PitchBook

Introduction to PitchBook Private Manager Style

A framework for quantifying private market manager investment style

PitchBook is a Morningstar company. Comprehensive, accurate, and hard-to-find data for professionals doing business in the private markets.

Credits & contact

Research
ANDREW AKERS, CFA Senior Data Analyst
andrew.akers@pitchbook.com

Design
MARA POTTER

Contact PitchBook

RESEARCH
reports@pitchbook.com

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Introduction

One of the biggest challenges private market participants face is contextualizing the vast array of strategies deployed by fund managers. This is particularly challenging in private markets where pertinent information to aid in the decision-making process is not always available. A fund manager's performance track record can offer valuable insights, but it is well known that only considering past performance is insufficient. Market participants also need a way to contextualize how past returns were generated. While it is impossible to quantify every factor that defines an investment process, PitchBook Private Manager Style (PB Manager Style) applies a quantitative framework to assess the qualitative characteristics of private market managers. These style metrics can be used to:

- Understand broad levers private market managers use to build portfolios
- Understand how a manager's exposures fit within an existing private markets portfolio
- Ensure a manager's actual investment history is consistent with its stated strategy
- Quickly compare managers

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Investment style

In a nutshell, an investment style is the overarching philosophy that drives how portfolios are built. One of the best-known examples of an investment style is the growth versus value dichotomy in public equity managers. A growth manager seeks out companies it expects to outperform the market's pricing of future growth, while a value manager invests in companies that it perceives as undervalued relative to current fundamentals. Both philosophies have the same goal—to maximize risk-adjusted return—but the methods to achieve this goal are quite different. Although this example of style cannot be directly applied to private market managers, the idea is the same.

The PB Manager Style framework uses a manager's deal history to quantify its investment style across four categories: industry, geography, deal type, and deal size (a proxy for company size). The output for the first three of these categories measures the degree of specialization within that category. For example, a manager that only invests in healthcare companies would be an industry specialist, and a manager that invests equally across all sectors would be an industry generalist. That may be obvious at the extremes, but the majority are somewhere in the middle, and it may be difficult to determine how specialized any given manager may be. The output for the last category, deal size, measures the average deal size and is a proxy for the size of companies in which a manager invests.

It is important to keep in mind that the style metrics are meant to be informational, rather than an indication of good or bad. The perception of style will depend on the individual investor and use case. If an asset allocator is looking to add a core private equity manager to their portfolio, they may find a generalist approach appealing. However, another asset allocator looking for a niche manager may seek a manager with style metrics that indicate more of a specialist approach. Another example of the possibility of diverging interpretation of style is the evaluation of an existing fund manager. If an asset allocator hired a concentrated manager, it would frame their judgement of style given the expectations that the manager employs a specialist strategy.

Methodology

The PB Manager Style metrics repurpose the Herfindahl-Hirschman Index (HHI),[1] which was originally created to determine the level of industry concentration for anti-trust regulation cases. The measure has also been widely used to assess concentration in areas of finance, such as bank credit risk and public market portfolios. The HHI is a simple and intuitive mathematical framework that can also be applied to the evaluation of private market managers and portfolios.

1: "Herfindahl-Hirschman Index," US Department of Justice, July 31, 2018.

The basic idea behind the HHI is that each member of a group contributes to the degree of concentration based on its share of the group total. We will start with a simple example as the metric was originally intended. Assume there are four companies in an industry with total revenues of $1.0 billion, and each company has an equal share (25%) of the revenue. The HHI for this hypothetical industry would be calculated as follows:

$HHI = (25)^2 + (25)^2 + (25)^2 + (25)^2 = 2{,}500$

The terms in the equation above represent the revenue share of each of the four companies. Now, assume that the industry has one dominant company with 70% of the revenues, and the other three companies have an equal share of the remaining revenue. The HHI in this example would be calculated as:

$HHI = (70)^2 + (10)^2 + (10)^2 + (10)^2 = 5{,}200$

Finally, in a monopolistic example where one company controls the entire industry, the HHI would be calculated as:

$HHI = (100)^2 + (0)^2 + (0)^2 + (0)^2 = 10{,}000$

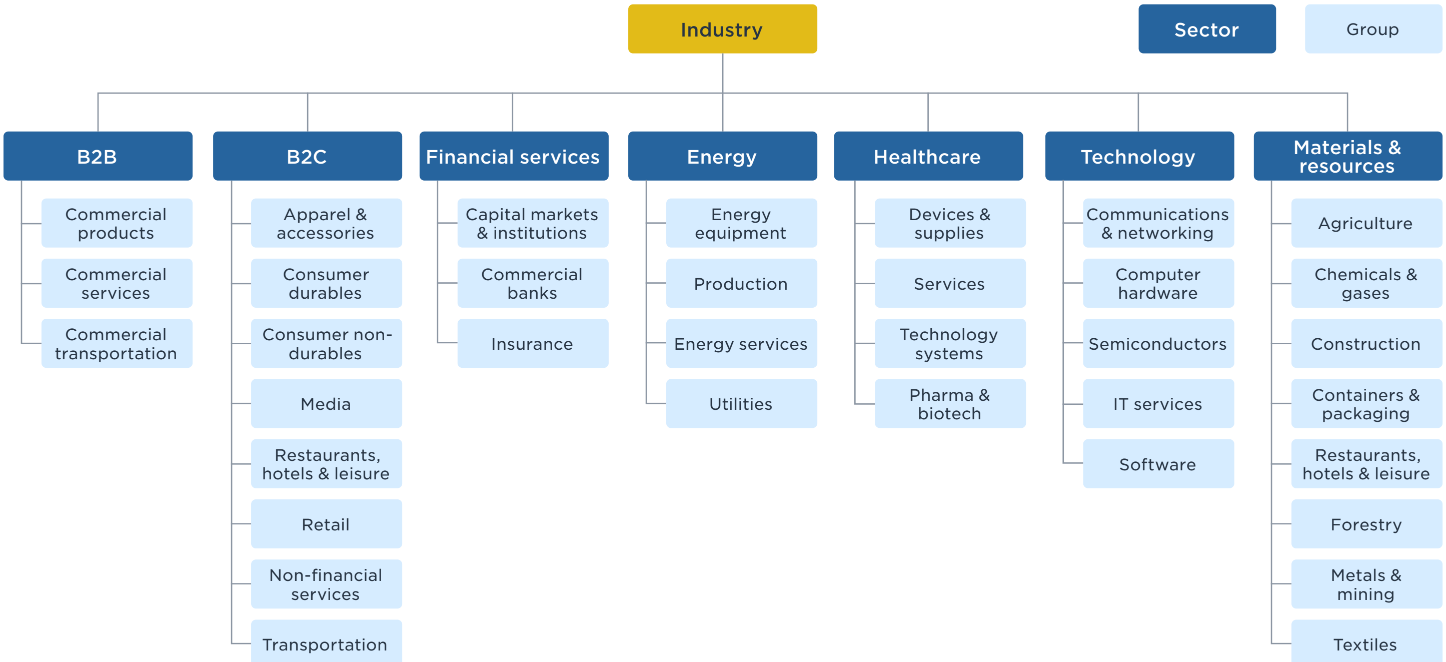
This example where the HHI equals 10,000 represents the maximum possible value. The minimum value will occur when all companies are equally weighted, but the exact minimum score depends on the number of companies within an industry. The table below shows the minimum HHI score for varying industry sizes.

Number of companies	Minimum HHI
2	5,000
3	3,333
4	2,500
5	2,000
6	1,667
7	1,429

Source: PitchBook | **Geography:** Global

The HHI methodology can easily be applied to the different characteristics of a portfolio, as discussed above. For example, to apply it to a manager's industry bets, companies in the example above are replaced by sector and revenue is replaced by deal count—the math is exactly the same. In addition to looking at a manager's deal count share at the sector level, we also consider how concentrated it is within each sector. For example, if a manager has all of its healthcare investments in biotech companies, that is a more specialized approach than if the healthcare investments also included devices, services, and tech. To show this, we calculate an HHI for the healthcare sector by looking at the percentage of deals done in the devices and supplies, services, technology systems, and pharmaceuticals/biotech industry groups within healthcare. This step is repeated for each sector in which the manager invests.

PitchBook Industry Map



Source: PitchBook | **Geography:** Global

The same two-dimensional framework is applied to geography. In this case, we calculate an HHI at the global region level, and then separate HHIs within each global region by looking at the deal counts by country, which measures both a manager's specialization across and within geographic regions. Due to the high concentration of investments within the United States and the common occurrence of US-only managers, we break the country out into its primary regions for additional granularity. All deals in the US are assigned to one of the following regions: Mid-Atlantic, New England, Southeast, Midwest, Great Lakes, Mountain, or West Coast.

The types of deals in which a manager participates is the third style component. Once again, we calculate an HHI to measure the degree of specialization within this style category. Unlike industry and geography, this metric only uses one dimension: the primary type of each deal. For example, in the VC space it is common for managers to focus on one area of the funding cycle, such as early- or late-stage rounds. These types of managers are likely to show up as specialists in this category. On the other hand, some VC managers will invest in companies regardless of what stage the company is in, and they should be viewed as generalists.

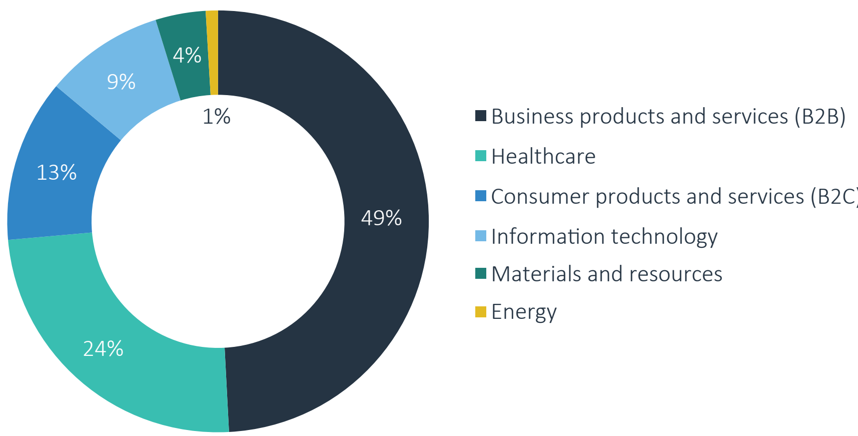
The final style category is deal size, which is the only one of the four to not use the HHI framework. Instead of measuring the degree of specialization, this category looks at the average total capital raised from all investors of the deals in which the manager has participated, which can be thought of as a proxy for the size of companies in which a manager invests. With this interpretation, the deal size category is similar to the large-cap versus small-cap style in public equities.

Example

To solidify this idea, we walk through a real-world example below for the industry style of an anonymous manager. In upcoming notes, we will use this framework to provide insights into the PE and VC manager universes as well as specific managers.

The manager in this example is a well-known PE buyout firm with more than 1,000 deals found on the PitchBook platform. The chart below shows the breakdown of its investments; the percentage is based on the number of deals in the seven PitchBook sectors.[2]

Proportion of deals by sector



Source: PitchBook | **Geography:** Global

This manager clearly has a preference for B2B and healthcare companies, with those two sectors making up almost three quarters of its investments. The remaining quarter is split across consumer products and services (13%), technology (9%), materials and resources (4%), and energy (1%). Using these allocations, the HHI is calculated as follows:

$$HHI = (49)^2 + (24)^2 + (13)^2 + (9)^2 + (4)^2 + (1)^2 \approx 3{,}200$$

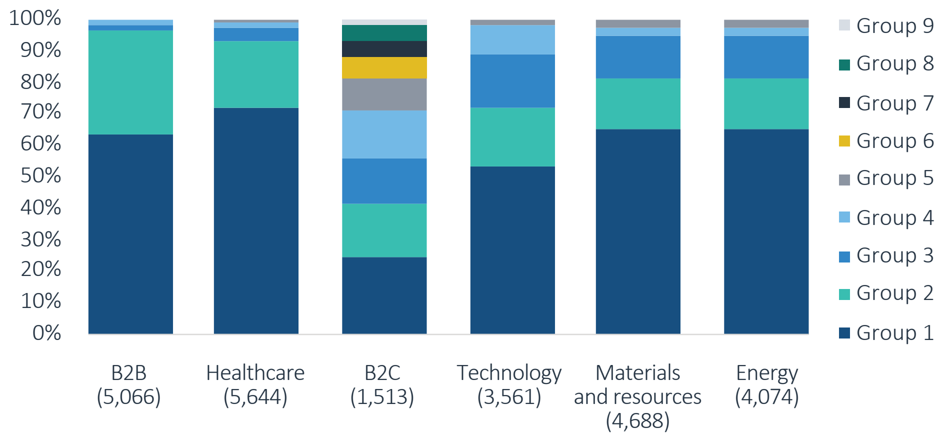
The sector HHI of approximately 3,200 indicates a low to moderate degree of specialization. While the raw HHI may be informative in certain instances, it may be more helpful to view this in relative terms. In this case, a score of around 3,200 ranks in the 46th percentile of all PE managers.[3] Or in other words, this manager has a greater degree of industry sector specialization than 46% of its peers.

The next step is to look at the investments within each sector to measure industry specialization at a more granular level. This involves calculating an HHI for each sector by looking at the breakout of investments in the industry groups within that sector. Finally, in order to boil the HHIs for each of the seven sectors down to just one value, we take an average weighted by each

2: Since the firm had no investments in the finance sector, that sector was not included in the chart.
3: The PE manager universe includes the following investor types: PE/buyout, growth/expansion, merchant banking firm, business development company, mezzanine, and infrastructure.

sector's allocation in the portfolio. In this example, the weight of the B2B sector will be 49%, the weight of the Healthcare sector will be 24%, and so on. The visual below shows the industry group breakout within each sector and the corresponding HHI. We see that this manager is fairly specialized within B2B and healthcare, the two sectors with the most investments. On the other hand, the manager is diversified within the B2C sector as shown by the extremely low HHI of 1,513. However, since the manager only has 9% of its overall investments in B2C, it will play a lesser role in the final calculation of the group HHI.

Proportion of deals by sector and industry group



Source: PitchBook | **Geography:** Global

After calculating the weighted average, we get an industry group HHI of 4,600, which places this manager in the 31st percentile among all PE managers. The last step is to fold the two HHIs (sector HHI of 3,200 and group HHI of 4,600) into one final value. Given that there is a greater degree of differentiation between companies in different sectors (e.g., healthcare versus tech) than between companies in different groups within the same sector (e.g., computer hardware versus software), we place more weight on the sector HHI than the group HHI at 70% and 30%, respectively. This results in a final industry HHI of 3,620 and suggests that they are more specialized than just 35% of their peers

This example was meant to give a basic overview of the most important parts of the methodology. For a more detailed and technical explanation of the methodology, please email reports@pitchbook.com.

PitchBook Platform subscribers can expect to see these descriptors on investor profiles in H1 2021.

Conclusion

PitchBook Manager Style provides asset allocators with a tool to analyze a private market manager's investments using metrics that can augment performance track records. These metrics offer insight into important aspects of the portfolio decision-making process, including industry, geography, deal types, and deal sizes. Private market participants can use these insights to gain a better understanding of a prospective manager's investment style, how that manager would fit into an existing private markets portfolio, and to verify existing managers are investing in line with expectations among other use cases.