# The Frustrating Law of Active Management

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**SUMMARY**

- In an ideal world, all investors would outperform their benchmarks. In reality, outperformance is a zero-sum game: for one investor to outperform, another must underperform.

- If achieving outperformance with a certain strategy is perceived as being "easy," enough investors will pursue that strategy such that its edge is driven towards zero.

- Rather, for a strategy to outperform in the long run, it has to be hard enough to stick with in the short run that it causes investors to "fold," passing the alpha to those with the fortitude to "hold."

- In other words, for a strategy to outperform in the long run, it must underperform in the short run. We call this *The Frustrating Law of Active Management*.

# About Newfound Research

Founded in August 2008, Newfound Research is a quantitative asset management firm based in Boston, MA.

Investing at the intersection of quantitative and behavioral finance, Newfound Research is dedicated to helping investors achieve their long-term goals with research-driven, quantitatively-managed portfolios, while simultaneously acknowledging that the quality of the journey is just as important as the destination.

We work exclusively with financial advisors and institutions to help them manage the wealth of their clients through our suite of investment portfolios and mutual funds.

# Portfolios Focused on Risk Management

Our strategies reflect our view that investing is not easy. Emotional decisions can derail even the best laid plan. Therefore, we believe that the optimal investment plan is, first and foremost, one that investors can stick with. Research shows that investors feel the pain of losses more than they feel the joy of gains. This is reflected in a deep desire to protect the capital that they have worked hard to accumulate. Accordingly, we seek to improve risk-adjusted returns and investor experience by prioritizing downside risk management and seeking to avoid large losses.

Our portfolios are available as separately managed accounts, through model manager platforms, and as mutual funds[1].

# Multi-Manager Model Allocations

For investors looking to outsource their asset allocation and manager selection decisions, we offer our QuBe ("Quantitative Behavioral") portfolio series, a suite of strategically managed, behavior aware, hybrid active/passive portfolios offered with zero overlay fee[2].

**Newfound was awarded 2016 ETF Strategist of the Year by ETF.com[3].**

[1] See http://www.thinknewfoundfunds.com
[2] See http://www.thinknewfound.com/qube-managed-portfolios
[3] An ETF Strategist is a firm that builds portfolios primarily using exchange-traded funds.

A few weeks ago, AQR published a piece titled *Craftsmanship Alpha: An Application to Style Investing*[4], to which Cliff Asness wrote a further perspective piece titled *Little Things Mean a Lot*[5].

We'll admit that we are partial to the title "craftsmanship alpha" because portfolio craftsmanship is a concept we spend a lot of time thinking about. In fact, we have a whole section titled Portfolio Craftsmanship on the Investment Philosophy section of our main website.[6] We further agree with Cliff: little things *do* mean a lot. We even wrote a commentary about it in May titled *Big Little Details*[7].

But there was one quote from Cliff, in particular, that inspires this week's commentary:

> *Let's just make up an example. Imagine there are ten independent (uncorrelated) sources of "craftsmanship alpha" and that each adds 2 basis points of expected return at the cost of 20 basis points of tracking error from each (against some idea of a super simple "non-crafted" alternative.) Each is thus a 0.10 Sharpe ratio viewed alone. Together they are expected to add 20 basis points to the overall factor implementation inducing 63 basis points of tracking error (20 basis points times the square-root of ten). That's a Sharpe ratio of 0.32 from the collective craftsmanship (in addition to the basic factor returns).*
>
> *[…]*
>
> *But, as many have noted in other contexts, a Sharpe ratio like 0.32 can be hard to live with. Its chance of subtracting from your performance in a given year is about 37%. Its chance of subtracting over five years is about 24%. And, wait for it… over twenty years the chance it subtracts is still about 8%. That's right. There's a non-trivial chance your craftsmanship is every bit as good as you think, and it subtracts over two full decades, perhaps the lion's share of your career. Such is the unforgiving, uncaring math.*

Whether it is structural alpha, style premia, or craftsmanship alpha: we believe that the very uncertainty and risk that manifests as (expected) tracking error is a necessary component for the alpha to exist in the first place.

The "unforgiving, uncaring math" that is a result – the fact that you can do everything right and still get everything wrong – is a concept that in the past we have titled *The Frustrating Law*[8] *of Active Management*.

## Defining *The Frustrating Law of Active Management*

We define The Frustrating Law of Active Management as:

[4] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3034472
[5] https://www.aqr.com/cliffs-perspective/little-things-mean-a-lot
[6] https://www.thinknewfound.com/investment-philosophy
[7] https://blog.thinknewfound.com/2017/05/big-little-details/
[8] To be clear that we don't mean a "law" in the sense of an inviolable, self-evident axiom. In truth, our "law" is much closer to a "theory."

*For any disciplined[9] investment approach to outperform over the long run, it must experience periods of underperformance in the short run.*

As if that were not frustrating enough a concept – that even if we do everything right, we still have to underperform from time-to-time – we add this corollary:

*For any disciplined investment approach to underperform over the long run, it must experience periods of outperformance in the short run.*

In other words, even if a competing manager does *everything wrong*, they should still be rewarded with outperformance at some point. Talk about adding insult to injury.

For the sake of brevity, we will only explore the first half of the law in this commentary. Note, however, that the second law is simply the inverse case of the first. After all, if we found an investment strategy that consistently underperformed, we could merely inverse the signals and have a strategy that consistently outperforms. If the latter is impossible, so must be the former.

## For it to work, it has to be hard

Let's say we approach you with a new investment strategy. We've discovered the holy grail: a strategy that *always* outperforms. It returns an extra 2% over the market, consistently, every year, after fees.

Ignoring reasonable skepticism for a moment, would you invest? *Of course* you would. This is free money we're talking about here!

In fact, everyone we pitch to would invest. Who wouldn't want to be invested in such a strategy? And here, we hit a roadblock.

*Everyone* can't invest. Relative performance is, after all, zero sum: for some to outperform, others must underperform. Our extra return has to come from somewhere.

If we do continue to accept money into our strategy, we will begin to approach and eventually exceed capacity. As we put money to work, we will create impact and inform the market, driving prices away from us. As we try to buy, prices will be driven up and as we try to sell, prices will be driven down. By chasing price, our outperformance will deteriorate.

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[9] The disciplined component here is very important. By this, we mean a strategy that applies a consistent set of rules. We do not mean, here, a bifurcation of systematic versus discretionary. Over the years, we've met a large number of discretionary managers who apply a highly disciplined approach. Rather, we mean those aspects of an investment strategy that can be codified and turned into a set of systematically applied rules.

Thus, even a discretionary manager can be thought of as a systematic manager plus a number of idiosyncratic deviations from those rules. The deviations must be idiosyncratic, by nature. If there was a consistent reason for making the deviations, after all, the reason could be codified itself. Thus, true discretion only applies to unique, special, and non-repeatable situations.

Note that the discipline does not preclude randomness. You could, for example, flip a coin and use the result to make an investment decision every month. So long as the same set of rules is consistently applied, we believe The Frustrating Law of Active Management applies.

And it needn't even be us trading the strategy. Once people *learn* about what we are doing – and how easy it is to make money – others will begin to employ the same approach. Increasing capital flow will continue to erode the efficacy of the edge as more and more money chases the same, limited opportunities. The growth is likely to be exponential, quickly grinding our money machine quickly to a halt.

So, the only hope of keeping a consistent edge is in a mixture of: (1) keeping the methodology secret, (2) keeping our deployed capital well below capacity, and (3) having a structural moat (e.g. first-mover advantage, relationship-driven flow, regulatory edge, non-profit-seeking counter-party, etc).

While we believe that all asset managers have the duty to ensure #2 remains true (we highly recommend reading *Alpha or Assets* by Patrick O'Shaughnessy[10]), #1 pretty much precludes any manager actually trying to raise assets (with, perhaps, a few limited exceptions in the hedge fund world that can raise assets on brand alone).

The takeaway here is that if an edge is perceived as being easy to implement (i.e. not case #3 above) and easy to achieve, enough people will do it to the point that the edge is driven to zero.

Therefore, if an edge is *known* by many (e.g. most style premia like value, momentum, carry, defensive, trend, etc), then for it to persist over the long run, the outperformance must be difficult to capture. Remember: for outperformance to exist, weak hands must at some point "fold" (be it for behavioral or risk-based reasons), passing the alpha to strong hands that can "hold."

This is not just a case of perception, either. Financial theory tells us that a strategy cannot always outperform its benchmark with certainty. After all, if it did, we would have an arbitrage: we could go long the strategy, short the benchmark, and lock in certain profit. As markets loathe (or, perhaps, *love*) arbitrage, such an opportunity should be rapidly chased away. Thus, for a disciplined strategy to generate alpha over the long run, it *must* go through periods of underperformance in the short-run.

## Can We Diversify Away Difficulty?

Math tells us that we should be able to stack the benefits of multiple, independent alpha sources on top of each other and simultaneously benefit from potentially reduced tracking error due to diversification.

Indeed, mathematically, this is true. It is why diversification is known as the only free lunch in finance.

This certainly holds for *beta*, which derives its value from economic activity. In theory, everyone can hold the Sharpe ratio optimal portfolio and introduce cash or leverage to hit their appropriate risk target.

[10] http://investorfieldguide.com/alpha-or-assets/

Alpha, on the other hand, is explicitly captured from the hands of other investors. Contrary to the Sharpe optimal portfolio, everyone cannot hold the Information ratio optimal portfolio at the same time[11]. *Someone* needs to be on the other side of the trade.

Consider three strategies that all outperform over the long run: strategy A, strategy B, and strategy C. Does our logic change if we learn that strategy C is simply 50% strategy A plus 50% strategy B? Of course not! For C to continue to outperform over the long run, it must remain sufficiently difficult to stick with in the short-run that it causes weak hands to fold.

## Conclusion

For a strategy to outperform in the long run, it has to be perceived as hard: hard to implement or hard to hold. For public, liquid investment styles that most investors have access to, it is usually a case of the latter.

This law is underpinned by two facts. First, relative performance is zero-sum, requiring some investors to underperform for others to outperform. Second, consistent outperformance violates basic arbitrage theories.

While coined somewhat tongue-in-cheek, we think this law provides an important reminder to investors about reasonable expectations. As it turns out, the proof is not always in the eating of the pudding. In fact, track records can be entirely misleading as validators of an investment process. As Cliff pointed out, even if our alpha source has a Sharpe ratio of 0.32, there is an 8% chance that it *subtracts* from performance over the next 20-years.

Conversely, even negative alpha sources can show beneficial performance by chance. An alpha source with a Sharpe ratio of -0.32 has an 8% chance that it *adds* to performance over the next 20-years.

And that's why we call it The *Frustrating* Law of Active Management. For investors and asset managers alike, there is little more frustrating than knowing that to continue working over the long run, good strategies have to do poorly, and poor strategies have to do well over shorter timeframes.

*Corey Hoffstein & Justin Sibears*

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[11] Well, technically they can if everyone is a passive investor. In this case, however, the information ratio would be undefined, with zero excess expected return and zero tracking error.

**About Newfound Research**

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