domain expertise beyond what is seen in comparable generalist funds. This allows funds to gain an information advantage and to deploy capital to different subsectors depending on their relative attractiveness. Stone Point Capital—which primarily invests in financial services—did this following the global financial crisis (GFC). The firm completed several deals in the banking sector after not doing one for at least five years because it understood the space better than almost anyone.

Even though specialization is not the end all, it will likely continue. We may see the next generation of specialists invest in only a handful of subsectors. Crosspoint Capital, which raised \$1.3 billion for its first fund in April 2021, focuses only on cybersecurity and infrastructure software. This may allow for even more impactful knowledge of the space. Additionally, many LPs appreciate the added flexibility. For the generalists determined to remain so, TPG's recent fund offerings may present a roadmap to satisfy LPs' desire for sector-level portfolio construction. The firm's Partners VIII fund, which closed in 2019, amassed \$11.2 billion, with another \$2.7 billion in a sidecar fund focused on healthcare. Apollo's natural resources funds and Warburg Pincus' financial services funds are additional examples of specialist funds investing alongside generalist flagship offerings. Sidecars for technology, industrial, or financial services investments could easily accompany future fundraises, thereby giving LPs the option to allocate to the generalist fund or fine-tune their sector allocations. However, some LPs view these sector-specific sidecars negatively because they may influence the GP's dealmaking in those areas, and allocators worry about how deals will be split between the funds. Going forward, performance will continue to be the most important driver of future fundraising. While LPs cannot simply allocate to generalists or specialists and outperform, the benefits offered by these approaches may pressure some firms in the middle to pick a side.

Appendix

The following tables display the results of an additional regression analysis in which IRR replaced PME as the dependent variable. The findings are similar for both PME and IRR. The average IRR is a net 1.5% lower for targeted managers relative to generalists and specialists, and no statistically significant difference exists in average IRRs between the latter two groups.

IRR regression results with sector HHI value*

| | Coefficient | t-statistic | p-value |
|-------------------------|-------------|-------------|---------|
| Intercept | 0.104 | 1.021 | 0.307 |
| Market conditions (PC1) | -0.018 | -3.707 | 0.000 |
| Market conditions (PC2) | -0.007 | -1.535 | 0.125 |
| Market conditions (PC3) | 0.021 | 3.667 | 0.000 |
| Fund number | 0.001 | 0.638 | 0.495 |
| Fund size (log) | -0.001 | -0.407 | 0.684 |
| Sector HHI (log) | 0.006 | 0.519 | 0.604 |

IRR regression results with style groups*

| | Coefficient | t-statistic | p-value |
|-------------------------|-------------|-------------|---------|
| Intercept | 0.165 | 7.261 | 0.000 |
| Market conditions (PC1) | -0.018 | -3.678 | 0.000 |
| Market conditions (PC2) | -0.007 | -1.561 | 0.119 |
| Market conditions (PC3) | 0.021 | 3.691 | 0.000 |
| Fund number | 0.001 | 0.623 | 0.533 |
| Fund size (log) | -0.003 | -0.727 | 0.468 |
| Targeted | -0.015 | -1.868 | 0.062 |
| Specialist | -0.001 | -0.080 | 0.936 |