Adverse Active Alpha℠: Adding Value Through Manager Selection

MATTHEW RIZZO
Executive Director
Morgan Stanley Wealth Management
Matthew.Rizzo@ms.com
+1 302 888-4105

ZACHARY A. APOIAN
Executive Director
Morgan Stanley Wealth Management
Zachary.Apoian@morganstanley.com
+1 212 296-1706

Introduction

Proponents of passive investing note that active managers routinely underperform their benchmarks and thus invest in index funds. Active investors choose managers in hopes of outperforming indexes and the rewards of doing so can be significant. While past performance is not an indicator of future results, Morgan Stanley's patented Adverse Active Alpha℠ manager screening and scoring process identifies equity strategies with characteristics demonstrated to lead to future outperformance. We believe that this cutting-edge methodology, combined with a strong overall manager analysis process, significantly improves the odds of adding value through manager selection.

Morgan Stanley Wealth Management is the trade name of Morgan Stanley Smith Barney LLC, a registered broker-dealer in the United States. This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Past performance is not necessarily a guide to future performance. Please refer to important information, disclosures and qualifications at the end of this material.

Executive Summary

In the investment business, generating alpha is the ultimate goal. Simply put, alpha is the difference between a portfolio's expected performance and its actual returns for a given level of risk. In other words, alpha is the active managers' value added. After all, what's the point of hiring active managers if the results are no better—or even worse—than the indexes? Why not just invest in low-cost index funds? Of course, active managers hope to beat their benchmark indexes and, over time, about half of them do it before fees. The issue is how to spot these managers in advance. Morgan Stanley's proprietary Adverse Active Alpha manager screening and scoring tool attempts to do just that. This patented process seeks managers with strong stock-picking skills and the ability to outperform indexes and their peers. It points toward managers with characteristics indicating a greater potential for outperformance.

Adverse Active Alpha builds upon research that indicates higher "active share" managers outperform lower "active share" managers over time. This metric gauges how different a portfolio is from its benchmark based on its security weightings. The "active" component of the screening methodology seeks managers with high active share relative to peers.

However, active share alone is not enough. Managers must effectively combine high active share with low-to-moderate tracking error to score more favorably in Adverse Active Alpha. Tracking error measures how closely a portfolio's return follows its index return.

By limiting tracking error, we are looking to screen out managers who try to beat their benchmark by taking large, overweight positions in particular stocks, sectors or industries. While such trades may at times be profitable, they tend to be more unpredictable. Additionally, we find that processes that emphasize such positioning are often less repeatable.

Intuitively, one expects that managers able to outperform when most of their peers are struggling likely possess investment skill. With this in mind, the "adverse" component of the screening tool awards managers that perform well in difficult markets for active managers, such as periods when the majority of managers underperform. We do this by breaking down track records into snapshots of time and scoring each period based on factors indicative of how difficult the environment was for active managers to outperform their index.

By scoring a manager's track record of outperformance based on the degree of difficulty, the rankings award managers who were able to rise to the top in difficult environments.

We believe that managers able to outperform when their peers are challenged while exhibiting high active share and low-to-moderate tracking error in their investment process are more likely to possess genuine stock-picking skill. Additionally, our analysis has shown that our methodology may produce higher realized returns than screening for managers on each factor individually.

Active Manager Historical Performance Results: Finding Top Managers Improves the Active Management Value Proposition

The Morgan Stanley Global Investment Committee (GIC) conducts comprehensive investment analysis to determine whether market environments are favorable for active management or are likely to create headwinds (see *Active and Passive Strategies: An Opportunistic Approach,* March 2015). While the average active manager outperforms during certain short- to intermediate-term time periods, over long periods of time, the average active manager has underperformed the benchmark net of fees.

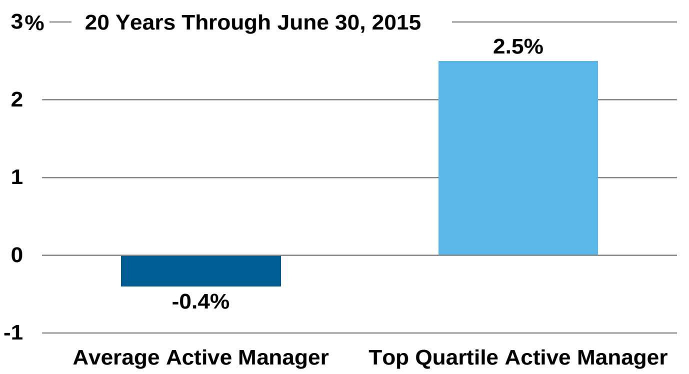
Given that index returns comprise the performance of all investors such as individuals, mutual funds, corporate retirement plans and other institutional investors, we can assume that about half of these investors will outperform the broad market and half will underperform on an asset-weighted basis and somewhat less than half will outperform after fees. Although mutual funds represent only one investor segment, the size of the fund universe ($10 trillion) makes it reasonable to assume that fund returns should generally follow a similar performance pattern, with less than half outperforming after fees.

During the past 20 years, the average equity mutual fund underperformed its benchmark index by about 40 basis points annually. Of course, no one invests with the average manager. Extrapolating the performance of the average active manager to all investors masks the results of investors able to successfully select top active managers. Therefore, performance metrics related to the ability to select outperforming managers are more appropriate.

The percentage of managers who have outperformed their benchmarks more accurately depicts the probability of success. Approximately 44% to 53% of all domestic equity managers beat their benchmarks across style categories during the past 20 years. While these statistics suggest a roughly 50/50 probability of selecting an outperforming manager, robust manager selection processes we believe increases the odds of success.

Equally important is measuring the reward for successfully selecting top managers. As can be seen in Exhibit 1, the performance benefit accrued to successful active managers is large. During the past 20 years, top-quartile active managers outperformed their benchmarks by 2.5% annualized and outperformed the average active manager by 2.9%, resulting in 80% greater wealth accumulation.

Exhibit 1: Active Manager Performance Relative to Indexes



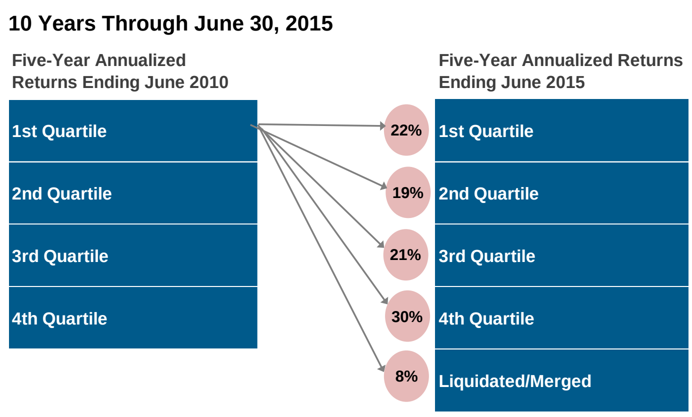
Source: Morningstar, Morgan Stanley Wealth Management as of June 30, 2015
Calculated by Morgan Stanley Wealth Management using data provided by Morningstar. (c) 2015 Morningstar, Inc. All rights reserved. Used with permission. This information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information.

Past Performance Alone Not a Good Predictor of Future Results

Finding top-quartile managers significantly improves the active-management value proposition, but one cannot identify the top performers by simply examining past performance. In fact, the evidence shows a weak link between past performance and future returns. Exhibit 2 shows the persistence of top-quartile returns during the past 10 years by looking at funds ranked by five-year performance through June 2010 and then looking at the subsequent five-year returns through June 2015. Only 25% of top-quartile funds from the first period remained in the top quartile while 19% fell into the second quartile. The remaining funds dropped into the bottom half or were liquidated or merged out of existence. Although each time period is unique, the data suggest that using past performance on its own is not a sufficient indicator of future performance because only four out of 10 top-quartile managers remain in the top half of performers in the next five years.

Although the phrase "past performance is not indicative of

Exhibit 2: Active Manager Persistence



Source: Morningstar, Morgan Stanley Wealth Management as of June 30, 2015 future results" is a common refrain, fund investors continue to chase performance, a pursuit that often leads to disappointment and poor timing decisions—that is, investing in a fund after its best performance. That's why investors' realized returns often lag behind published fund returns. Morningstar calculated that the average investor underperformed published fund returns by 2.5% annualized over a recent 10-year period after taking into account dollar-weighted investor purchases and sales.

Adverse Active Alpha: Improving the Odds of Success

While the average active manager may have difficulty outperforming over time, investors typically endeavor to find managers that can add incremental value relative to indexes and peers. To the extent that active management is utilized, manager selection is a critical component.

The patented Adverse Active Alpha manager screening and scoring methodology identifies actively managed equity strategies—mutual funds and separately managed accounts—with characteristics demonstrated to lead to future outperformance potential. We believe that this cutting-edge methodology, combined with a strong overall manager analysis, significantly improves the odds of adding value through manager selection.

The Mechanics of Adverse Active Alpha: Active Share

Adverse Active Alpha builds upon academic and industry research indicating that higher active share managers outperform lower active share managers over time.[1] This metric gauges how different a portfolio is from its benchmark based on its security weightings. It also often captures how much conviction a manager has in a particular investment idea. The active share calculation sums the absolute values of each portfolio holding weight minus the benchmark weight and divides by two.

From a structural standpoint, average active-manager relative performance has suffered as a result of managers—sometimes known as "closet indexers"—taking less active risk. Because these managers construct portfolios that look similar to the index but charge active management fees, as a group they tend to underperform by a margin similar to their fees and, by definition, most have a difficult time outperforming. Studies suggest that closet indexing has increased significantly over time so that about one-third of all equity mutual funds are closet indexers.

To the extent that investors utilize active management, increasing active exposure increases the likelihood of outperformance. Research from Antti Petajisto, one of the developers of the active share measure, finds that closet indexers as a group underperformed their indexes by 0.91% annually over time and contribute to the 0.41% annual shortfall of active managers overall.[2] Managers emphasizing factor timing such as sector or an investment style also underperformed over time. In contrast, stock pickers with a combination of high active share and low tracking error outperformed their benchmarks by 1.26% a year net of fees.

Exhibit 3: Performance Benefit from High Active Share Managers

Annualized Relative Performance 20 Years Ended June 30, 2015

Large Blend (versus S&P 500 Index)	
Investing in Funds with High Active Share*	0.47%
Morningstar Large Blend Average Manager	-1.32%
Performance Benefit from High Active Share	**1.79%**
Large Growth (versus Russell 1000 Growth Index)	
Investing in Funds with High Active Share*	1.08%
Morningstar Large Growth Average Manager	-0.63%
Performance Benefit from High Active Share	**1.71%**
Large Value (versus Russell 1000 Value Index)	
Investing in Funds with High Active Share*	-0.40%
Morningstar Large Value Average Manager	-1.62%
Performance Benefit from High Active Share	**1.22%**

*Funds ranked by active share within style peer group. Top 20% recalculated annually. Fund returns net of expense ratio.

Source: Morningstar, GIMA as of June 30, 2015

In light of the performance benefit from higher active exposure, Adverse Active Alpha seeks managers with high active share relative to peers. For purposes of the ranking process, active share is calculated relative to each strategy's style benchmark. As shown in Exhibit 3, investment processes executed with high active share substantially outperformed lower active share strategies across the large-cap style categories. In the large-cap core and large-cap growth categories, high active share managers also outperformed their style benchmarks after fees. High active share was most beneficial in the large-cap growth category.

To score more favorably, managers must effectively combine high active share with low-to-moderate tracking error. Tracking error measures how closely a portfolio's return follows its index return. Although executing an investment process with high active share and low tracking error might seem counterintuitive, it often points toward active managers adding value primarily through stock selection.

By limiting tracking error, we attempt to find managers that are not seeking to outperform based on factor bets such as large overweight positions in particular sectors or industries, i.e., a 30% allocation to a sector that makes up 20% of the benchmark index. While such trades may at times be profitable, they tend to be more unpredictable. Additionally, we find that processes that emphasize factor timing are often difficult to replicate.

As noted by Petajisto, "factor bets generate large volatility with respect to the index even with relatively small active positions … Funds that focus on factor bets have also lost money for their investors." He also notes that most of the outperformance came from the stock pickers and that active stock picking funds (higher active share funds) tended to exhibit skill, "but funds taking factor bets did not."

Factor bets can at times be quite profitable. The question is can they be repeated and predicted in advance. When looking back at past performance (either abnormally strong or weak), it is quite likely that one might find a manager or two with large factor exposure—such as a large bet on the technology sector—in the top performer ranks (or bottom). However, the question is what is the likelihood of those managers performing well in the future? Often they are unable to repeat their strong performance.

Importantly, higher active share can be achieved through active security overweights or underweights relative to the index, or from holding securities outside of the index. Investment processes executed with limited tracking error are less likely to be investing outside of their stated investment style—often referred to as style drifting—regardless of whether or not its holdings are included in its style benchmark.

Adverse: Performing Through Headwinds

In order to justify active management fees and avoid paying for index-like performance, investors should emphasize managers with high active exposure. At the same time, simply looking different from a benchmark is not enough to ensure success. Therefore, investors should additionally seek managers with a history of strong relative performance in a variety of market environments and consistent and repeatable investment processes.

Intuitively, one would imagine that managers able to outperform when most of their peers are struggling likely possess investment skill. With this in mind, the "adverse" component of the model systematically ranks managers based on the ability to execute their investment processes in the face of difficult environments for active managers, such as periods when the majority of active managers underperformed. Importantly, we identify difficult environments based on how hard it was for active managers to outperform passive benchmarks, as opposed to down market periods or other periods of market stress. At various times, active management experiences difficult relative performance periods in up, down and flat markets.

In order to score managers based on the adverse metric, we break down manager track records into snapshots of time and score each period relative to the style peer group based on the degree of difficulty. To determine which time periods were most difficult for active managers, we developed a set of factors with high positive or negative correlation to active manager relative performance (see Exhibit 4). By scoring a manager's track record of outperformance based on the degree of difficulty, we can see who rose to the top in difficult environments. In our tests, we observed that adding this metric gave better relative performance than using active share alone.

Exhibit 4: Measuring the "Degree of Difficulty" for Active Managers

Representative Factor List – Large Cap Growth

Return Correlation	Stock selection is more effective when companies trade distinctly.
Return Dispersion	Active managers have more opportunities to pick winning stocks when dispersion is high.
Growth Relative Performance	Active managers position for many investment theses, while benchmarks depend only on growth or value.
Small Cap Relative Performance	Small cap outperformance is favorable for active managers given their tendency toward smaller weighted capitalization.
Percentage of Managers that Outperformed	Indicates the "degree of difficulty" to outperform.

Source: Morgan Stanley Wealth Management as of June 30, 2015

Adverse Active Alpha Results

Since achieving positive alpha is our goal, what is the alpha potential for our model? If we applied our Adverse Active Alpha tool to manager results at year-end 1999, managers in the large-cap growth category ranking in the top decile (top 10%) would have outperformed the Russell 1000 Growth Index by 166 basis points annually during the following 15.5 calendar years, as shown in Exhibit 5. Top-decile-ranked large-cap value managers

Exhibit 5: Performance Benefit from Top Ranked Adverse Active Alpha Managers Relative to Benchmarks and Peers

Annualized Relative Performance for Calendar Years 2000\ through June 30, 2015

Large-Cap Growth	Annualized Performance	Performance Relative to Benchmark
Top Ranked Managers using Adverse Active Alpha Process	**4.05%**	**1.66%**
Russell 1000 Growth Index	2.39%	--
Average Large-Cap Growth Manager	2.20%	-0.19%
Large-Cap Value		
Top Ranked Managers using Adverse Active Alpha Process	**7.17%**	**0.81%**
Russell 1000 Value Index	6.36%	--
Average Large-Cap Value Manager	5.28%	-1.08%

Note: Fund returns net of expense ratio
Source: Morningstar, GIMA as of June 30, 2015

outperformed the Russell 1000 Value Index by more than 80 basis points in the same time period. Additionally, relative performance declined significantly after the first quintile (top 20%), which we expected given that the model is intended to find only the top stock pickers and looks for managers with specific characteristics. Of course, some managers with rankings below the top quintile performed well. However, the results were more random and hard to predict. Also, approximately nine out of 10 managers in the top decile outperformed their benchmarks, indicating the results were not the result of a small number of strong performing outliers.

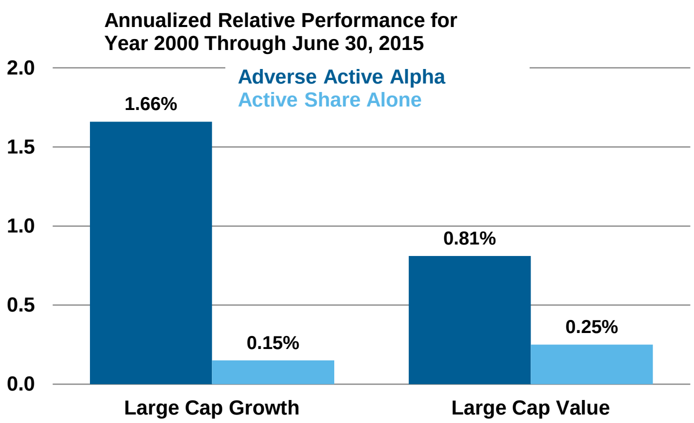
How Did the Results Compare to Active Share Alone?

While the performance results were compelling for managers that score well using the Adverse Active Alpha methodology, one key question is how the results compare to using active share alone. As noted previously, results of certain studies have shown that investment managers with higher active share performed better than those with lower active share over time. Since active share is one component of the Adverse Active Alpha model, some might wonder how its results compare to simply using active share alone.

Using the same time period noted above—year-end 1999 through June 30, 2015—we can compare the Adverse Active Alpha results to those of active share alone. Within the Adverse Active Alpha ranking process, managers receive higher scores if their active share falls within the top 30% relative to peers. Therefore, in order to test the efficacy of the rankings, we compared the performance of managers ranked in the top 30% based on active share alone to the performance of top ranked managers using the Adverse Active Alpha process.

Within large-cap growth, the high active share managers outperformed the benchmark by 0.15% annualized over the period measured. However, the top decile measured by the year-end Adverse Active Alpha score outperformed by 1.66% annualized. Within large-cap value, the high active-share managers outperformed by 0.25% while the top-decile Adverse Active Alpha managers outperformed by 0.81%. This analysis reveals that using the Adverse Active Alpha scores resulted in a pickup in performance within both style categories (see Exhibit 6).

Exhibit 6: Why Use the Adverse and Active Components Together?



Source: Morningstar, GIMA as of June 30, 2015

Characteristics of Highly Ranked Managers

A question that often comes up is what kind of managers typically score well in the Adverse Active Alpha rankings? The most common characteristic is that the managers emphasize fundamental, bottom-up stock picking, as opposed to more top-down strategies. Otherwise, the managers can vary by sub-style within their respective categories. Although some of the managers are fairly concentrated, say a portfolio of 35 to 50 stocks, they are not typically highly concentrated, which would be just 10 stocks.

Looking at the average characteristics for the top-decile managers as of year-end 2014, we can get an idea of what kind of managers rank well. As shown in Exhibit 7, on average, highly ranked large-cap growth managers tend to be fairly concentrated with smaller market capitalizations compared to their respective indexes, although this is not uncommon for the large-cap growth universe as a whole. Also for top-decile managers, valuation

Exhibit 7: Top-Decile-Ranked Adverse Active Alpha Large-Cap Growth Manager Portfolio Characteristics

	Top-Decile Adverse Active Alpha	Morningstar Large Growth Peer Group	Russell 1000 Growth Index
Number of Holdings	34	110	682
Percent in Top 10	43%	42%	42%
Average Market Cap	40,865	43,911	49,572
Price/Earnings	23	23	22
Price/Book Value	4.1	4.9	5.1
Price/Sales	2.7	2.9	2.2

Source: Morningstar, GIMA as of Dec. 31, 2014

Exhibit 8: Top-Decile-Ranked Adverse Active Alpha Large-Cap Value Manager Portfolio Characteristics

	Top-Decile Adverse Active Alpha	Morningstar Large Value Peer Group	Russell 1000 Value Index
Number of Holdings	46	117	704
Percent in Top 10	39%	34%	24%
Average Market Cap	47,964	47,944	51,073
Price/Earnings	17	16	17
Price/Book Value	2.2	2.1	1.8
Price/Sales	1.5	1.6	1.4

Source: Morningstar, GIMA as of Dec. 31, 2014 measures such as the price/earnings, price/book and price/sales ratios were broadly in line with peers and the index.

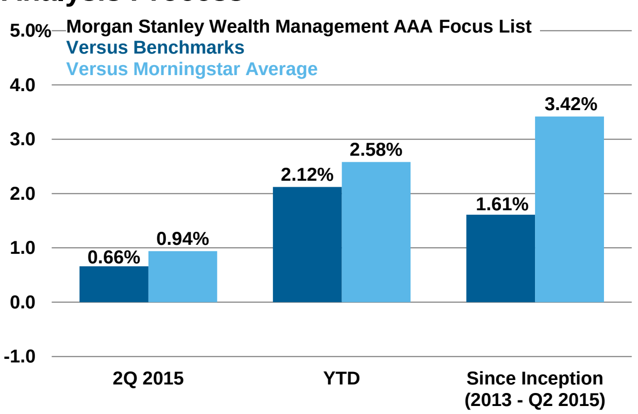
As can be seen in Exhibit 8, top-ranked large-cap value managers also showed higher concentration relative to peers. However, average market capitalization was similar to peers, albeit below that of the Russell 1000 Value Index. Valuation characteristics were generally in line with those of the index.

Conclusion: Adverse Active Alpha in Conjunction with a Strong Manager Selection Process

The performance benefit resulting from strong active manager selection can meaningfully add to investors' returns. In order to justify active management fees and avoid paying these fees simply to replicate index performance, investors should emphasize managers with high active exposure. At the same time, simply looking different from a benchmark is not enough. Therefore, investors should additionally seek managers with a history of strong relative performance in a variety of market environments and consistent and repeatable investment processes.

Morgan Stanley's proprietary Adverse Active Alpha process points toward active money managers with the ability to deliver future outperformance. However, we emphasize the importance of comprehensive manager due diligence before making manager selection decisions. We believe the odds of achieving success are greater and the alpha potential is meaningfully higher by combining Adverse Active Alpha with a strong manager analysis process (see Exhibit 9). The Morgan Stanley Wealth Management approach to manager selection includes a thorough vetting of the investment process and stock selection methodology in addition to style and market capitalization consistency.

Exhibit 9: Adverse Active Alpha in Conjunction with a Fundamental Manager Analysis Process



Source: Morgan Stanley Wealth Management as of June 30, 2015

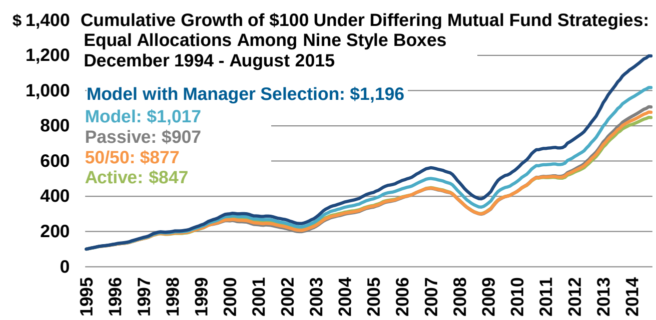
While highly ranked managers performed well as a group, there is no guarantee that each individual strategy will outperform. Additionally, highly ranked managers can have differing risk profiles that might not be suitable for all investors. Factors such as manager turnover and changes to investment process can partially or fully negate a positive Adverse Active Alpha ranking. With that said, the model points toward generally desired active manager characteristics such as strong performance in a variety of market environments and high active share.

Finally, the active/passive decision does not have to be an either/or proposition. Using proprietary tools such as Adverse Active Alpha in conjunction with the GIC's comprehensive model for forecasting the probability of active manager outperformance represents the best of both worlds for investors looking to combine active and passive investing (see Exhibit 10).

Our analysis shows that allocating to active and passive in dynamic proportions suggested by market conditions, as defined by our nine-factor framework, beat all-or-nothing active/passive investing, with incremental annual performance premiums over passive-only strategies of 75 to 150 basis points (net of fees). Furthermore, combining this allocation approach with our manager selection process for periods when active management is recommended can also deliver a performance premium.

Morgan Stanley experienced strong results since the creation of Adverse Active Alpha by combining the rankings with its manager overall due diligence process. ■

Exhibit 10: Combining Tactical Active/ Passive Allocation with Manager Selection



Source: Morningstar, Morgan Stanley Wealth Management as of Aug. 31, 2015

[1] Cremers, Martijn, and Petajisto, "How Active is Your Fund Manager? A New Measure That Predicts Performance," AFA 2007 Chicago Meetings Paper; EFA 2007 Ljubljana Meetings Paper; Yale ICF Working Paper No. 06-14, available at SSRN: http://ssrn.com/abstract=891719

[2] Petajisto, Antti, "Active Share and Mutual Fund Performance," *Financial Analysts Journal*, Volume 69, Number 4, July/August 2013.

Index Definitions

RUSSELL 1000 INDEX This index measures the performance of the 1,000 largest US companies based on market capitalization.

RUSSELL 1000 GROWTH INDEX This index measures the performance of the growth portion of the Russell 1000 Index. These are the companies with higher price-to-book ratios and higher forecasted growth rates.

RUSSELL 1000 VALUE INDEX This index measures the performance of the value portion of the Russell 1000. These are the companies with lower price-to-book ratios and lower forecasted growth rates.

S&P 500 INDEX This capitalization-weighted index includes a representative sample of 500 leading companies in leading industries in the US economy.

Financial Terms

PRICE-TO-BOOK – price per share divided by book value per share. Price-to-Book for the portfolio is a weighted average of the results for the individual stocks in the portfolio.
PRICE-TO-SALES – Price to sales is calculated by dividing a stock's current price by its revenue per share for the trailing 12 months.

P/E – FORECAST (FYI and FY2) – The price/earnings ratio for the portfolio based on the most recent closing price divided by the annual mean expected earnings for the current fiscal year (FY1 EPS forecast) and the next unreported fiscal year (FY2 EPS forecast) or the fiscal year following FY1. P/E for the portfolio is a weighted average of the results for the individual stocks in the portfolio.

Disclosures

Morgan Stanley Wealth Management is the trade name of Morgan Stanley Smith Barney LLC, a registered broker-dealer in the United States. This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or other financial instrument or to participate in any trading strategy. Past performance is not necessarily a guide to future performance. Please refer to important information, disclosures and qualifications at the end of this material.

The author(s) (if any authors are noted) principally responsible for the preparation of this material receive compensation based upon various factors, including quality and accuracy of their work, firm revenues (including trading and capital markets revenues), client feedback and competitive factors. Morgan Stanley Wealth Management is involved in many businesses that may relate to companies, securities or instruments mentioned in this material.

This material has been prepared for informational purposes only and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security/instrument, or to participate in any trading strategy. Any such offer would be made only after a prospective investor had completed its own independent investigation of the securities, instruments or transactions, and received all information it required to make its own investment decision, including, where applicable, a review of any offering circular or memorandum describing such security or instrument. That information would contain material information not contained herein and to which prospective participants are referred. This material is based on public information as of the specified date, and may be stale thereafter. We have no obligation to tell you when information herein may change. We make no representation or warranty with respect to the accuracy or completeness of this material. Morgan Stanley Wealth Management has no obligation to provide updated information on the securities/instruments mentioned herein.

The securities/instruments discussed in this material may not be suitable for all investors. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. Morgan Stanley Wealth Management recommends that investors independently evaluate specific investments and strategies, and encourages investors to seek the advice of a financial advisor. The value of and income from investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, securities/instruments prices, market indexes, operational or financial conditions of companies and other issuers or other factors. Estimates of future performance are based on assumptions that may not be realized. Actual events may differ from those assumed and changes to any assumptions may have a material impact on any projections or estimates. Other events not taken into account may occur and may significantly affect the projections or estimates. Certain assumptions may have been made for modeling purposes only to simplify the presentation and/or calculation of any projections or estimates, and Morgan Stanley Wealth Management does not represent that any such assumptions will reflect actual future events. Accordingly, there can be no assurance that estimated returns or projections will be realized or that actual returns or performance results will not materially differ from those estimated herein.

This material should not be viewed as advice or recommendations with respect to asset allocation or any particular investment. This information is not intended to, and should not, form a primary basis for any investment decisions that you may make. Morgan Stanley Wealth Management is not

acting as a fiduciary under either the Employee Retirement Income Security Act of 1974, as amended or under section 4975 of the Internal Revenue Code of 1986 as amended in providing this material.

Morgan Stanley Smith Barney LLC, its affiliates and Morgan Stanley Financial Advisors do not provide legal or tax advice. Each client should always consult his/her personal tax and/or legal advisor for information concerning his/her individual situation and to learn about any potential tax or other implications that may result from acting on a particular recommendation.

Asset Class and Other Risks
Investing in ***stocks***, ***mutual funds*** and ***exchange-traded funds ("ETFs")*** entails the risks of market volatility. The value of all types of investments may increase or decrease over varying time periods.

Nondiversification: For a portfolio that holds a concentrated or limited number of securities, a decline in the value of these investments would cause the portfolio's overall value to decline to a greater degree than a less concentrated portfolio. Portfolios that invest a large percentage of assets in only one industry sector (or in only a few sectors) are more vulnerable to price fluctuation than those that diversify among a broad range of sectors.

Value and ***growth investing*** also carry risks. Value investing involves the risk that the market may not recognize that securities are undervalued and they may not appreciate as anticipated. Growth investing does not guarantee a profit or eliminate risk. The stocks of these companies can have relatively high valuations. Because of these high valuations, an investment in a growth stock can be more risky than an investment in a company with more modest growth expectations.

Small- and mid- capitalization companies may lack the financial resources, product diversification and competitive strengths of larger companies. The securities of small capitalization companies may not trade as readily as, and be subject to higher volatility than, those of larger, more established companies.

Benchmark index
Depending on the composition of your account and your investment objectives, any indices shown in this report may not be an appropriate measure for comparison purposes and are therefore presented for illustration only.

Indices are unmanaged. They do not reflect any management, custody, transaction or other expenses, and generally assume reinvestment of dividends, accrued income and capital gains. Past performance of indices does not guarantee future results. You cannot invest directly in an index.

Performance of indices may be more or less volatile than any investment product. The risk of loss in value of a specific investment (such as with an investment manager or in a fund) is not the same as the risk of loss in a broad market index. Therefore, the historical returns of an index will not be the same as the historical returns of a particular investment product.

Investors should carefully consider the investment objectives and risks as well as charges and expenses of a mutual fund before investing. The prospectus contains this and other important information about the mutual fund.

This material is disseminated in Australia to "retail clients" within the meaning of the Australian Corporations Act by Morgan Stanley Wealth Management Australia Pty Ltd (A.B.N. 19 009 145 555, holder of Australian financial services license No. 240813).

Morgan Stanley Wealth Management is not incorporated under the People's Republic of China ("PRC") law and the material in relation to this report is conducted outside the PRC. This report will be distributed only upon request of a specific recipient. This report does not constitute an offer to sell or the solicitation of an offer to buy any securities in the PRC. PRC investors must have the relevant qualifications to invest in such securities and must be responsible for obtaining all relevant approvals, licenses, verifications and or registrations from PRC's relevant governmental authorities.

If your financial adviser is based in Australia, Switzerland or the United Kingdom, then please be aware that this report is being distributed by the Morgan Stanley entity where your financial adviser is located, as follows: Australia: Morgan Stanley Wealth Management Australia Pty Ltd (ABN 19 009 145 555, AFSL No. 240813); Switzerland: Morgan Stanley (Switzerland) AG regulated by the Swiss Financial Market Supervisory Authority; or United Kingdom: Morgan Stanley Private Wealth Management Ltd, authorized and regulated by the Financial Conduct Authority, approves for the purposes of section 21 of the Financial Services and Markets Act 2000 this material for distribution in the United Kingdom.

Morgan Stanley Wealth Management is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule") and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule.

This material is disseminated in the United States of America by Morgan Stanley Wealth Management.

Third-party data providers make no warranties or representations of any kind relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages of any kind relating to such data.

This material, or any portion thereof, may not be reprinted, sold or redistributed without the written consent of Morgan Stanley Smith Barney LLC.

Conflicts of Interest

GIMA's goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients' assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA's evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs. Morgan Stanley Wealth Management, managers, MS&Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account.

© 2015 Morgan Stanley Smith Barney LLC. Member SIPC.