

Oversharing Active Share: Why High Active Share is Neither Sufficient nor Necessary for Alpha

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Highlights

- The essential ingredient for a manager to consistently produce a return in excess of the benchmark (repeatable alpha) is either:
Skill to consistently identify outcomes that the market has not fully priced-in
or
The ability to exploit inefficiencies of benchmark construction itself.
- It is investment skill and not active-share that leads to true outperformance. There are many examples of low active-share managers who delivered strong long-term benchmark-relative and peer-beating results.
- Investment skill is the most important factor needed to justify active fees. When skill is present, a little bit of active share can go a long way.
- A hypothetical multi-manager portfolio of high active-share strategies (to create an intentionally low active-share blend), can produce peer-beating results with increased efficiency.

"The islanders were impressed both by the egalitarianism of the Americans and their obvious wealth and power. (Cargo cult) followers...built symbolic landing strips to encourage American airplanes to land and bring them cargo."

Cargo Cult, New World Encyclopedia

The cargo cults of Melanesia were born from the abrupt American military presence in the South Pacific during World War II. The primitive natives of the islands admired, and indeed worshipped, the seemingly endless wealth of the new arrivals who literally descended upon them in planes from the sky. Their ignorance of modern technology lulled them into believing that, if they built symbolic runways, the Americans would one day return to their islands with treasured cargo.

The gospel of active share emerged in 2009 from the writings of two professors, Antti Petajisto and Martijn Cremers, who took a temporally and geographically limited data set and found a connection between excess returns and active share. Their acolytes proselytize that investment managers are "closet indexing", unless they are managing to the professors' arbitrary definition of worthwhile active risk. This lack of understanding about root causes and their effects may be amusingly endearing when observing primitive cultures, however it must not be misapplied to something as important as an investor's financial health.

The use of active share should be limited at best to a "truth check" of a manager's investment philosophy claims, rather than a meaningful measure of the worth of a manager's offerings, given its many shortcomings. These are outlined—and explored sequentially in the remainder of this paper:

i) The conclusion from Petajisto's 2013 follow-up study on active share was very specific about the type of high tracking error that is desirable, but has been transmogrified by devotees into something general. In the best case, this is for the sake of simplicity; however in the worst case it can be construed as an attempt to add a self-serving spin to the zeitgeist. Further, the original and follow-up studies have a number of flaws in their construction that limit the usefulness of the active share measure.

ii) There are many counterexamples of low active share managers delivering strong long-term benchmark-relative and peer-beating results. This clearly demonstrates that high active share is not a necessary condition for justifying active fees. To imply otherwise is to ignore the facts.

iii) Simple logic dictates that investment skill is the most important factor needed to justify active fees. A thought experiment around perfect skill and low active share is conducted, and the outcome clearly highlights that a little bit of active share can go a long way. We also construct a hypothetical multi-manager portfolio of high active share strategies to create an intentionally low active-share blend, and demonstrate that peer-beating results with increased efficiency is the outcome.

A cultish devotion to active share will not cause planeloads of alpha to magically appear. There are many ways to add value over a benchmark. However, the essential ingredient for repeatable alpha potential is either the skill to consistently identify outcomes that the market has not fully priced in, or the ability to exploit inefficiencies of benchmark construction. It is in these respects alone that managers can distinguish themselves as worthy of charging active fees.

Ivory Tower of Babel

Cremers and Petajisto (2009)¹, and Petajisto (2013)² published studies that showed a monotonic relationship between active share and alpha. Ignoring the flaws of their studies for a moment, Petajisto (2013) makes clear that all high active share is not alike. It is active share that is combined with low systematic risk—that is, portfolios that do not overweight sectors or industries, but rather are highly selective within those parameters, that *appear* to have predictive power.

Many of the vocal proponents of high active share ignore the premise of factor-neutral portfolio construction. A portfolio of 40 stocks is a bet against all of the others in the benchmark after all, and one way to limit the “known unknowns” is to take systematic risk out of the equation. This is a very specific comment about active share, but has been generalized as a need to simply have high active share as a prerequisite to justify one’s existence as an active manager.

One potential flaw with how Petajisto identifies low tracking error is that he does so after the fact using returns-based data, rather than identifying managers with low systematic risk by verifying that managers that he has labeled as *low tracking error* actually hold stocks in all major industries. The mathematical expression of tracking error is the standard deviation of excess returns. Low tracking error can be observed from high active share managers who have been lucky enough to be on the right side of a small number of impactful factor tilts, rather than the minimization of systematic risk as specified by Petajisto. In a random assortment of high active share managers, some will ultimately have higher returns with lower tracking error, even though they’ve taken factor bets. Petajisto’s study does not attempt to separate out stock selection skill from factor-betting luck.

Additionally, Petajisto defines the “low” tracking error group of high active share managers as those managers with a mean value of 8.5%. This would not be considered truly low tracking error by most practitioners (for example, the 10-year first quartile break to March 2016 of tracking error in eVestment’s U.S. Large Cap Core Equity universe with 262 observations is a relatively paltry 475 bps). Studies highlight that tracking error in that range invalidates any conclusions about alpha in the limited time period provided by Petajisto’s data set³. The 2009 and 2013 studies also only focus on one country (the U.S.), so any comments about the robustness of the conclusions in other geographies are baseless.

While the data sets used in the studies control for survivorship bias by including “dead” funds, there is conceivably an unobservable silent outcome of managers that had poor performing high active share strategies that went out of business because of their high active share. These managers could have continued to perform very poorly and would likely have lowered the outcome for higher active share managers in general. The combination of high active share and low skill is the worst one after all; however the data cannot reflect this, even though it technically controls for survivorship bias.

The most compelling argument against the conclusions of Cremers and Petajisto was uncovered by Frazzini, Friedman, and Pomorski (2015)⁴, who showed that Petajisto did not divide the manager data into relevant universes. All of the data on active share was simply lumped into one large collection of managers, regardless of whether the manager was small cap, large cap or in between.

The major flaw with this is that there was a distinct pattern of active share: high active share managers tend to be small-cap managers, and low active share managers tend to be large-cap managers. In fact, when Frazzini et al looked at the data, they found that the highest quartile of active share of large-cap funds did not even meet the bottom quartile of active share of small-cap funds! This detail is important, given that investors choose their funds based on the type of market exposure they want, not the active share that they want.

Once the benchmark was controlled for, Frazzini et al found that there is no meaningful relationship between active share and benchmark-relative performance, except among small-cap stocks.

High Alpha and Low Active Share

If low active share is supposed to be detrimental to alpha, we should not be able to review a robust universe and find strategies with low active share in the first quartile over the long run. In fact, we looked at the eVestment U.S. Large Cap Growth Equity Universe (chosen for its large sample size of 273 observations over the 10-years ending March 2016). We find that, of the 69 first quartile observations, eight of them had average active shares at or below the 60% active share cut-off point⁵ (using an average of the longest available data set up to 10-years for each manager) that has been touted as “closet indexing”.

Moreover, there were only 23 data points of managers with active shares below 60% to begin with; in other words, eight out of 23 managers (~35%) with low active share wound up in the first quartile. Rather than demonstrating that low active share managers have a disadvantage versus the peer group, this review shows that, as a group, they have a higher probability of being in the first quartile than a random variable.

Managers that had low active shares of less than 70% but more than 60%, accounted for another 14 data points in the first quartile. In fact, one of these low active share managers was actually the fourth-best manager out of the entire 273 observations. Therefore, 22 managers, or fully 32% of the first quartile, would be characterized as low active share managers. This is counter to the expectation that low active share managers cannot deliver strong performance.

Perfect Skill + Low Active Share = Top Percentile Performance

Imagine a U.S. equity manager with a parsimonious crystal ball that provides only one stock tip per year. The good news is it tells the manager what the best-performing stock in the S&P 500 Index is going to be over the next year. The manager tries to sell clients on the idea that he has perfect skill, and that he will buy a one-stock portfolio containing the best performing stock next year. He is universally turned down because of the institutionalized desire for diversified portfolios and regulatory limits on single stock concentration in a fund.

The manager does the next most rational thing: since he knows nothing with certainty about the 499 other stocks in the index, he buys all of them in their market-cap-weighted proportion for 90% of the portfolio. The other 10% of the portfolio is used to buy the crystal ball-informed best-performing stock. By definition, he has perfect skill, and only 10% active share. To the proponents of high active share, his lowly 10% active

share will appear to be vulgar closet indexing, and the manager would never pass a screen to get hired. However, a review of the data shows that this manager would not only beat the benchmark, he would be the absolute best manager in the universe. In fact, the second-best manager wouldn't even be close.

The real first-percentile manager in the eVestment Large Cap Equity universe over this 10-year period has 14.73% of annualized excess return. The crystal ball-informed low active share portfolio was better than this by over 8% annualized.

Clearly, it is investment skill and not active share that leads to true outperformance.

Of course, when confronted with perfect skill, the wealth-maximizing option is to take on 100% active share. However, in the real world, perfect skill does not exist, and a manager may have great instincts in one area, but fewer in another. The imperfect foresight in identifying skill and the intractable uncertainties of randomness means that high active share can just as easily be punished as rewarded.

Multi-manager Investing and Active Share

Multi-manager portfolios use an investment approach that combines multiple styles of active management. This reduces the performance noise associated with managers making security selection calls in areas where they are experts, while ignoring sections of the market where they have no informed views. This approach will reduce active share by design in order to isolate true skill from areas where informed judgment is not truly being made. It can be demonstrated that, by consciously decreasing the active share in this respect, returns can be peer-beating and more efficient than other first-quartile high active-share strategies.

Exhibit 1: S&P 500 Index (USD)

	Best Performing Stock	Return	Index Return	Portfolio Return (10/90)
2015	Netflix	134.38%	1.37%	14.7%
2014	Skyworks Solutions	156.33%	13.68%	27.9%
2013	Netflix	296.82%	32.37%	58.8%
2012	Regeneron Pharmaceuticals	208.62%	15.99%	35.3%
2011	Cabot Oil & Gas Corp.	100.96%	2.11%	12.0%
2010	Netflix	218.64%	15.06%	35.4%
2009	XL Group PLC	419.83%	26.45%	65.8%
2008	Dollar Tree Inc.	61.27%	-37.00%	-27.2%
2007	First Solar	796.44%	5.57%	84.7%
2006	Intercontinental Exchange Inc.	196.84%	15.78%	33.9%
		10-year annualized return	7.3%	30.4%

Source: Bloomberg data, calendar year returns

Exhibit 2: U.S. Equity Investment Managers - 10-year Results

	Weight	Active Share vs. S&P 500 (Q1 2006)	10-year Excess Return vs. S&P 500 (Q1 2006)	10-year Quartile*	10-year Tracking Error vs. S&P 500	10-year Information Ratio
Lower Quality Growth Manager	10	92%	3.77%	1	9.18%	0.41%
Higher Quality Growth Manager	25	95%	2.38%	1	9.44%	0.25%
Low Tracking Error Core Manager	30	37%	0.54%	2	1.94%	0.28%
Higher Quality Value Manager	25	87%	3.26%	1	4.8%	0.68%
Lower Quality Value Manager	10	82%	-0.86%	4	3.16%	-0.27%
Multi-manager Low Active Share Portfolio	100	55%	2.05%	1	2.88%	0.71%

*eVestment US Large Cap Equity Universe. Source: eVestment 10-year data ending March 31, 2016

The table above displays the 10-year results of a number of different U.S. equity investment managers chosen for their style offsets with one another. While performance represented a distinct “look-ahead” bias, this was intentional in order to demonstrate that combining high active-share managers into a low active-share aggregate increases the efficiency of the multi-managed portfolio.

This efficiency effect occurs because managers can differentiate and add value with unique and complementary patterns due to differences in style, timeframe, expertise in specific areas, etc. For example, high active-share portfolios can add episodic but large excess return over the long-run with no near-term catalysts; while a low active-share strategy can add consistent short-term excess returns with specific forecasts in a more finite timeframe. Both can be worthwhile endeavors that justify active fees.

Clearly, closet indexing is not the intent nor the outcome of an informed multi-manager, low active-share investment approach. A thoughtful blending of portfolio risks is the antidote to the fact that omniscience does not exist in the real world; the good news is that returns can be peer-leading and less risky with low active share.

Active Care: More Important than any Statistic

The excitement around active share is understandable—after all, past performance is not predictive, and a simple framework for assessing skill does not exist. However, no one said adding value was easy.

Finding consistent alpha is hard work, and actively caring about the details matters far more than a quest for any heuristic. Manager research and selection should start with a crisp skill definition that can serve as the foundation for alpha generation. While due diligence is simply ensuring that managers “do what they say”, true manager research actually seeks alpha enlightenment by answering whether a manager’s predictions around outcomes actually occur. What matters is not that a manager went through their standard weekly meeting process to make a decision, but rather what decision was actually made and whether the predicted outcome came true. Luck should never be confused for skill.

Confusing performance outcome with skill is a common mistake made by due diligence practitioners; rewarding a manager for their good luck when the state of the world changes in their favour (e.g. acts of god, supply shocks, etc.) can occur when only portfolio-level data, such as active share, is monitored. Thoughtful manager researchers need to study a substantial amount of game tape to have a chance at identifying skill. By deeply understanding the value of a manager using a skill-based framework, investors can have something that is truly worth believing.

¹How Active Is Your Fund Manager? A New Measure That Predicts Performance, K.J. Martijn Cremers, Antti Petajisto

²Active Share and Mutual Fund Performance, Antti Petajisto

³Chasing Performance Is A Dangerous Game, INTECH, November 22, 2012

⁴Deactivating Active Share, Andrea Frazzini, Jacques Friedman, Lukasz Pomorski

⁵Active Share and Mutual Fund Performance, Antti Petajisto

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