Adding Value Through Active Management: The Power of Active Share

ARTISAN PARTNERS
Insights

For Institutional Investors Only – Not For Retail Distribution

ARTISAN PARTNERS

MILWAUKEE | SAN FRANCISCO | ATLANTA | NEW YORK | KANSAS CITY | LONDON

Adding Value Through Active Management: The Power of Active Share

Investors debating the merits of active versus passive management may be missing a key element: Not all active managers are truly active.

Active management may come with a higher fee, but it also has the potential to generate returns in excess of passive benchmarks. In fact, an increasing body of evidence has shown that active management can be beneficial net of fees—when it is truly active. Consequently, a relatively new metric, *active share*, is gaining prominence as a better, more comprehensive way to measure how active a manager is than tracking error alone—allowing investors to distinguish between managers who make true, bottom-up security selections from those that more closely mimic a benchmark. As important, historically, higher levels of active share have been shown to correlate with benchmark outperformance.

The Active Versus Passive Debate

Warren Buffett famously said, "I'd be a bum on the street with a tin cup if the markets were always efficient." Investors have long sought active management as a way to capitalize on near-term inefficiencies to improve risk-adjusted returns. However, active management comes at a cost, which can create headwinds to portfolio performance. Further, ample evidence has shown that on average, active managers have tended to underperform benchmarks once fees are taken into account.

This has contributed to the rising popularity of passive investing over the past two decades, as investors seek to gain broad equity exposure with minimal fees. Yet, no investing tactic is without weaknesses. Investors must remember that, similar to active management, passive management still requires asset allocation decisions which may ultimately be sub-optimal. Further, passive vehicles such as exchange-traded funds (ETFs) may be concentrated, leading to unintentional sector or stock-specific risk. A passive strategy, by definition, will also provide no downside protection during a bear market for the corresponding benchmark. But if the primary goal is simply to pay minimal fees for market participation, passive vehicles can be attractive tools.

For investors who do not want to make strategic decisions based primarily on one factor—costs—and want their portfolios to have the potential to generate returns in excess of passive benchmarks, how can they be sure the active managers they select have the potential to outperform a benchmark, net of fees?

Not All "Active" Management Is Truly Active

Part of the challenge in identifying active managers capable of delivering benchmark outperformance is understanding whether that active manager is truly "active."

It has been long understood there are two primary ways investment managers can be active. The first is through "factor timing," or shifting weights relative to a benchmark based on size, style, sector and/or industry factors. This can be thought of as a "top-down" strategy.

The second is through stock selection—or a "bottom-up" strategy. Managers often tend to favor one style of active management over the other, with some managers utilizing a blend of factor timing and stock selection.

Differing styles of active management can make comparisons across managers somewhat challenging—how can one compare a manager who mostly makes sector-related decisions to a manager who focuses on bottom-up individual security selection?

Traditionally, *tracking error* has been used to measure performance variance between a portfolio and its benchmark. However, tracking error tends to capture differences in factor timing but not necessarily stock selection. In other words, tracking error captures systemic risk, but not the unsystemic risk (and potential subsequent return) unique to individual securities.

Another tracking error weakness: High or low, it has not been shown to correlate to portfolio performance.

Active Share and Active Management

Active share appears to rectify some of the weaknesses inherent in tracking error. The concept was initially advanced by Antti Petajisto and Martijn Cremers in a 2009 paper ("How Active Is Your Fund Manager") when they were both professors at the Yale School of Management.

Their aim was to better measure how active a manager is by capturing differences at the individual security level. They also sought to understand whether truly active stock pickers had better results historically.

They started with a simple notion—to outperform a benchmark, one must differ from it. They hypothesized that greater deviations should, on average, be reflective of greater benchmark outperformance potential over time.

They created a simple calculation (demonstrated hypothetically in Exhibit 1) which compared individual security weights in a portfolio to its benchmark. The absolute weight differences were totaled and divided by two to arrive at an active share percentage. The simple five-security portfolio in Exhibit 1 has 55% active share compared to its benchmark.

Exhibit 1: Active Share Calculation

Stock	Portfolio Weights (%)	Benchmark Weights (%)	Difference	Absolute Value
A	25	35	-10	10
B	10	25	-15	15
C	30	10	20	20
D	0	30	-30	30
E	35	0	35	35
TOTAL	**100**	**100**		**110**
Active Share				**110/2 = 55%**

They applied this methodology to all US-equity mutual funds from 1980 to 2003 and subsequently updated the universe again through 2009. They also developed guidelines (see Exhibit 2) to define levels of active share. Any portfolio with above 80% active share was deemed High Active Share. Portfolios with below 60% active share were found to be increasingly like their benchmarks. Petajisto and Cremers coined the term "closet indexers" to describe the managers of those portfolios.

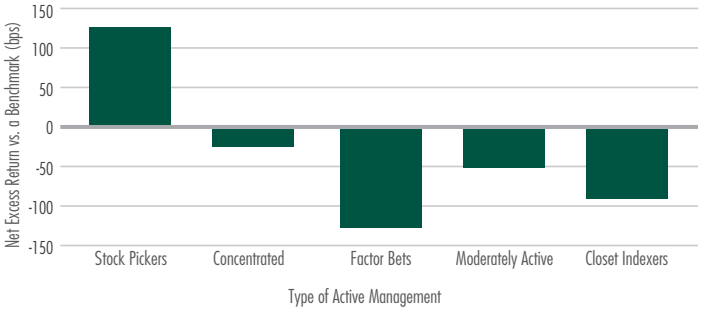
Exhibit 2: Active Share Levels

Stock	Portfolio Weights
100%	Entirely Different than Benchmark
> 80%	High Active Share
< 60%	Potential Closet Indexer
0%	Identical to Benchmark

Source: Martijn Cremers and Antti Petajisto, "How Active is Your Fund Manager," Oxford University Press, August 2009.

Their findings showed that portfolios with the highest active share levels, a group they called "stock pickers" (see Exhibit 3)[1], outperformed their benchmarks by an average 126 basis points, net of fees. This was a select group, however—all other active-management categories underperformed. The worst-performing category was "factor bets"—portfolios with low active share but higher tracking error, followed closely by "closet indexers," portfolios with low active share and low tracking error.

Exhibit 3: Power of Active Share



Source: Antti Petajisto, "Active Share and Mutual Fund Performance," *Financial Analysts Journal*, volume 69, number 4, July/August 2013. Fund performance is based on the 1990-2009 time period using US equity mutual funds. **Past performance does not guarantee future results.**

Their findings were largely in line with other studies showing that active managers overall tend to lag benchmarks on average. However, Petajisto and Cremers' study appeared to identify a potential reason—most "active" managers are not truly active. The ability to segment and identify managers who did in fact deviate meaningfully from their benchmarks increased the likelihood of identifying those with greater outperformance potential.

Petajisto and Cremers posited their findings suggested that managers who are more active in individual stock selection tended to have enough skill to outperform benchmarks over time, net of fees. But high levels of factor timing, on its own, was not necessarily indicative of skill. What's more, so-called "closet indexers" too closely mimicked their benchmarks to deliver outperformance net of fees.

They also found tracking error as a metric need not necessarily be abandoned. On its own, the metric was not shown to correlate with outperformance. Tracking errors of 4% to 6% were found to be associated with active share percentages from 30% to 100%—hence, it was neither a good indication of true active management nor historical performance. However, in their analysis, portfolios with higher levels of active share (i.e., stock pickers) also tended to have higher tracking error. In fact, they found portfolios combining high levels of the two earned the highest positive excess returns historically.

Another key finding: Even during market downturns, funds with high levels of active share outperformed. They observed that during bear markets, inter-stock correlations increased—so they again posited that higher levels of active share when broad market correlations were higher seemed to indicate increased levels of manager skill.

[1]Net excess returns are annualized returns net of fees and transaction costs. Index funds, sector funds and funds with less than 10M in assets were excluded, resulting in a review of 1,124 "actively managed" funds. Mutual funds with high active share may charge higher fees than those with a lower active share. Types of Active Management: The universe was divided into multiple categories based on both Active Share, which measures mostly stock selection, and Tracking Error, which measures mostly exposure to systematic risk. Active "stock pickers" take large but diversified positions away from the index. Funds focusing on "factor bets" generate large volatility with respect to the index even with relatively small active positions. "Concentrated" funds combine very active stock selection with exposure to systematic risk. "Closet indexers" do not engage much in any type of active management. A large number of funds in the middle are "moderately active" without a clearly distinctive style.

A final key finding: High levels of active share tended to persist. Which means the metric can be a useful tool for investors to understand if a high active share manager is likely to continue delivering the active management investors expect.

Incorporating Active Share in Manager Assessment

Investors are right to be concerned with the costs involved in investing. However, costs should not be considered in a vacuum, but as part of a fuller analysis including the investors' goals and objectives, risks and potential benefits of any strategy.

Avoiding the costs of active management can mean missing the opportunity to achieve superior risk-adjusted returns that may be necessary in achieving long-term objectives. The push to limit active management may be better framed as an effort to identify which managers are delivering true, bottom-up, active management.

While Petajisto and Cremers performed their analysis using a universe of US equity mutual funds, active share can be calculated for any manager providing transparency on individual holdings. Which means, as part of a fuller analysis, active share can be a useful tool in identifying the potential for an active equity manager to add value.

Key Takeaways

- Historically, high levels of active share have been shown to correlate with benchmark outperformance.
- High levels of active share correlated to future high levels of active share.
- Active share can be a useful metric to demonstrate value-add potential from active portfolios.

Source: Martijn Cremers and Antti Petajisto, "How Active is Your Fund Manager" *Oxford University Press*, August 2009.

Active Share and Artisan Partners

Artisan Partners has long believed in the benefit of active management and has built a firm of six autonomous investment teams managing 14 active, high value-added investment strategies. The teams are allowed high degrees of investment freedom to take investment risk in the context of a well-defined, repeatable investment process.

While each team has its own investment philosophy and process, one common characteristic across all teams is portfolios are largely built without regard to a benchmark. Each team utilizes its own research to identify attractive investments in a true, fundamental bottom-up process. As such, the portfolios tend to have high active share levels over time.

Exhibit 4 highlights both current active share and the performance of the Funds over trailing one-, three-, five- and ten-years and since inception. Since inception, 11 of 14 Funds have generated returns in excess of their respective benchmarks.

Exhibit 4

	Average Annual Total Returns % (30 Jun 2014) 1 Yr	3 Yr	5 Yr	10 Yr	Inception	Active Share (%)	Value-Added (bps)[2]	Expense Ratio (%) *Subsidized/Unsubsidized*
GROWTH TEAM								
Artisan Global Opportunities Fund—Inception: 22 Sep 2008	21.75	13.13	19.79	—	12.26	93.86	445	1.28
MSCI All Country World Index	22.95	10.25	14.28	—	7.81			
Artisan Mid Cap Fund—Inception: 27 Jun 1997[3]	25.28	14.33	21.55	10.95	14.53	84.55	620	1.29
Russell Midcap® Growth Index	26.04	14.54	21.16	9.83	8.33			
Artisan Small Cap Fund—Inception: 28 Mar 1995[3]	18.55	14.15	21.37	8.01	8.91	92.92	127	1.41
Russell 2000® Growth Index	24.73	14.49	20.50	9.04	7.64			
GLOBAL EQUITY TEAM								
Artisan Global Equity Fund—Inception: 29 Mar 2010	17.25	16.28	—	—	16.03	94.34	545	1.50[7]/1.77
MSCI All Country World Index	22.95	10.25	—	—	10.58			
Artisan Global Small Cap Fund—Inception: 25 Jun 2013	23.27	—	—	—	24.86	99.54	-341	1.50[7,8]/2.51
MSCI All Country World Small Cap Index	25.97	—	—	—	28.27			
Artisan International Fund—Inception: 28 Dec 1995	22.19	12.29	15.00	8.80	10.54	85.54	515	1.20
MSCI EAFE Index[4]	23.57	8.10	11.77	6.93	5.39			
Artisan International Small Cap Fund—Inception: 21 Dec 2001[3]	21.44	12.76	17.11	12.72	14.85	97.53	322	1.51
MSCI EAFE Small Cap Index	29.08	9.84	15.21	8.73	11.63			
U.S. VALUE TEAM								
Artisan Value Fund—Inception: 27 Mar 2006	23.87	15.21	17.55	—	7.36	90.20	78	1.04
Russell 1000® Value Index	23.81	16.92	19.23	—	6.58			
Artisan Mid Cap Value Fund—Inception: 28 Mar 2001[3]	21.02	15.12	19.25	11.59	12.24	89.38	130	1.20
Russell Midcap® Value Index	27.76	17.56	22.97	10.66	10.94			
Artisan Small Cap Value Fund—Inception: 29 Sep 1997[3]	15.30	7.18	14.94	8.77	10.38	91.99	166	1.24
Russell 2000® Value Index	22.54	14.65	19.88	8.24	8.72			
GLOBAL VALUE TEAM								
Artisan Global Value Fund—Inception: 10 Dec 2007[3]	23.13	16.58	19.24	—	9.06	91.51	634	1.38
MSCI All Country World Index	22.95	10.25	14.28	—	2.72			
Artisan International Value Fund—Inception: 23 Sep 2002[3]	27.64	14.61	18.13	11.60	15.89	94.58	564	1.18
MSCI EAFE Value Index	26.86	8.46	11.24	6.71	10.25			
EMERGING MARKETS TEAM								
Artisan Emerging Markets Fund—Inception: 2 Jun 2008	13.96	-4.25	5.35	—	-3.70	79.27	-385	1.48[7]
MSCI Emerging Markets Index	14.31	-0.39	9.24	—	0.15			
Artisan Emerging Markets Fund—Linked Institutional & Investor Shares[5]	—	—	—	—	4.78[5]			
MSCI Emerging Markets Index[6]	—	—	—	—	7.71			
CREDIT TEAM								
Artisan High Income Fund—Inception: 19 Mar 2014	—	—	—	—	2.49%[1]	—	-34	1.25[9]/1.38
BofA Merrill Lynch US High Yield Master II Index	—	—	—	—	2.83[1]			

Source: Artisan Partners/MSCI/Russell/BOfA Merrill Lynch. Performance shown is for the Investor Shares unless noted. Expense Ratios for fiscal year ended 30 Sep 2013. [1]Returns for periods less than one year are not annualized. [2]Value added since inception column is based on the fund's since inception return minus the since inception return of the fund's primary benchmark. [3]Closed to most new investors. [4]Index performance starts 31 Dec 1995. [5]Performance data shown relates to the Investor Shares from 2 Jun 2008 forward and for Institutional Shares (APHEX) prior to 2-Jun-08. Performance of the Institutional class shares does not reflect higher expenses associated with the Investor Shares, and if reflected, would reduce the performance quoted. Institutional Shares inception date: 26 Jun 2006. [6]Index performance starts 26-Jun-06. [7]Artisan Partners has contractually agreed to reimburse the Fund for any ordinary operating expenses in excess of 1.50% through 1 Feb 2015, at which time the contract may be renewed, revised or discontinued. [8]For the Fund's inception through the fiscal year ended 30 Sep 2013. Expenses are estimated for the fiscal year. [9]Expenses estimated for the current fiscal year because the fund is new. Artisan Partners has contractually agreed to reimburse the fund for its management fee and any other ordinary operating expenses in excess of 1.25% of its average daily net assets through 1 Apr 2015, at which time the contract may be renewed, revised or discontinued.

The performance quoted represents past performance, which does not guarantee future results. The investment return and principal value of an investment in an Artisan Fund will fluctuate, so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance data quoted. For Artisan Emerging Markets, Global Equity, Global Opportunities, Global Small Cap, Global Value, High Income, International, International Small Cap and International Value Funds, the performance information shown does not reflect the deduction of a 2% redemption fee on shares held by an investor for 90 days or less and, if reflected, the fee would reduce the performance quoted. Artisan Global Equity and Global Small Cap Funds' investments in initial public offerings (IPOs) made a material contribution to the Funds' performance. IPO investments are not an integral component of the Funds' investment process and may not be available in the future. Artisan Emerging Markets, Global Equity, Global Opportunities, Global Small Cap, Global Value and High Income Funds' performance information reflects Artisan Partners' agreement to limit the Fund's expenses and has had a material impact on the Fund's performance, which would have been lower in its absence. Artisan High Income Fund's return may vary greatly over short periods, and current performance may be materially lower or higher than the performance data quoted. An investment cannot be made directly into an index. For current to most recent month-end performance information, call 888.454.1770.

For more information: Visit www.artisanpartners.com | Call 888.454.1770

Carefully consider the Fund's investment objective, risks and charges and expenses. This and other important information is contained in the Fund's prospectus and summary prospectus, which can be obtained by calling 888.454.1770. Read carefully before investing.

Active share can indicate a portfolio's potential to perform higher or lower than a comparator index. There is no guarantee that a high active share portfolio will outperform.

International investments involve special risks, including currency fluctuation, lower liquidity, different accounting methods and economic and political systems, and higher transaction costs. These risks typically are greater in emerging markets. Such risks include new and rapidly changing political and economic structures, which may cause instability; underdeveloped securities markets; and higher likelihood of high levels of inflation, deflation or currency devaluations. Securities of small- and medium-sized companies tend to have a shorter history of operations, be more volatile and less liquid and may have underperformed securities of large companies during some periods. Value securities may underperform other asset types during a given period. Growth securities may underperform other asset types during a given period. Fixed income investments entail credit and interest rate risk. In general, when interest rates rise, fixed income values fall and investors may lose principal value. High income securities (junk bonds) are fixed income instruments rated below investment grade. High income securities are speculative, have a higher degree of default risk than higher-rated bonds and may increase the portfolio's volatility. Loans carry risks including the insolvency of the borrower, lending bank or other intermediary. Loans may be secured, unsecured, or not fully collateralized, and may infrequently trade, experience delayed settlement, and be subject to restrictions on resale. Private placement and restricted securities are subject to strict restrictions on resale and may not be able to be easily sold or accurately valued. International investments involve special risks, including currency fluctuation, lower liquidity, different accounting methods and economic and political systems, and higher transaction costs. The use of derivatives may create investment leverage and increase the likelihood of volatility and risk of loss in excess of the amount invested.

This material is as of 30 Jun 2014 and is subject to change without notice. While the information contained herein is believed to be reliable, there no guarantee to the accuracy or completeness of any statement in the discussion. This material is for informational purposes only and should not be considered as investment advice or a recommendation of any investment service, product or individual security. A fund's active share will fluctuate from period to period.

Sources: Antti Petajisto, "Active Share and Mutual Fund Performance," *Financial Analysts Journal*, volume 69, number 4, July/August 2013; Petajisto.net as of 13 May 2014; Martijn Cremers and Antti Petajisto, "How Active is Your Fund Manager," *Oxford University Press*, August 2009.

Description of Indices: All indices are unmanaged, market weighted indices and their returns include net reinvested dividends. Unlike the Funds' returns, the returns of all of the indices do not reflect the payment of sales com¬missions or other expenses incurred in the purchase or sale of the securities included in the indices. An investment cannot be made directly into an index. MSCI ACWI (All Country World) Index is an index designed to measure equity market performance in the global developed and emerging markets. The MSCI ACWI (All Country World) Small Cap Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of small-capitalization companies in developed and emerging markets. The MSCI EAFE Index is an index of companies in developed markets, excluding the U.S. and Canada. The MSCI Emerging Markets Index is an unmanaged, market-weighted index of companies in emerging markets. There may be less countries in the MSCI Emerging Markets Index than the number of countries defined as emerging markets by Artisan Partners. Artisan Partners defines emerging markets as those markets in any country other than Canada, Luxembourg, the United States and the countries comprising the MSCI EAFE Index. The MSCI EAFE Small Cap Index is an index of small companies in developed markets, excluding the U.S. and Canada. The MSCI EAFE Value Index is an index of companies in developed markets, excluding the US and Canada, that exhibit value investment style characteristics according to MSCI's methodology. The Russell 2000® Growth Index is an index of small companies included in the Russell 2000® Index with higher price-to-book ratios and higher forecasted growth values. The Russell 2000® Value Index is an index of those companies included in the Russell 2000® Index with lower price-to-book ratios and lower forecasted growth values. The Russell Midcap® Index is an index of about 800 medium-sized U.S. companies. The Russell Midcap® Growth Index is an index of those medium-sized companies included in the Russell Midcap® Index with higher price-to-book ratios and higher forecasted growth values. The Russell Midcap® Value Index is an index of those companies included in the Russell Midcap® Index with lower price-to-book and lower forecasted growth values. The Russell 1000® Value Index is an unmanaged, market-weighted index of those large companies included in the Russell 1000® Index with lower price-to-book ratios and lower forecasted growth values. Russell indices are unmanaged, market-weighted indices whose returns include net reinvested dividends but, unlike the portfolio's returns, do not reflect the payment of sales commissions or other expenses incurred in the purchase or sale of the securities included in the indices. The BofA Merrill Lynch US High Yield Master II Index tracks the performance of below investment grade $US- denominated corporate bonds publicly issued in the US domestic market. To construct a country index, every listed security in the market is identified. Securities are free float adjusted, classified in accordance with the Global Industry Classification Standard (GICS®), and screened by size, liquidity and minimum free float.

Russell Investment Group is the source and owner of the Russell Index data contained or reflected in this material and all trademarks and copyrights related thereto. The presentation may contain confidential information and unauthorized use, disclosure, copying, dissemination or redistribution is strictly prohibited. This is a presentation of Artisan Partners. Russell Investment Group is not responsible for the formatting or configuration of this material or for any inaccuracy in Artisan Partners' presentation thereof.

MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used to create indices or financial products. This report is not approved or produced by MSCI.

BofA Merrill Lynch, used with permission. BofA Merrill Lynch is licensing the BofA Merrill Lynch indices "as is," makes no warranties regarding same, does not guarantee the suitability, quality, accuracy, timeliness, and/or completeness of the BofA Merrill Lynch indices or any data included in, related to, or derived there from, assumes no liability in connection with their use, and does not sponsor, endorse, or recommend Artisan Partners, or any of its products or services.

Artisan Funds offered through Artisan Partners Distributors LLC (APDLLC), member FINRA. APDLLC is a wholly owned broker/dealer subsidiary of Artisan Partners Holdings LP. Artisan Partners Limited Partnership, an investment advisory firm and adviser to Artisan Funds, is wholly owned by Artisan Partners Holdings LP.

Not FDIC Insured | No Bank Guarantee | May Lose Value

For Institutional Investor Use Only – Not for Retail Distribution

A R T I S A N  P A R T N E R S

MILWAUKEE | SAN FRANCISCO | ATLANTA | NEW YORK | KANSAS CITY | LONDON

8/12/14 – A14633L_vIS
ActiveShare_FocusPiece_vIS