



FIDUCIENT

Advisors

Helping Clients Prosper

Active/Passive Investing

May 2023



Disclosure

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Active versus Passive Management?

Active Management

- Hand-on approach requiring active decisions regarding buying and selling of stocks and/or bonds.
- Goal of active management is typically to provide **better** risk-adjusted returns versus the broad market after-fees.
- Requires deep analysis by the investment team regarding security selection and timing.
- Management fees are generally higher than passive investing options.
- Success requires making more right trading decisions than wrong.

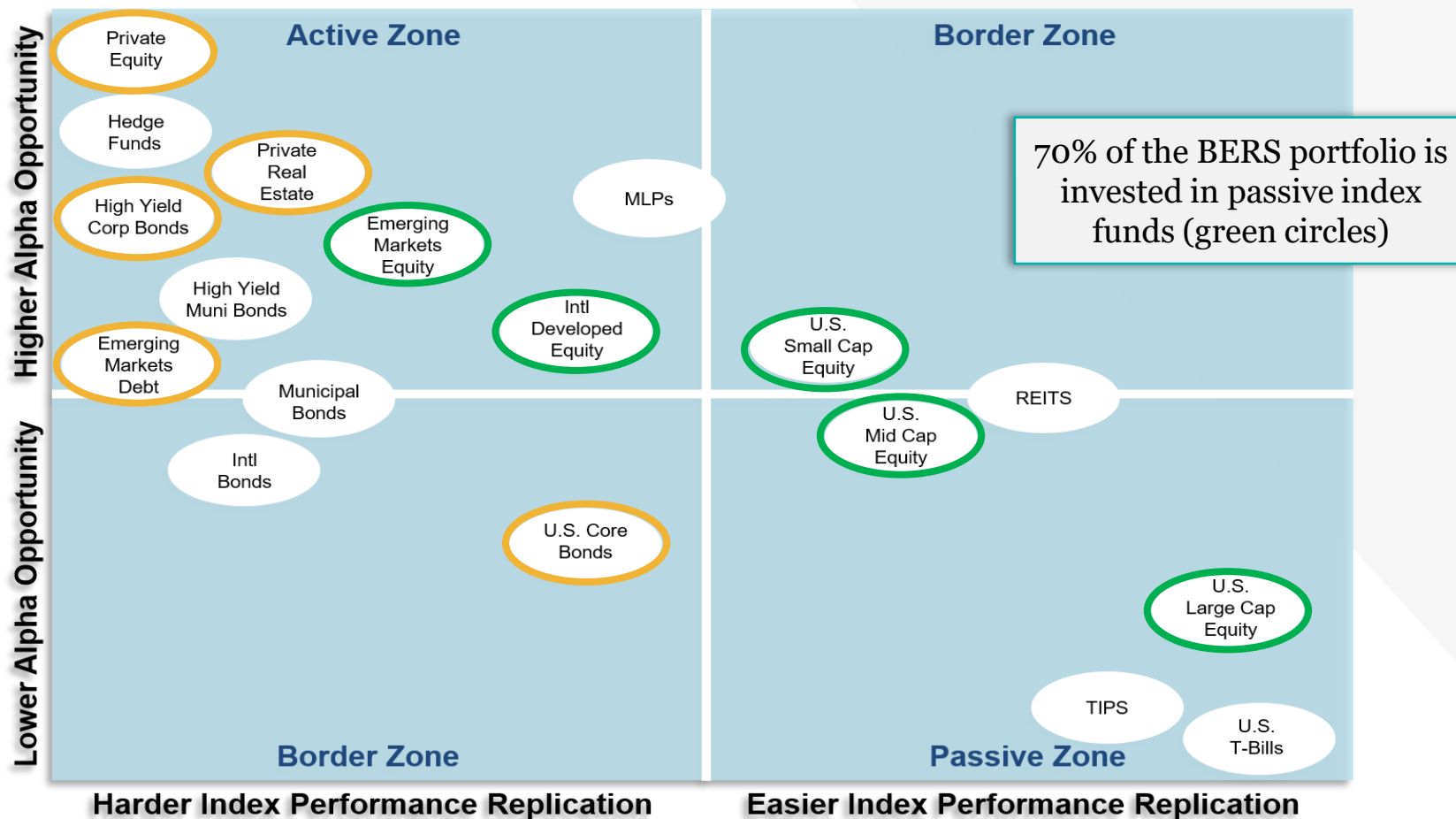
Passive Management

- Investing approach that seeks to deliver returns in line with a specific area of the market (e.g., large cap stocks)
- Goal of passive management is typically to provide **similar** risk-adjusted returns versus the index being tracked.
- Requires the ability to efficiently track and invest in the benchmark index.
- Management fees are typically lower than active management.
- Success requires effective and efficient index replication.



Active? Passive? Yes.

An Effective Combination of Both



Please see www.fiducient.com for our detailed White Paper - The Next Chapter in the Active vs. Passive Debate, April 2023.



The Next Chapter in the Active vs. Passive Debate: Key Findings from Fiducient's Research Group

89%

of ten-year top quartile mutual funds were unable to avoid at least one three-year stretch in the bottom half of their peer group. This result is slightly higher than the median of the historical range of 83 to 92 percent in our past six editions, and up from the 85 percent we observed in our 2021 edition. The higher percentage can be attributed to Fixed Income and Core and Growth equities, which represent a high percentage of the funds analyzed.

62%

of ten-year top quartile mutual funds were unable to avoid at least one five-year period in the bottom half of their peer group. This result is near the top of our historical range of 54 to 63 percent in our past six editions, and up from the 56 percent we observed in our last edition of our analysis.

**Long-term
Success**

Falling prey to natural human behavioral tendencies during the manager selection and termination process generally leads to failure. Investors need to make a concerted effort before investing to understand a manager's investment process, sub-style, and whether they possess competitive advantages over their peers that improve the odds of ranking in the top quartile. We continue to affirm this allows investors to develop the confidence, and more importantly, the patience required for long-term success.

Please see www.fiducient.com for our detailed White Paper - The Next Chapter in the Active vs. Passive Debate, April 2023 for details and additional disclosures.

Distinct portfolio share classes (only) from Morningstar mutual fund database as of December 2022. Not corrected for survivorship bias. All data in all exhibits is sourced as Morningstar and Fiducient Advisors analysis unless stated otherwise. Many fund families offer multiple versions of the same fund, but with variations of the fees that are charged and investor qualifications. Morningstar's "distinct portfolio only" feature removes all duplicate options. Morningstar normally designates the oldest share class as the distinct portfolio.

Morningstar data is not immune to survivorship bias. Each mutual fund that survived the ten0year stretch was captured regardless of performance. In addition, the Morningstar data generates returns net of expenses.

All ten-year calculations across the paper reflect the period from December 31 2023 – December 31 2022.



The Next Chapter in the Active vs. Passive Debate: Key Findings from Fiducient’s Research Group

- If we define success as achieving the top quartile over the last ten years, there is a mixed picture for passive investing.
- For example, there are 56 Large Cap Core passive funds that achieved 10-year track records and 91% of the time during that period finished in the top two quartiles.
- On the other hand, there are 13 Intermediate-Term Bond passive funds that have achieved 10-year track records and only 29% of the time finished in the top two quartiles over the last 10-year period.
- Investing passively does not completely insulate investors from volatility in relative performance compared to active peers and in some asset classes guaranteed sub-par results over the most recent ten-year period.

Passive Strategies (Open-Ended Mutual Funds Only)

Asset Class	# of Index Funds with 10 Year Track Records	Peer Rank Relative to Respective Morningstar Category			% of Rolling 3-Year Periods	
		Best 10-Year Peer Rank	Worst 10-Year Peer Rank	Mean 10-Year Peer Rank	% Top Two Quartiles	% Bottom Two Quartiles
Intermediate Bond	13	25	91	64	29%	71%
Large Cap Value	11	4	87	48	55%	45%
Large Cap Core	56	6	94	31	91%	9%
Large Cap Growth	16	2	90	28	70%	30%
Small Cap Value	5	15	93	61	43%	57%
Small Cap Core	19	8	96	49	65%	35%
Small Cap Growth	3	75	98	84	31%	69%
International Core	19	25	83	55	38%	62%
Emerging Markets	6	48	69	58	43%	57%
Real Estate	3	47	87	71	29%	71%

Source: Morningstar, Fiducient Advisors’ analysis; as of December 31, 2022.
The underlying portfolios included in this exhibit are open-ended mutual funds with ten-year track records that are classified as passive strategies based on Morningstar’s definition.



A Place for Both Active and Passive Management

- Regardless of whether an active or passive strategy is selected, an investor should understand that poor results are not an “if”, but rather a “when.” In due course, great long-term performing managers will fall to the bottom half of peer groups over multiple three- and five-year periods.
- Simply choosing a passive strategy, or moving to one during difficult periods, does not insulate from poor peer group rankings and might even guarantee exclusion from top quartile performance over longer periods. Falling prey to natural human behavioral tendencies during the manager selection and termination process generally leads to failure.
- Investors need to make a concerted effort before investing to understand a manager’s investment process, sub-style, and whether they possess competitive advantages over their peers that improve the odds of ranking in the top quartile.
- We continue to believe that the key to success lies in an investor’s ability to stay invested through the lulls. No matter what path an investor takes regarding active versus passive, patience continues to prove to be a prerequisite for success.
- For more information, please see our white paper: [The Next Chapter in the Active vs. Passive Debate.](#)



Index and Benchmark Definitions Disclosures

Comparisons to any indices referenced herein are for illustrative purposes only and are not meant to imply that actual returns or volatility will be similar to the indices. Indices cannot be invested in directly. Unmanaged index returns assume reinvestment of any and all distributions and do not reflect our fees or expenses.

Fixed Income

- **Bloomberg 1-3 Month U.S. Treasury Bill Index** is designed to measure the performance of public obligations of the U.S. Treasury that have a remaining maturity of greater than or equal to 1 month and less than 3 months.
- **Bloomberg U.S. Aggregate Index** covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
- **Bloomberg Global Aggregate ex. USD Indices** represent a broad-based measure of the global investment-grade fixed income markets. The two major components of this index are the Pan-European Aggregate and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds and Canadian government, agency and corporate securities.
- **Bloomberg U.S. Corporate High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.
- **Bloomberg US Government/Credit 1-3 Year Index** is the 1-3 year component of the U.S. Government/Credit Index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.
- **Bloomberg US Government/Credit Long Index** is the Long component of the U.S. Government/Credit Index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity and quality requirements.
- **Bloomberg US Treasury Inflation Protected Securities Index** consists of Inflation-Protection securities issued by the U.S. Treasury.
- **Bloomberg Muni Index** is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. Bonds must be rated investment-grade by at least two ratings agencies.
- **Bloomberg High Yield Municipal Bond Index** covers the universe of fixed rate, non-investment grade debt.
- **Bloomberg Intermediate U.S. Gov't/Credit** is the Intermediate component of the U.S. Government/Credit index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.

Equity

- The S&P 500 Index is a capitalization-weighted index designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. Russell 3000 Index is a market-cap-weighted index which consists of roughly 3,000 of the largest companies in the U.S. as determined by market capitalization. It represents nearly 98% of the investable U.S. equity market.
- Russell 1000 Index consists of the largest 1000 companies in the Russell 3000 Index.
- Russell 1000 Growth Index measures the performance of those Russell 1000 companies with higher P/B ratios and higher forecasted growth values.



Index and Benchmark Definitions Disclosures

Equity

- Russell 1000 Value Index measures the performance of those Russell 1000 companies with lower P/B ratios and lower forecasted growth values.
- Russell Mid Cap Index measures the performance of the 800 smallest companies in the Russell 1000 Index.
- Russell Mid Cap Growth Index measures the performance of those Russell Mid Cap companies with higher P/B ratios and higher forecasted growth values.
- Russell Mid Cap Value Index measures the performance of those Russell Mid Cap companies with lower P/B ratios and lower forecasted growth values.
- Russell 2000 consists of the 2,000 smallest U.S. companies in the Russell 3000 index.
- Russell 2000 Growth Index measures the performance of the Russell 2000 companies with higher P/B ratios and higher forecasted growth values.
- Russell 2000 Value Index measures the performance of those Russell 2000 companies with lower P/B ratios and lower forecasted growth values.
- MSCI ACWI (All Country World Index) ex. U.S. Index captures large and mid-cap representation across Developed Markets countries (excluding the United States) and Emerging Markets countries. The index covers approximately 85% of the global equity opportunity set outside the U.S.
- MSCI EAFE Index is an equity index which captures large and mid-cap representation across Developed Markets countries around the world, excluding the U.S. and Canada. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
- MSCI Emerging Markets Index captures large and mid-cap representation across Emerging Markets countries. The index covers approximately 85% of the free-float adjusted market capitalization in each country.
- MSCI EAFE Large Value Index captures large cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.
- MSCI EAFE Large Cap Index is an equity index which captures large cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 70% of the free-float adjusted market capitalization in each country.
- MSCI EAFE Large Growth Index captures large cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.
- MSCI EAFE Mid Value Index captures mid cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.
- MSCI EAFE Mid Cap Index is an equity index which captures mid cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 15% of the free-float adjusted market capitalization in each country.
- MSCI EAFE Mid Cap Growth Index captures mid cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.



Index and Benchmark Definitions Disclosures

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- MSCI EAFE Small Cap Index is an equity index which captures small cap representation across Developed Markets countries around the world, excluding the US and Canada. The index covers approximately 14% of the free float adjusted market in each country.
- MSCI EAFE Small Cap Growth Index captures small cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.
- MSCI ACWI (All Country World Index) ex USA Large Value Index captures large-cap securities exhibiting overall value style characteristics across Developed Markets countries (excluding the US) and Emerging Markets (EM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.
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Index and Benchmark Definitions Disclosures

Equity

- MSCI Emerging Markets (EM) Large Value Index captures large-cap securities exhibiting overall value style characteristics across Emerging Markets (EM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.
- MSCI Emerging Markets (EM) Large Index includes large-cap representation across Emerging Markets countries. The index covers approximately 70% of the free float-adjusted market capitalization in each country.
- MSCI Emerging Markets (EM) Large Growth Index captures large-cap securities exhibiting overall growth style characteristics across Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.
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- MSCI Emerging Markets (EM) Mid Index includes mid-cap representation across Emerging Markets countries. The index covers approximately 15% of the free float-adjusted market capitalization in each country.
- MSCI Emerging Markets (EM) Mid Growth Index captures mid cap securities exhibiting overall growth style characteristics across Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.
- MSCI Emerging Markets (EM) Small Value Index captures small cap securities exhibiting overall value style characteristics across Emerging Markets (EM) countries. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield.
- MSCI Emerging Markets (EM) Small Cap Index includes small cap representation across Emerging Markets countries. The index covers approximately 14% of the free float-adjusted market capitalization in each country. The small cap segment tends to capture more local economic and sector characteristics relative to larger Emerging Markets capitalization segments.
- MSCI Emerging Markets (EM) Small Growth Index captures small cap securities exhibiting overall growth style characteristics across Emerging Markets (EM) countries. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

Alternatives & Miscellaneous

- S&P Real Asset Index is designed to measure global property, infrastructure, commodities, and inflation-linked bonds using liquid and investable component indices that track public equities, fixed income, and futures. In the index, equity holds 50% weight, commodities 10%, and fixed income 40%.
- FTSE Nareit Equity REITs Index contains all Equity REITs not designed as Timber REITs or Infrastructure REITs.



Material Risk Disclosures

Fixed Income securities are subject to interest rate risks, the risk of default and liquidity risk. U.S. investors exposed to non-U.S. fixed income may also be subject to currency risk and fluctuations.

Domestic Equity can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to changes to underlying company conditions, sector or industry factors, or other macro events. These may happen quickly and unpredictably.

International Equity can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to changes to underlying company conditions, sector or industry impacts, or other macro events. These may happen quickly and unpredictably. International equity allocations may also be impact by currency and/or country specific risks which may result in lower liquidity in some markets.

Private Real Estate involves higher risk and is suitable only for sophisticated investors. Real estate assets can be volatile and may include unique risks to the asset class like leverage and/or industry, sector or geographical concentration. Declines in real estate value may take place for a number of reasons including, but are not limited to economic conditions, change in condition of the underlying property or defaults by the borrow.