DIAMOND HILL

INVESTED IN THE LONG RUN

The Art & Science of Capacity Management

March 2021

- In the asset management industry, there is an inherent conflict of interest between asset managers and clients: greater AUM leads to higher revenue for the manager but can potentially negatively impact performance for existing clients.
- As such, capacity discipline is a critical component of an active manager's ability to add value for clients.
- At Diamond Hill, we have been thoughtful and intentional about properly aligning our interests with those of our clients to ensure our portfolio managers are incentivized to add value for clients rather than gather assets.
- The primary factors we use to estimate a strategy's capacity include: the ability to take a meaningful position across the full opportunity set, liquidity considerations, and our desire to maintain a long-term partnership with existing clients.

Active management's value proposition rests on the idea that a consistent and repeatable investment process has the potential to outperform passive alternatives over the long term. At Diamond Hill, we seek to add value for clients through a valuation disciplined, bottom-up approach, utilizing a long-term perspective and aligning our interests with those of our clients.

Alignment of interests with our clients is a critical component of our mission, and we accomplish this in several ways:

- **Results-oriented compensation philosophy:** We compensate portfolio managers based on investment results over rolling five-year periods.
- **Invest alongside our clients:** All portfolio managers invest alongside clients with significant personal investments in the strategies they manage.
- **Fair and reasonable fees:** In addition to fair and reasonable fees, we offer a variable fee option to equity clients, linking management fees to investment results.
- **Capacity discipline:** Portfolio managers have discretion in determining the capacity of the strategies they manage.

It is this last point that we will explore in this piece.

Why Capacity Matters

In the asset management industry, a common structural flaw exists, which was summarized by Warren Buffett in his 2016 Berkshire Hathaway annual letter to shareholders.

> "There are three connected realities that cause investing success to breed failure. First, a good record quickly attracts a torrent of money. Second, huge sums invariably act as an anchor on investment performance... Third, most managers will nevertheless seek new money because of their personal equation – namely, the more funds they have under management, the more their fees.[1]"

[1]Berkshire Hathaway 2016 Annual Shareholder Letter.

Below we illustrate these conflicting realities. Chart 1 demonstrates the concept that under a fixed-fee arrangement the more assets under management (AUM), the higher the revenue. Chart 2 illustrates that if a strategy grows without capacity constraints, a portfolio manager's ability to generate excess returns eventually diminishes.

Chart 1

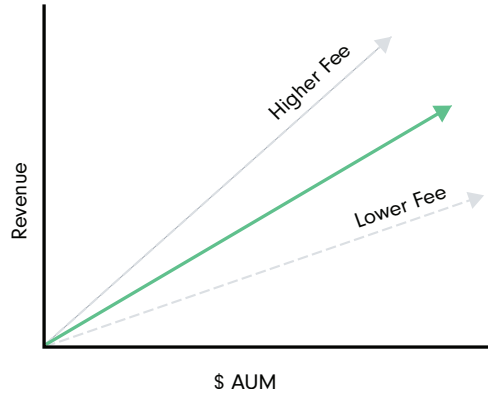
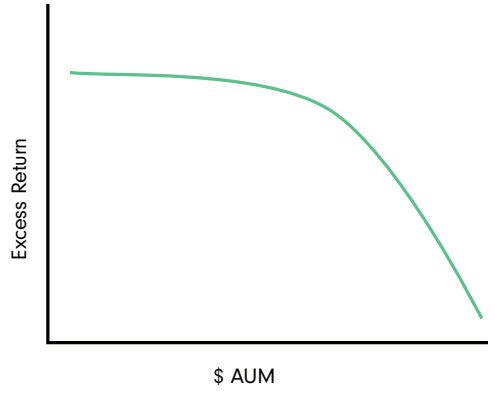


Chart 2



Herein lies the problem: many investment managers fail to properly address capacity, and the result can be detrimental to clients. If portfolio managers are incentivized to grow assets under management, time spent attracting new clients can act as a distraction from delivering outstanding investment results for existing clients. In addition, AUM may grow to the point where it begins to impede the manager's ability to generate excess returns.

At Diamond Hill, we sustain the growth of our strategies to the point where revenue supports our ability to retain the investment team responsible for generating excess returns while simultaneously protecting the portfolio manager's ability to add value.

To eliminate potential conflicts of interest, we link portfolio manager compensation to long-term investment results (rolling five-year periods) and give portfolio managers discretion in determining capacity for the strategies they manage, including decision-making rights on closing to new investors. Portfolio manager interests are thereby aligned with our clients' interests in two ways:

1. Because incentive compensation is based on investment results, portfolio managers are incentivized to close strategies before reaching a level where their ability to generate excess return is hampered.

2. Through meaningful personal investments in their strategies, portfolio managers are incentivized to optimize investment results rather than grow assets under management.

Determining Capacity Estimates

Estimating capacity is both an art and science. There is no perfect formula that determines the exact capacity for a strategy, but there are three key factors that we believe are most impactful:

1. Our ability to take a meaningful position in securities across the **full opportunity set.**

2. **Liquidity** of each security and the portfolio as a whole.

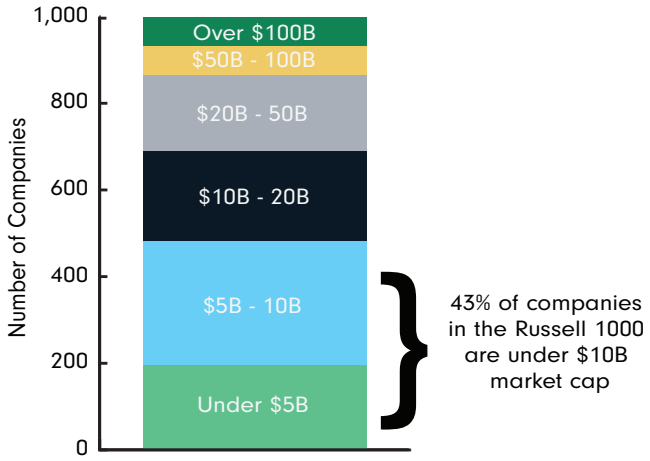
3. Retaining our **long-term partnership** with clients.

Utilizing the Full Opportunity Set

Why does the ability to generate excess returns diminish as AUM grows? If assets grow without limits, there comes a point at which the manager cannot build meaningful position sizes across the full opportunity set. As such, managers are forced to pass up alpha opportunities, invest in a larger number of positions (with potentially less conviction), or move up the size spectrum, which may compromise the strategy's objectives or increase the likelihood of mirroring its benchmark.

Let's consider the example in Exhibit 1 using the large cap universe, approximated by companies within the Russell 1000 Index.

Exhibit 1: Number of Companies in the Russell 1000 Index by Market Capitalization



Source: FactSet. As of 31 Dec 2020.

Given the highly liquid nature of many mega cap stocks, investors often underestimate the importance of capacity for a strategy like large cap. However, the large cap universe encompasses a wide range of market capitalizations, and it is important to consider the potentially adverse impacts of unconstrained asset growth.

Exhibit 2: Hypothetical Large Cap Stock Example

Assumed assets in Large Cap strategy	$50B
Amount of stock for a 1% position	$500M
Market cap of stock to purchase	$5B
Percent of shares outstanding needed to be bought	10%

In Exhibit 2 we consider a hypothetical manager with $50 billion in assets. To build a modest 1% position in a $5 billion market cap company, the manager would need to purchase 10% of shares outstanding. Even if the manager moves up the market cap spectrum, he/she would still need to acquire 5% of a $10 billion market cap company just to establish a 1% position. This would hamper the manager's ability to establish a 1% position in nearly half of the companies in the Russell 1000 Index. The impact is magnified as you move down the market cap spectrum.

What if a manager wanted to purchase a higher-conviction position, say 2%? As illustrated in Exhibit 3, establishing a 2% position would certainly have adverse market implications.

Exhibit 3: Hypothetical 2% Position Example

	Large Cap	Mid Cap	Small Cap
Assumed assets in strategy	$50B	$25B	$10B
Amount of stock for a 2% position	$1B	$500M	$200M
Market cap of stock to purchase	$5B	$2.5B	$1B
Percent of shares outstanding needed to be bought	20%	20%	20%

At Diamond Hill, this is an important consideration of our capacity discipline, as we seek to put the most capital behind our highest-conviction ideas while maintaining a diversified portfolio. We also believe our ability to add value for clients is predicated on our willingness to look different from the benchmark. As such, we manage relatively concentrated portfolios. For example, our Large Cap strategy holds 40 to 60 positions, with over 30% of assets in the top ten holdings.

Preserving our ability to build high-conviction portfolios while utilizing the full opportunity set is directly linked to our capacity discipline.

Liquidity Considerations

In determining capacity, we also consider the liquidity of the securities we own and how long it would take to trade in and out of a security without impacting the market.

Let's revisit the hypothetical manager in Exhibit 1 with a large cap strategy with $50 billion in AUM. How long would it take the manager to establish or exit a 1% position without a significant market impact, i.e., only trading 20% of the average trading volume per day?

Exhibit 4: Establishing a 1% Position for a Manager With $50B in AUM (as of Dec 2020)

Company	Market Cap	Average Trading Volume*	Estimated Days To Buy 1% Position**
Stock 1 (BorgWarner)	$10.6B	$111M	23
Stock 2 (NVR)	$17.2B	$88M	29
Stock 3 (Hanesbrands)	$6.2B	$84M	30

*Used three-month average volume x 50-day average share price.
**Assuming 20% of average volume.

In Exhibit 4, we use actual data for three companies currently held in our Large Cap strategy. Liquidity (defined as the number of days it takes to establish a 1% position) is lower for the two larger stocks versus the smallest one, indicating that average trading volume is an important consideration when determining capacity. The example above also suggests that if AUM is allowed to grow unchecked, it can become onerous to trade in and out of positions without having an adverse market impact.

Long-Term Partnership

The final element of our capacity management philosophy is prioritizing our long-term client relationships. When we soft close strategies, we do so at a point where there is sufficient capacity for our existing clients to add additional capital if desired. In our experience, soft closing strategies has been a successful tool in tempering inflows such that we have not needed to hard close any of our strategies.

We have a demonstrated track record of closing strategies to protect existing clients. Recent examples include:

- Large Cap – soft closed March 2021
- Small-Mid – soft closed April 2016
- Small Cap – soft closed December 2015
- Long-Short – soft closed June 2015

While the Small-Mid Cap and Large Cap strategies remain in a soft close status, Small Cap and Long-Short have re-opened to new investors. Exhibit 5 shows the current capacity estimates for our most widely-held equity strategies.

Exhibit 5: Capacity Estimates

Strategy	Capacity Estimate
Small Cap	$1.5B-$2.0B
Small-Mid Cap (closed to most new investors)	$2.5B-$3.5B
Mid Cap	$4.0B-$5.0B
Large Cap (closed to most new investors)	$20.0B-$25.0B
Large Cap Concentrated	$4.0B-$6.0B
All Cap Select	$1.0B-$2.0B
International	$15.0B-$20.0B
Long-Short	$4.0B-$5.0B

Conclusion

Our strong commitment to capacity discipline provides the foundation needed to act in the best interests of our clients. It is on that foundation that we build high conviction, differentiated portfolios that we believe have the potential to outperform their benchmarks and provide our clients with strong investment outcomes over the long term.

As of 31 Jan 2021, Diamond Hill owned shares of BorgWarner, Inc., Hanesbrands, Inc. and NVR, Inc.

The Russell 1000 Index measures the performance of roughly 1,000 US large-cap companies. The index is unmanaged, market capitalization weighted, includes net reinvested dividends, does not reflect fees or expenses (which would lower the return) and is not available for direct investment. Index data source: London Stock Exchange Group PLC. See diamond-hill.com/disclosures for full disclaimers.