

The Sun Also Shines on Highly Active Managers and Astute Financial Advisors

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As robo-advisors join passive investing's parade, interested investors would be well advised to do their due diligence on robo shops and the latter's reliance on passive products. Just as performance among financial advisors and active mutual fund managers varies, it also varies among robo-advisors. Ultimately, good risk-adjusted returns don't simply depend on low investment fees, but sensible portfolio allocation and management over market cycles. To that end, investors should also appreciate how passive products work, especially exchange traded funds (ETFs), and how successful active managers succeed in the long run.

Executive Summary

- Investing automaticity increasingly involves “emotionless” robo-advisors and is a positive fin-tech innovation. But just as some actively managed funds outperform their benchmarks over time, and some financial advisors are better than others, investment risks and portfolio returns of robo-advisors also vary.
- Passive investment inflows have grown sharply in recent years, primarily given their low fees and benchmark-matching returns. But the case for active management remains strong, given the crucial work on price discovery that active managers undertake and their ability to capitalize on valuation dynamics, especially in periods of market volatility and low correlation.
- Recent academic research builds on the work involving high active share to include active's outperformance in global equity funds, in which stock selection was “the prime source of excess returns.” On the flip side, passive investors are subject to more portfolio transactions, and at inefficient prices, than is generally appreciated, particularly in the case of ETFs.
- SEC investor bulletins on risks associated with robo-advisors implicitly illustrate the holistic and nuanced value proposition that financial advisors offer, including the significant role they can play in helping clients avoid chasing performance or selling at the wrong time.

Are the supposed travails of active investment managers spilling over to financial advisors, who are now reportedly under threat from cheaper, “emotionless” robo-advisors? Just as nominally active fund managers can’t compete with index funds after fees, financial advisors who don’t add value face a growing threat from robos offering do-it-yourself investment services. Flow data into exchange-traded and passive index-based mutual funds are apparently being joined by increasing numbers of investors turning to robo services that use algorithms to manage clients’ money.

The trends toward investing “automaticity” may be all the rage nowadays, with more and more active investment shops offering passive investment options in a bid to draw some of the flows going to ETFs and index funds. Interestingly, even active investing icon Warren Buffett has become an advocate for passive. In his latest annual letter to Berkshire Hathaway shareholders, the Oracle of Omaha reiterated that “both large and small investors should stick with low-cost index funds.” Meanwhile, Wall Street Journal columnist Jason Zweig approvingly described how the “moralistic and puritanical view of investing” advocated by Buffett mentor Benjamin Graham, namely value investing based on fundamental company research, is ceding ground to passive investments, just as robo-advisors catering to more and more millennials may be incrementally disintermediating financial

advisors to baby boomer and generation X clients. Zweig’s column, which, ironically, is named after Graham’s seminal 1949 book, *The Intelligent Investor*, characterizes the shift as “a sort of pragmatism that is sensible.”

But is it? While robo-advisors and passive investments offer valuable services and products to many investors, they’re hardly the be-all and end-all for building wealth. In fact, despite the dire headlines about the “average” actively managed fund underperforming its benchmark, there’s no academic consensus that passive is the way to go, nor much reporting on the above-average fund managers who have added value over time. As for the rise of the robos, regulators of late have begun issuing guidance that automated digital investment advisory programs aren’t without risks. Indeed, just as returns among active managers vary, portfolio performance among robo-advisors differs markedly as well.

Active for Me, Passive for Thee

Even as he claimed victory in a \$1 million wager that a S&P 500 Index fund would beat a high-cost fund of hedge funds over a decade, Buffett in his 2016 shareholder missive also provided many investment chestnuts related to Berkshire’s stock-picking and active management more generally. “Every decade or so, dark clouds will fill the economic skies, and they will briefly rain gold. When downpours of that sort occur, it’s imperative that we rush outdoors carrying washtubs, not tea-

spoons,” Buffett wrote. “During such scary periods, you should never forget two things: First, widespread fear is your friend as an investor, because it serves up bargain purchases. Second, personal fear is your enemy. It will also be unwarranted.” Buying when the market is gripped by fear is sound advice. So is advising caution when asset prices reflect irrational exuberance, as Alan Greenspan once put it. “Of course, a business with terrific economics can be a bad investment if it is bought at too high a price,” Buffett added.

Yet passive investing in bull markets compels just that, despite claims by advocates that market capitalization-based passive flows don’t inflate share prices. Mathematically, as the share prices of index constituents rise, passive investors must invest more in them to maintain their respective weightings, regardless of company fundamentals or earnings prospects. In essence, passive investing becomes a momentum play. And the dynamic works in both directions: as indices fall, passive investors must sell into a declining market. Rather than buy low and sell high, passive investing does the exact opposite, which makes no economic sense.

Yet uneconomic market participants can help active managers undertaking the crucial work of price discovery. In down markets, actively managed funds populated with stocks judged to have stronger balance sheets, cash flow characteristics, earnings outlooks, and less demanding valuations can exhibit more resilience. As a result, their shareholders may not have as hard a fall in bear markets as passive investors, who by definition capture the full index drawdown. Although it’s been nearly a decade, investors should remember that, like insurance, such

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protection serves a real purpose: from the October 2007 peak to the March 2009 trough, the S&P 500 Index plummeted 56%. Moreover, active managers who maintain meaningful cash positions can in times of market distress use the downpours to upgrade their portfolios at cheaper price points.

To be sure, since the golden rains of the Global Financial Crisis, many valuation-sensitive active managers have had a harder time consistently beating their benchmarks, which have been broadly lifted by the unprecedented flood of global central bank monetary stimulus. Interestingly, going by Berkshire's book value per share, one of Buffett's favorite valuation metrics, Berkshire outperformed the S&P 500 Index's total return (with dividends reinvested) in just three out of the nine years from 2008 through 2016. But, Berkshire's 41-year compounded annualized gain of 19% doubles that of the U.S. bluechip index in the longer period. Shorter measurement periods that don't include full market cycles clearly aren't the best yardsticks for measuring active fund performance. That's certainly true in Thornburg's case as well, given that all eight of Thornburg equity funds have outperformed their respective benchmarks since inception, if not in shorter timeframes.

Passively Active

Quite apart from the discrete experience of individual active investment shops, academic research well beyond Antti Petajisto's 2013 "Active Share and Mutual Fund Performance"¹ continues to add perspective to the active/passive debate. In "Global Equity Fund Performance: An Attribution

"We find that the average global equity manager outperforms the benchmark by 1.2% to 1.4% a year before fees," with stock selection "the prime source of excess return."

Approach," researchers decomposed the excess returns of 143 global equity funds over the decade through 2012, using their actual holdings to derive stock, country, and currency contributions in an attribution analysis.² "We find that the average global equity manager outperforms the benchmark by 1.2% to 1.4% a year before fees," with stock selection "the prime source of excess return," the authors report. The results "support considering active management in global equity markets, at least for institutional accounts that pay annual fees of less than 1%," they add.

In "Sharpening the Arithmetic of Active Management," Lasse Heje Pedersen, an academic affiliated with AQR Capital Management, challenges William Sharpe's 1991 "arithmetic of active management," which stipulates that "the return on the average actively managed dollar will equal the return on the average passively managed dollar," so that after costs, the actively managed dollar's return will be less. "It is based on the implicit assumption that the market portfolio never changes, which does not hold in the real world because new shares are issued and others are repurchased," Pedersen points out.³ Passive investors, in fact, must trade regularly "to maintain their market-weighted portfolios," and have to do so at less favorable prices than active managers, he notes. Trading

price differentials and the frequency of changes to the market portfolio—given index rebalancing, secondary share offerings and share repurchases alone—are material return factors. Market portfolio changes in particular create opportunities for truly active managers to add value, for example, by purchasing securities of thriving companies before they are inducted into an index, or avoiding index constituents that are on their way out, or choosing to participate, or not, in secondary offers or share buybacks based on offered prices.

If the structure of index mutual funds and the implicit pricing of trading activity within them present opportunities for active managers, so do those of ETFs, though in somewhat different ways. ETFs are generally cheaper and more tax efficient than index funds and boast a structure that can cut portfolio turnover. But as investors can trade them intraday, including selling them short or buying them on margin, ETF trading activity can run high, driving embedded fund transaction fee volumes. At the same time, investment flows into ETFs also ipso facto influence the pricing of underlying stock and bond constituents, raising intra-sector correlations and even at times correlations across sectors. The correlations look poised to increase.

1. *Active Share and Mutual Fund Performance*, Antti Petajisto, Financial Analysts Journal (FAJ), Volume 69, 3Q 2013.

2. *Global Equity Fund Performance: An Attribution Approach*, Gallagher, Harman, Schmidt, and Warren, FAJ, 1Q 2017.

3. *Sharpening the Arithmetic of Active Management*, Lasse Heje Pedersen, SSRN, Oct. 7, 2016, updated Jan. 19, 2017.

At an estimated \$3.2 trillion toward the end of 2016, ETFs are still less than a tenth of worldwide open-end mutual fund assets, according to the Investment Company Institute. But their growth is strong. In the United States alone, the number of ETFs rose to 1,729 in January, up nearly 8% from 1,604 in January 2016.⁴ Net inflows, meanwhile, are even more striking: After attracting \$201 billion in 2016, global equity ETFs drew another \$128.41 billion over the first eleven weeks of 2017 alone, according to BofA Merrill Lynch's March 23 *Flow Show* report.

Plenty of research has already been undertaken on the impact that ETFs can have on individual constituent and broader market liquidity. They offer investors a great ride as markets rise. But in selloffs, ETFs can get very bumpy. Recall the August 2015 "Flash Crash," when triggered stop-loss and intermarket sweep orders multiplied across the market as high-speed algorithmic trading programs prioritized speed over price. That, in turn, generated divergence between the "fair value" of an ETF and the market prices of its underlying constituents. Many stop-loss orders were filled at prices well below ETF fair values, locking in steep losses for their shareholders. Human market makers weren't to blame.

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Degrees of pricing inefficiency always exist in ETFs, as their formal net asset value (NAV) is based on the previous session's closing price, not the current session's live pricing of its underlying constituents. That creates arbitrage opportunities when an ETF's live price diverges from its published NAV. "Because of the large trading volume of ETFs, the historical premiums in actual ETF transactions amount to over \$40 billion a year relative to NAVs and roughly \$20 billion when adjusted for stale NAVs—a rather large amount of money to pay for trading at inefficient prices, suggesting that investors should not ignore these effects when trading ETFs," Petajisto notes in updated research.⁵ "Positive premiums on ETFs lead to more share creation—and vice versa for negative premiums—indicating that arbitrageurs are actively using the ETF share creation and redemption process to trade against these mispricings."

Beyond embedded trading fees, stale pricing and potential liquidity challenges when markets turn volatile, the very premise of some ETFs as passive vehicles must be questioned. Take the mushrooming numbers of "multifactor" ETFs in which constituents are picked based on factors commonly used by active managers, or "actively managed" ETFs, which sport both a benchmark index as well as managers

who can time trades, modify sector allocations, and choose to deviate from index constituents and weightings.

ETFs offer valuable trading, tax, and cost advantages. But like all investible securities, they aren't without risks and embedded costs, including trading at inefficient prices. Such characteristics diminish the expense advantages of ETFs versus actively managed mutual funds. They can also impact sectors and broader markets in volatile times. Investors should be cognizant of both the pluses and minuses of ETFs, particularly retail investors who use ETFs to chase sector performance and mistime the market.⁶ But so should the growing number of people turning to robo-advisors, which routinely employ ETFs in client portfolio construction and asset allocation.

[An Average Financial Advisor? An Average Robo? A Robo Fiduciary?](#)

If there's little sense in comparing benchmark returns against the "average" actively managed mutual fund given performance variability among active managers, there's not much point in comparing robo-advisors to professional financial advisors, either. Both have their advantages and disadvantages. Just as some financial advisors are better than others, it turns out there's also dispersion in the performance of robo-advisors. That shouldn't really come as much of a surprise. Although the human programmers at robo-advisors use mean variance analysis and modern portfolio theory (MPT) more generally in writing the algorithms driving portfolio allocations for their clients, coding and model differences mean allocation mixes vary noticeably.

4. Investment Company Institute, *ETF Assets and Net Issuance*, January 2017.

5. *Inefficiencies in the Pricing of Exchange-Traded Funds*, Antti Petajisto, FAJ, Volume 73, Q1 2017.

6. *What Drives ETF Flows*, Clifford, Fulkerson, Jordan, July 2014; *Abusing ETFs*, Bhattacharya, Loos, Meyer, and Hackethal, July 2016.

Citing the growth in the popularity of robo-advisors, the U.S. Securities and Exchange Commission (SEC) has issued investor bulletins stressing the importance of understanding “the potential costs, risks, and benefits” of using them. “As with any advisor, it is very important you take the time to learn about the robo-advisor’s services,” the SEC noted.⁷ It listed a number of caveats to consider, including that some “may obtain and consider only limited information about you.” Does it consider specific financial goals, or overall financial needs, and does it incorporate all relevant financial information, including various types of assets, say real estate or bank savings accounts? How well does it capture a client’s risk tolerance through a questionnaire?

In addition to a robo’s particular process for building client profiles is its approach to investing. “Different robo-advisors have different approaches to investing, including different investment styles and different products offered,” the SEC pointed out. “Some have several pre-determined portfolios of investments that they will recommend for you that you may or may not be able to customize. Some robo-advisors focus solely on a limited range of investment products, such as broad-based exchange-traded funds,” the unique characteristics of which “may make them more suitable for certain investors and less suitable for others.”

The SEC warned that “in some cases robo-advisors may not have been tested under stressed market conditions,” and added that a robo’s investment style “can make a big difference in the asset allocation of your portfolio.”

One of the more noticeable traits among the asset allocations of the examined robos was home bias, with a heavy allocation to U.S. equities, when about half the world’s stock market capitalization is overseas. ... (and) U.S. stocks are trading at historically rich valuations.

If its economic and market assumptions on prevailing interest rate trends don’t pan out, for example, then “the tool’s output will be flawed,” the SEC warned.

The variability among robos is borne out in a running study involving leading robo-advisors in which clients with identical investment profiles were created. Condor Capital Management, a New Jersey-based Registered Investment Advisor, opened, among others, taxable accounts with moderate 60%/40% allocations to equity and fixed income for an investor in a high tax bracket.⁸ “Starting with a similar baseline allocation across the portfolios allows us to measure performance and compare how our funds are invested as equally as possible on an ongoing basis,” Condor explained. “Of the taxable accounts that we have full-year 2016 performance for, returns varied considerably.” Among the nine robo-advisors under study, 2016 performance varied from 5.55% to 10.75%, a significant range.

What drove the performance differentials? “It appears that the majority of the trades were done to rebalance the portfolio rather than take advantage of pricing dislocations in the capital markets,” Condor noted. “In other words, for the most part, trades were not made to represent significant shifts

in style, strategy or outlook.” That makes sense, as MPT assumes a risk averse investor can optimize returns according to a given level of market risk based on historical and statistical analysis of an investment’s variance and correlation within the whole portfolio. Rebalancing is sound as a principle, but its application varies from one robo’s algorithm to another’s. One of the more noticeable traits among the asset allocations of the examined robos was home bias, with a heavy allocation to U.S. equities, when about half the world’s stock market capitalization is overseas. Moreover, that bias comes at a time when U.S. stocks are trading at historically rich valuations while foreign equities are generally much cheaper on a relative basis.

Apart from relative valuation levels or stages of market and economic cycles from one geography to the next, financial advisors may have good reason to skew client portfolios in one direction or another, based on the risk tolerances, asset and debt profiles, needs or goals of individual clients. Moreover, seasoned financial advisors can play a vital role in regret aversion, helping clients avoid common mistakes such as chasing performance or selling at the wrong time. They can perhaps better gauge a client’s investment and financing needs by taking a holistic approach to the client’s priorities, from

7. SEC Investor Bulletin, 2/23/2017, SEC Investor Alert, 5/8/2015.

8. <http://www.condorcapital.com>

life insurance and saving for children's college, to saving for a down payment on a mortgage, incorporating student loans or high-interest credit card debt when establishing taxable investment accounts or managing retirement accounts.

If financial advisors are now effectively becoming fiduciaries, is the same true of robo-advisors? The SEC warns investors to find out if a robo-advisor is "paid to offer particular products or does it offer only products with which it is affiliated?" Does it utilize tax-

loss harvesting, or can it freeze sales during an outbreak of volatility?

Automaticity is a positive innovation in the expanding world of "fin-tech." But just as with professional financial advisors, performance variability exists among robo-advisors, as well. The same, of course, holds true for active portfolio managers, among which performance dispersion is always significant. That renders the "average" a rather useless argument in favor of passive investing. Index funds and ETFs are valuable investment tools, but they'll never fully displace portfolio manag-

ers adept at appraising asset prices in dynamic markets, particularly when market cycles turn, volatility increases and correlations decrease.

Over the long-run, investors can do well with both approaches, particularly if they do their homework on the advisors and investment management options out there. "Set it and forget it" may not be the worst approach for building wealth, but it probably isn't the best, either. ■

				AVERAGE ANNUAL TOTAL RETURNS AS OF MARCH 31, 2017						ANNUAL OPERATING EXPENSE RATIOS	
		TICKER	INCEPTION	YTD	1-YR	3-YR	5-YR	10-YR	Since Incep	Net	Gross
Investment Income Builder Fund											
A Shares	Without sales charge	TIBAX	12/24/02	3.71%	11.85%	2.89%	6.74%	5.40%	9.51%	–	1.39%
	With sales charge			-0.96%	6.81%	1.33%	5.76%	4.91%	9.16%	–	–
I Shares		TIBIX	11/3/03*	3.77%	12.20%	3.21%	7.07%	5.74%	9.90%	–	1.07%
	Blended Index			4.97%	11.06%	4.92%	7.70%	4.50%	7.44%	–	–
Global Opportunities Fund											
A Shares	Without sales charge	THOAX	7/28/06	7.14%	13.63%	8.58%	12.89%	7.38%	10.00%	–	1.35%
	With sales charge			2.30%	8.52%	6.93%	11.85%	6.89%	9.53%	–	–
I Shares		THOIX	7/28/06	7.22%	14.05%	8.98%	13.35%	7.88%	10.51%	–	0.99%
	MSCI AC World Index			6.91%	15.04%	5.08%	8.37%	4.00%	5.19%	–	–
International Value Fund											
A Shares	Without sales charge	TGVAX	5/28/98	6.85%	8.61%	2.94%	4.47%	2.58%	7.32%	–	1.28%
	With sales charge			2.03%	3.71%	1.38%	3.51%	2.11%	7.06%	–	–
I Shares		TGVIX	3/30/01*	6.96%	9.03%	3.31%	4.87%	2.98%	7.80%	–	0.90%
	MSCI EAFE Index			7.25%	11.67%	0.50%	5.83%	1.05%	3.92%	–	–
	MSCI AC World ex-U.S. Index			7.86%	13.13%	0.56%	4.36%	1.35%	4.43%	–	–
Better World International Fund											
A Shares	Without sales charge	TBWAX	9/30/15	5.08%	11.91%	–	–	–	10.89%	1.83%	7.27%
	With sales charge			0.35%	6.85%	–	–	–	7.55%	–	–
I Shares		TBWIX	9/30/15	5.37%	12.78%	–	–	–	11.76%	1.09%	2.28%
	MSCI AC World ex U.S. Index			7.86%	13.13%	–	–	–	10.62%	–	–
International Growth Fund											
A Shares	Without sales charge	TIGAX	2/1/07	10.73%	8.77%	1.08%	7.00%	6.14%	6.61%	–	1.39%
	With sales charge			5.72%	3.89%	-0.46%	6.02%	5.66%	6.14%	–	–
I Shares		TINGX	2/1/07	10.89%	9.24%	1.52%	7.45%	6.68%	7.16%	0.99%	1.00%
	MSCI AC World ex U.S. Growth Index			9.13%	9.63%	1.55%	4.84%	1.97%	2.19%	–	–
Developing World Fund											
A Shares	Without sales charge	THDAX	12/16/09	8.33%	7.53%	-2.91%	1.95%	–	5.07%	–	1.57%
	With sales charge			3.46%	2.68%	-4.38%	1.01%	–	4.41%	–	–
I Shares		THDIX	12/16/09	8.40%	7.94%	-2.49%	2.42%	–	5.60%	1.09%	1.16%
	MSCI Emerging Markets Index			11.45%	17.22%	1.18%	0.81%	–	2.19%	–	–
Value Fund											
A Shares	Without sales charge	TVAFX	10/2/95	7.79%	17.84%	8.92%	11.99%	5.40%	9.79%	–	1.39%
	With sales charge			2.95%	12.54%	7.27%	10.96%	4.92%	9.55%	–	–
I Shares		TVIFX	11/2/98*	7.90%	18.32%	9.35%	12.43%	5.81%	10.24%	0.99%	1.07%
	S&P 500 Index			6.07%	17.17%	10.37%	13.30%	7.51%	8.78%	–	–
Core Growth Fund											
A Shares	Without sales charge	THCGX	12/27/00	9.11%	14.80%	3.94%	9.87%	4.83%	5.93%	–	1.40%
	With sales charge			4.21%	9.63%	2.36%	8.86%	4.34%	5.63%	–	–
I Shares		THIGX	11/3/03*	9.21%	15.28%	4.37%	10.34%	5.30%	6.47%	0.99%	1.05%
	Russell 3000 Growth Index			8.63%	16.27%	10.90%	13.22%	9.04%	5.00%	–	–

Performance data shown represents past performance and is no guarantee of future results. Investment return and principal value will fluctuate so shares, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than quoted. For performance current to the most recent month end, visit thornburg.com or call 877-215-1330. The maximum sales charge for the Fund's A shares is 4.50%. There is no up-front sales charge for class I shares. Thornburg Investment Management and/or Thornburg Securities Corporation have contractually agreed to waive fees and reimburse expenses through at least April 10, 2018, for some of the share classes; these are reflected in the net expense ratio. For more detailed information on fund expenses and waivers/reimbursements, please see the fund's prospectus.

* Prior to inception of this share class, performance is calculated from actual returns of the class A shares adjusted for the expenses of the newer share class.

Returns are annualized for periods greater than one year.

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Before investing, carefully consider the Fund's investment goals, risks, charges, and expenses. For a prospectus or summary prospectus containing this and other information, contact your financial advisor or visit thornburg.com. Read them carefully before investing.

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The MSCI All Country (AC) World Index is a market capitalization weighted index that is representative of the market structure of 46 developed and emerging market countries in North and South America, Europe, Africa, and the Pacific Rim. The index is calculated with net dividends reinvested in U.S. dollars.

The MSCI All Country (AC) World ex-US Index is a market capitalization weighted index representative of the market structure of 45 developed and emerging market countries in North and South America, Europe, Africa, and the Pacific Rim, excluding securities of United States issuers. Beginning in January 2001, the index is calculated with net dividends reinvested in U.S. dollars. Prior data is calculated with gross dividends.

The MSCI All Country (AC) World ex-U.S. Growth Index is a market capitalization weighted index that includes growth companies in developed and emerging markets throughout the world, excluding the United States.

The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 23 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The S&P 500 Index is an unmanaged broad measure of the U.S. stock market.

The Russell 3000 Growth Index is an unmanaged index comprised of those Russell 3000 companies with higher price-to-book ratios and higher forecasted growth values. The stocks in this index are also members of either the Russell 1000 Growth or the Russell 2000 Growth indices. Source: Frank Russell Company.

The performance of any index is not indicative of the performance of any particular investment. Unless otherwise noted, index returns reflect the reinvestment of income dividends and capital gains, if any, but do not reflect fees, brokerage commissions or other expenses of investing. Investors may not make direct investments into any index.

Investments carry risks, including possible loss of principal. Additional risks may be associated with investments outside the United States, especially in emerging markets, including currency fluctuations, illiquidity, volatility, and political and economic risks. Investments in small- and mid-capitalization companies may increase the risk of greater price fluctuations. Portfolios investing in bonds have the same interest rate, inflation, and credit risks that are associated with the underlying bonds. The value of bonds will fluctuate relative to changes in interest rates, decreasing when interest rates rise. Investments in the Funds are not FDIC insured, nor are they bank deposits or guaranteed by a bank or any other entity.

Exchange Traded Fund (ETF) – A security that tracks an index, a commodity or a basket of assets like an index fund, but trades like a stock on an exchange. ETFs experience price changes throughout the day as they are bought and sold.

Active Share – A measure of the percentage of stock holdings in a manager's portfolio that differ from the benchmark index.